

LOOKING BACK



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TARAMANI, MADRAS - 600 113

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PRIME MINISTER

New Delhi
March 30, 1982

Dear Dr. Swaminathan,

As you prepare to leave for Manila, I should like to express my appreciation of your work in India and also to tell you how much we shall miss you. You have made significant contribution to our scientific and economic policy making. Your role in the strengthening of our agricultural base is not inconsiderable. To your tasks in the Planning Commission you brought deep concern for the nation's realities besides the intellectual discipline of a scientist.

My good wishes to you in the new assignment you have taken up.

Yours sincerely,

Indira Gandhi
(Indira Gandhi)

Dr. M.S. Swaminathan
Member
Planning Commission
New Delhi

பருவம் பல, சோப் ஒன்றே, சரியான விலை.

வெவ்வேறு பருவங்கள் நம் சருமத்தை பல்வேறு வகையில் பாதிக்கின்றன. வேனில் காலம் வெப்பமும் வியர்வையும், குளிர்காலம் சரும உலர்ச்சியையும், மழைக்காலம் சரும பாதிப்பையும் ஏற்படுத்துகிறது. 18 மூலிகைகள் தூய தேங்காய் எண்ணையில் சேர்த்து தயாரிக்கப்பட்ட மெடிமிக்ஸ் சருமத்தையும் கேசத்தையும் சுத்தம் செய்து மிருதுவாக்கி குறைந்த செலவில் ஆண்டு முழுவதும் ஆரோக்கியம் தந்து மெருகூட்டுகிறது.



மூலிகைகள்	நன்மைகள்
குடஜா, சோப்சீனி, விடங்கம், ஜோதிஷ்மதி	மேனிக்கு அழகுதரும் மூலிகைகள்
உஷீரம், சாரிபா, தான்யகா	வோக்குருவை நீக்கும் மூலிகைகள்
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சித்ரகா, தாருஹரித்ரா	முகப்பருவை தடுத்திடும் மூலிகைகள்
வனார்த்ரக, கிருஷ்ணஜீரகா, ஜீரகா	வியர்வை நாற்றம் நீக்கும் மூலிகைகள்
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உலகம்

தென்னை : ஈரியோ பைட்டை ஒழிக்க
“அக்ரோ பயோசைடு”

வேளாண் பல்கலைக்கழகம் புதிய கண்டுபிடிப்பு!

இந்திய விவசாயம் நேற்று, இன்று, நாளை

டாக்டர் எம்.எஸ். சுவாமிநாதன் சிறப்புப் பேட்டி!



டாக்டர் எம்.எஸ். சுவாமிநாதன்

விவசாயிகளிடமிருந்து மூலிகைகள் தேவை!

மெடிமிக்ஸ் நிர்வாக இயக்குனர் தகவல்

ரிகால்லிமலைக்கு வரீங்களா!

விவசாய சிறப்புப் பார்வை

தேரத்தாபுரி 'மா' வில் மறறமலர்ச்சி

எஸ்.எஸ். நாகராஜன் தொடரில்...



டாக்டர் ச. கண்ணையன்

பேப்பர் விசா

இஸ்ரேல் செல்வது என முடிவு எடுத்தவுடன் ஓரிரு மாதங்களுக்கு முன் டெல்லியில் இருந்து இஸ்ரேல் சென்று வந்த மத்திய அரசில் பணியாற்றும் எனது நண்பர் ஒருவரைத் தொடர்பு கொண்டேன். அவர் கூறிய அறிவுரைகளும் ஆலோசனைகளும் எனக்கு மிகவும் உதவியாக இருந்தன. நீங்கள் எதிர்காலத்தில் பல வெளி நாடுகளுக்கு செல்ல வாய்ப்பு இருப்பதால் 'பேப்பர் விசா' வாங்கிச் செல்லுங்கள் என்று கூறினார்.

'பேப்பர் விசா' என்றால் என்ன? அது

பற்றி எல்லோரும் தெரிந்து கொள்வது நலம். வெளிநாட்டுக்கு செல்லும் முன் அந்த நாட்டுத் தூதரகத்திற்கு நமது பாஸ்போர்ட்டையும், அதற்கு உரியக் கட்டணத்தையும் செலுத்தி விண்ணப்பிக்க வேண்டும். அந்த விண்ணப்பத்தினை ஆய்வு செய்து நீங்கள் அந்த



சீ யாப் கலிலீ

நாட்டிற்கு செல்வதற்கு அவர்களுக்கு ஆட்சேபனை இல்லையெனில் உங்கள் பாஸ்போர்ட்டில் நீங்கள் எத்தனை நாட்கள் அங்கு தங்கலாம் என்று அனுமதியளித்து முத்திரையிடுவார்கள். நாம் அந்த நாட்டிற்கு செல்லும் பொழுதோ அல்லது அந்நாட்டில் இருந்து வெளியேறும் பொழுதோ அந்நாட்டு விமான நிலையத்தில் உள்ள குடி பெயர்வோருக்கான அலுவலர்கள், அன்றைய தேதியிட்டு முத்திரையிடுவார்கள்.

மற்றொரு நாட்டிற்கு செல்லும்போது அந்த நாட்டின் குடிபெயர்வோருக்கான அலுவலர்கள் உங்கள் பாஸ்போர்ட்டை பார்க்கும் போது எந்தந்த நாட்டிற்கு எப்படிப் பொழுது சென்றீர்கள் என்று அறிய முடியும். நீங்கள் இஸ்ரேலுக்கு சென்று வந்தால் சில

வலர்கள் உங்கள் பாஸ்போர்ட்டை பார்க்கும் போது நீங்கள் எந்தந்த நாட்டிற்கு எப்படிப் பொழுது சென்றீர்கள் என்று அறிய முடியும். நீங்கள் இஸ்ரேலுக்கு சென்று வந்தால் சில

டாக்டர். ஞானப்பிரகாசம்

அரபு நாடுகளில் (லெபரான், சிரியா போன்ற நாடு களில்)

அனுமதியளிப்பார்கள். இஸ்ரேல் நாட்டிற்கு நீங்கள் செல்லும் பொழுது அந்த கடிதத்தில் தான் முத்திரையிடுவார்களே தவிர உங்கள் பாஸ்போர்ட்டில் முத்திரையிட மாட்டார்கள். ஆகையால் பிற நாட்டிற்கு செல்லும் பொழுது நீங்கள் இஸ்ரேல் நாட்டிற்கு சென்று வந்தது தெரியாது. அதனால் பேப்பர் விசா வாங்குவது நல்லது.

ஆனால் இதுபோல் பேப்பர் விசா வாங்குவதிலும் சில இடப்பாடுகள் உள்ளன. இந்த பேப்பர் விசா அனைவருக்கும்

கொடுத்து விடமாட்டார்கள். அவர்களுக்கு நம்பிக்கை உள்ள நபர்களுக்கு மட்டும்தான் விசா வழங்குவார்கள். இது போன்ற விவரத்தை அந்த நண்பர் எனக்கு விரிவாக எடுத்துக் கூறினார்.

அத்துடன் இஸ்ரேல் நாட்டிற்கு செல்லும்போது கட்டாயமாக ரிட்டன் டிக்கெட்டு சென்றால்தான் உங்களை அங்கு இறங்குவதற்கு அனுமதிப்பார்கள். ரிட்டன்

டிக்கெட் இல்லையென்றால் திரும்பி செல்வதற்கு பணம் கட்ட வேண்டும். ஆக இந்த நிபந்தனைகளுக்கு கட்டுப்பட்டால் தான் அங்கு செல்ல முடியும். இல்லையென்றால் நீங்கள் அங்கு செல்ல முடியாது என்றும் அந்த நண்பர் எனக்கு விரிவாக எடுத்துக் கூறினார்.

உலகத்திலேயே குடியிருப்போர் அதிகம் செலவு செய்ய வேண்டிய நகரங்களான நியூயார்க், டோக்கியோ, டெல்லி போன்ற மூன்று நகரங்களிலும் முதன்மை

எக்காரணத்திற்காகவும் அவர்கள் நாட்டில் நுழைய உங்களை அனுமதிக்க மாட்டார்கள்.

இவ்வாறான இடப்பாடுகளை தடுப்பதற்கு இஸ்ரேல் தூதரகத்தில் பேப்பர் விசா கொடுக்கிறார்கள். உங்கள் பாஸ்போர்ட்டில் முத்திரையிடாமல் தனியாக கடிதத்தாளில் அரசு முத்திரையிட்டு உங்கள் நிழற்படம் ஒட்டி

○ குறைந்து வரும் நிலத்தடி நீரைக் கட்டுப்படுத்த எந்த வகையான தொழில் நுட்ப முறைகளைக்கடை பிடிக்க வேண்டும்?

முதலாவது, தேவையான அளவு நீரையே பயிர்களுக்குத் தேவையான நேரத்தில் அளிக்க வேண்டும். மழை நீரை நிலத்தில் அறுவடை செய்து நிலத்தடிநீர் மட்டத்தை அதிகரிக்கச்செய்ய வேண்டும். நீர்வளம் மிகக்குறைவான இடங்களில் உயர் தொழில் நுட்பத்தைப்பயன்படுத்தி, குறைந்த அளவு நீரை உபயோகித்து அதிக அளவு வருமானம் கிடைக்க ஆவணம் செய்ய வேண்டும். சொட்டு நீர் பாசனம் மற்றும் தெளிப்பான் மூலம் பாசனம் செய்வதால் குறைந்த அளவு நீரைக்கொண்டு அதிக மகசூல் பெறலாம்.

○ தாராளமய வர்த்தகம் அமலுக்கு வரும் இவ்வேளையில் பன்னாட்டு நிறுவனங்களோடு போட்டியிட நம் விவசாயிகள் என்ன செய்ய வேண்டும்?

அறுவடை, சேமிப்பு, பண்படுத்துதல், பதப்படுத்துதலில் நவீன முறைகளைப் பின்பற்ற வேண்டும். தரமான விவசாய விளைப்பொருட்களை உற்பத்தி செய்யவும் நல்ல முறையில் அவைகளைப்பேணி, காப்பாற்றிப் பிற நாடுகளைக் கவரும் வண்ணம் பெட்டிகள் அமைத்து ஏற்றுமதி செய்ய வேண்டும். உலக சந்தையில் விளை பொருட்கள் மற்றும் பூ வகைகள் தட்டுப்பாடான சமயங்களில் அவைகள் கிடைக்குமாறு பார்த்துக் கொள்ளுதல் மிகவும் பிரயோஜனமாக இருக்கும். இஸ்ரேல் நாடு இம்முறையினை வெற்றிகரமாகக் கையாளுகின்றது. முக்கியமாக, நல்ல சேமிப்புக் கிடங்குகள் உடனுக்குடன் சரக்குகளை அனுப்ப குளிர்சாதன வசதிகள் படைத்த போக்குவரத்து வாகனங்கள் விவசாயிகளுக்கு அமைத்துக் கொடுக்க வேண்டும். தகவல் தொடர்பு முறைகளைக் கிராம அளவில் மேம்படுத்த வேண்டும். கிராமத்தை மையமாகக் கொண்ட உணவு பண்படுத்தும் தொழிற் சாலைகளை ஏற்படுத்த அரசாங்கம் விவசாயிகளை ஊக்குவிக்க வேண்டும்.

○ இன்றைய தகவல் தொழில்நுட்ப

வளர்ச்சி, விவசாயத்திற்கு எந்த அளவிற்கு பயன்படும்?

விவசாயிகளுக்குத் தேவையான பூச்சி, நோய் மற்றும் களை நிர்வாகம் அவற்றின் அறிகுறி அடிகளைக் கட்டுப்படுத்தும் முறைகள், விதைகள் கிடைக்கும் இடம், சந்தை நிலவரங்கள் போன்ற தகவல்கள் கணினி மூலம் மக்களின் தேவைக்கு ஏற்ப, ஏற்ற

**காந்தியடிகள்
கூறியது போல்
இயற்கையின்
வரப்பிரசாதங்களில்
இருந்து நமது
தேவைகளை மட்டும்
பூர்த்தி செய்து
பேராசைகளை
ஒதுக்கவேண்டும்**

காலத்தில் கிடைக்க இது உதவும். செய்திகளைத் தரும் மையங்களையும் ஏற்படுத்தலாம். பாண்டிச்சேரியில் எமது நிறுவனம், செய்திகளைத் தரும் மையங்களை நிறுவி திறம்படச் செயல்படுத்தி வருகின்றது. விவசாயிகளுக்குத் தேவையான பருவநிலை மாற்றங்கள், விலை விவரப்பட்டியல்கள், விதை, உரம், பூச்சி மருந்து கிடைக்கும் இடம், விலை, கால்நடைகளுக்கு வரும் வியாதிகள், அவற்றை நிவர்த்தி செய்யும் முறைகள் போன்ற விவரங்கள் கிடைக்க இந்த மையம் உதவிடும்.

○ இன்றுள்ள சூழ்நிலை

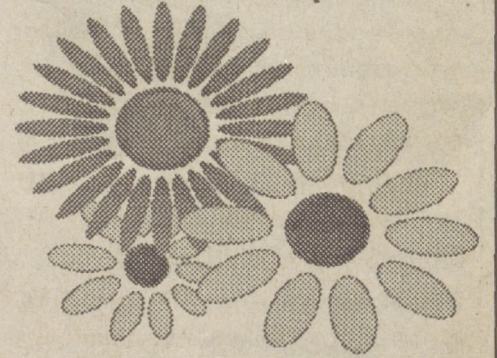
யில் விவசாயிகளுக்கு நீங்கள் கூறும் ஆலோசனை என்ன?

நமது விவசாய பெருங்குடி மக்கள் மிகவும் திறமைசாலிகள் அவர்களின் ஒத்துழைப்பால் தான் நாம் உணவு உற்பத்தியில் தன்னிறைவு பெற்றுள்ளோம் என்பதனை மகிழ்ச்சியுடன் தெரிவித்துக் கொள்கிறேன் பயிர் மற்றும் இதர தொழில்களைக் கவனத்துடன் தேர்ந்தெடுக்க வேண்டும். மண், நீர், காலநிலை, வீட்டின் தேவை மற்றும் சந்தை நிலவரத்தைப் பொறுத்து, பயிர்கள், கால்நடை, மீன், கோழி வளர்ப்பு போன்ற சிறு தொழில்களை தேர்ந்தெடுக்க வேண்டும். வளங்குன்றா வேளாண்மை ஒப்பானது. முதலில் இருந்து கிடைக்கும் வட்டியை உபயோகித்து முதலைக் காத்துக் கொள்ளுவது போல் வட்டியான மகசூலை உபயோகித்து முதலுக்கு ஒப்பான வளமான நிலத்தைப் பேணிகாக்க வேண்டும்.

காந்தியடிகள் கூறியது போல் இயற்கையின் வரப்பிரசாதங்களில் இருந்து நமது தேவைகளை மட்டும் பூர்த்தி செய்து பேராசைகளை ஒதுக்கவேண்டும் எனக்கூறி, விவசாய பெருமக்கள் நிலவளத்தைப் பாதுகாத்து நல்ல மகசூலைப்பெற்று வளமுடன் சந்தோஷமாகவும், மனநிறைவுடனும் வாழ வேண்டும் என வாழ்த்துகிறேன் என்று தெரிவித்தார்.

கேள்விகளைக் கொஞ்சம் கூர்மையானதாக இருந்தாலும் அதற்கு கொஞ்சமும் தயங்காமல் பதில் அளித்த விதமும் பயனுள்ள தகவல்களை கூறிய பாங்கும் எல்லோருக்கும் பயனாக அமையும் என்று நம்புகிறோம்.

■ ஆத்தூர் செந்தில்குமார்



படுத்தப்படுகின்றன. உயிர் உரங்களும் அதிக அளவில் உபயோகப்படுத்தப்படுகின்றன. என்றாலும் உணவு உற்பத்தியைத் தக்க வைத்துக் கொள்ள குறைந்த அளவில் இன்றியமையாத ரசாயன பூச்சிக்கொல்லி மருந்துகளையும் இரசாயன உரங்களையும் அவ்வப்போது இயற்கை உரங்களோடு ஒருங்கிணைத்து உபயோகிக்க வேண்டியிருக்கிறது.

○ விவசாயத்தில் இயந்திர மயமாக்கப்படுவதால் வேலைவாய்ப்பு குறைந்துள்ளது அது பற்றி உங்கள் கருத்து என்ன?

நமது நாட்டில் எல்லா மாநிலங்களிலும் இந்த நிலை உள்ளது எனக்கூற முடியாது. இயந்திர மயமாக்கப்படுவதால் ஓரளவு வேலை வாய்ப்புக் குறையும் என்பதில் சந்தேகமில்லை. அதே சமயம், இதனால் பலன்கள் நமக்குக் கிடைக்கும். முக்கியமாக நிலங்களைத் துரிதமாக செய்நேர்த்தி செய்து அறுவடை செய்து பக்குவப்படுத்துவதற்கு இயந்திரங்கள் உதவும். நம் நாட்டைப் பொறுத்த வரை விவசாயிகளுக்கும் மற்றும் தொழிலாளர்களுக்கும் விவசாயத்தைச் சார்ந்த அல்லது இதர வேலைவாய்ப்புகளை உண்டாக்கக் கொடுக்க வேண்டும். காளான் வளர்த்தல், குட்டைகளில் மீன் வளர்த்தல், காய்கறி, பூவளர்த்தல், ஆடு வளர்த்தல் போன்ற விவசாயம் சார்ந்த வேலை வாய்ப்பு தரும் உபத்தொழில்களை ஊக்குவிக்க வேண்டும்.

○ உயிரி தொழில்நுட்பம் எதிர்கால விவசாயத்திற்கு எந்த அளவில் கைக்கொடுக்கும்?

இந்தத் தொழில் நுட்பம் மூலம் மரபு அணுக்களை மாற்றம் செய்து, "அதிக விளைச்சல் தரவல்ல" சூப்பர் நெல்" வறட்சி தாங்கும் பயிர்கள், உப்புத்தன்மையைத் தாங்கும் பயிர்வகைகள் மற்றும் பூச்சி நோய் தாக்காத பயிர் வகைகளை உருவாக்கி உணவு உற்பத்தியை பெருக்க முடியும் என நம்புகிறேன். உயிர் உரங்கள், ரசாயனம் சாராத உயிர் கொல்லி மருந்துகள் உற்பத்தியிலும் இத்தொழில்நுட்பம் முக்கிய பங்காற்றி வருகிறது.

காத பயிர் வகைகளை உருவாக்கி உணவு உற்பத்தியை பெருக்க முடியும் என நம்புகிறேன். உயிர் உரங்கள், ரசாயனம் சாராத உயிர் கொல்லி மருந்துகள் உற்பத்தியிலும் இத்தொழில்நுட்பம் முக்கிய பங்காற்றி வருகிறது.

○ வளர்ந்த நாடுகளில் விவசாயிகள் கடைபிடிக்கும் புதிய தொழில் நுட்பங்கள் எந்த அளவிற்கு நமக்குப் பயன்படும், அந்த நாடுகளுக்கு



இணையாக வளர நாம் என்ன செய்ய வேண்டும்?

வளர்ந்த நாடுகளில் சராசரியாக ஒரு விவசாயிக்கு 200 ஏக்கர் நிலம் உள்ளது. நவீன முறையில் இயந்திரம் மூலம் பயிர் செய்யப்படுகிறது. தெளிப்பான் மட்டும் சொட்டு பாசனம் மூலம் நீர் பாய்ச்சப்படுகிறது. உரங்களும் சொட்டு பாசனம் மூலமே பயிர்களுக்கு அளிக்கப்படுகிறது.

ஆனால் நம் நாட்டில் ஒரு விவசாயி சராசரியாக 0.14 ஏக்கர் நிலம் மட்டுமே வைத்துள்ளார். இந்த நிலத்தில்

மேற் சொன்ன புதிய தொழில் நுட்பங்களைப் பயன்படுத்துவது கடினம். நம் நாட்டில் நிலமில்லா வருமானம் இல்லாத தொழிலாளர்கள் அதிகம். இதில் குடிப் பழக்கமும் உண்டு. விவசாயம் செய்வதற்கு வேண்டிய மூலதனமான கல்வி, விழிப்புணர்ச்சி மற்றும் பொருளாதார வலிமை தேவை. இதனை அளித்தால் நமது விவசாயிகள் எளிதாக அதிக மகசூல் பெற வாய்ப்புகள் உண்டு. மானாவரி சாகுபடி மற்றும் வறட்சி நிர்வாகம் போன்றவற்றில் கவனம் செலுத்துவது நல்லது. மேலும் விவசாய வளர்ச்சிக்காக நம் மாநிலங்கள் எடுத்து வரும் முயற்சிகள் பாராட்டும் வகையில் உள்ளது.

○ விவசாய விளைப்பொருட்களின் கட்டுப்படியான விலைக்குத் தீர்வு தான் என்ன? இதற்கு ஏதாவது விடிவு காலம் உண்டா?

இதற்கு அரசு ஆவணம் செய்து வருகிறது. முக்கியமாக வெங்காயம், கரும்பு, கோதுமை, நெல் போன்ற பயிர்களுக்குக் கட்டுப்படியான விலை நிர்ணயிக்கப்பட்டுள்ளது. சமீபத்தில் தேங்காய்க்கும் கட்டுப்படியான விலை நிர்ணயிக்கப்பட்டுள்ளது. ஒரே சமயத்தில் ஒரே ரகப் பயிரில் ஏற்படும் அதிகமான விளைச்சலாலும் அதற்குச்சரியான விற்பனை விலை கிடைக்காமல் போவதாலும் இந்நிலை ஏற்படுகிறது. இதற்கு இறக்கு மதியைக் குறைத்தோ அல்லது சேமிப்பு கிடங்குகளில் சேமித்து வைத்துத் தேவையான சமயங்களில் விநியோகிப்பதாலோ இந்த நிலைமையை ஓரளவுக் குறைக்கலாம். விவசாயிகளும் பயிர்களைச் சந்தை நிலவரத்தைப் பொறுத்துத் தேர்ந்தெடுத்துப் பயிர் செய்ய வேண்டும். ஒரே சமயத்தில் எல்லா விவசாயிகளும் ஒரே பயிரைச் சாகுபடி செய்வதால் மேற்கண்ட சூழ்நிலை உருவாகிறது.

வனப் பாதுகாப்பு குறித்து வீராவில் செயல்திட்டம்

சென்னை, செப். 20—

நாட்டில் உள்ள காடுகளைப் பாதுகாப்பது குறித்த செயல்திட்டம் வரையறுக்கப்பட்டுள்ளது. அடுத்த இரண்டு வாரங்களுக்குள் இதற்கு முழுவடிவம் கொடுக்கப்பட்டு இறுதித் திட்டம் வெளியிடப்படும் என்று மத்திய சுற்றுச்சூழல் மற்றும் வனத்துறை அமைச்சர் சுரேஷ் பிரபு தெரிவித்தார்.

அத்துடன் சுற்றுச்சூழல் குறித்த வெள்ளை அறிக்கையும் தாக்கல் செய்யப்படும் எனவும் சொன்னார்.

உலகக் காடுகள் மற்றும் நீடித்த வளர்ச்சிக் கமிஷனின் அறிக்கை வெளியீடு தரமணியில் உள்ள எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி அறக்கட்டளை வளாகத்தில் ஞாயிற்றுக்கிழமை நடைபெற்றது. நிகழ்ச்சியில் சுரேஷ் பிரபு பேசியதாவது:

உலகில் ஆண்டுதோறும் 1.5 கோடி ஹெக்டேர் பரப்பளவு காடுகள் அழிக்கப்படுகின்றன. ஒரு நாட்டின் பொருளாதாரத்துக்கு வனவளம் மிகவும் முக்கியமானது என்பதை இந்திய அரசு உணர்ந்துள்ளது.

ஒரு நாட்டில் குறைந்தபட்சம் மூன்றில் ஒருங்கு காடாக இருக்க வேண்டியது

மத்திய அமைச்சர்

அவசியமாகும். ஆனால் அந்நிலையை நாம் எட்டவில்லை. இப்போது நமது நாட்டில் 19 சதவிகிதம் மட்டுமே காடுகள் உள்ளன. அடர்ந்த காடுகள் எண்ணிக்கை 0.37 சதவிகிதமாக உள்ளது. இந்நிலையை மாற்றி காடுகள் எண்ணிக்கை 33 சதவிகிதமாக உயர்த்த நடவடிக்கை எடுக்கப்படும்.

உச்சி மாநாடு நடத்த வேண்டும்

ஒருநாட்டில் காடுகள் அழிக்கப்படுவதால் மற்ற நாடுகளும் பாதிக்கப்படுகின்றன. எனவே காடுகள் பாதுகாப்பு குறித்த உச்சி மாநாட்டை நடத்த வேண்டும். காடுகள் பாதுகாப்பு குறித்து அனைத்து நாடுகளிலும் விழிப்புணர்வு ஏற்படுத்த வேண்டும். வெளியிடப்பட்ட அறிக்கையில் காடுகள் பாதுகாப்பு கவுன்சில் ஏற்படுத்த வேண்டும் எனக் கூறப்பட்டுள்ளது. இதற்கு இந்தியா முயற்சியெடுக்கும்.

நாட்டின் மொத்த உள்நாட்டு உற்பத்தியில் குறிப்பிட்ட அளவு காடுகள் பாது

காப்புக்காக ஒதுக்க வேண்டும்.

விருதுகள் வழங்க திட்டம்

காடுகள் பாதுகாப்பு குறித்த விருதுகள் வழங்க மத்திய அரசு திட்டமிட்டுள்ளது. ராஜஸ்தானில் ஒரு மரத்தைப் பாதுகாக்க போராட்டம் நடத்தி தனது உயிரைக் கொடுத்த 'அம்ரிதா தேவியின் நினைவாக இவ்விருது வழங்கப்படும்.

இதைத் தவிர சிறந்த வனத்துறை பாதுகாவலர்களுக்கும் 'காடுகள் பாதுகாப்பு' விருது வழங்க திட்டமிட்டுள்ளது என்றார் சுரேஷ் பிரபு.

உலகக் காடுகள் மற்றும் நீடித்த வளர்ச்சிக் கமிஷனின் அறிக்கையை சுரேஷ் பிரபு வெளியிட சுயானா நாட்டின் அறிவியல், தொழில்நுட்பத் துறை அமைச்சர் நவீன் சந்திரபால் பெற்றுக்கொண்டார்.

சுவாமிநாதன் அறக்கட்டளைத் தலைவர் எம்.எஸ். சுவாமிநாதன், காமன்வெல்த் துணைச் செயலர்-ஜெனரல் ஹம்ப்ரி மொட், கமிஷன் உறுப்பினர்கள் ஆஞ்ஜெலா க்ராப்பர், பி.சி.ஓம். ஃப்ரீஜெய்லா, கமலா செளத்ரி உள்ளிட்டோர் கலந்து கொண்டனர்.



சென்னை தரமணி எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி அறக்கட்டளை வளாகத்தில் ஞாயிற்றுக்கிழமை நடந்த விழாவில் உலகக் காடுகள் மற்றும் நீடித்த வளர்ச்சிக் கமிஷனின் அறிக்கையை மத்திய சுற்றுச்சூழல் மற்றும் வனத்துறை அமைச்சர் சுரேஷ் பிரபு வெளியிடுகிறார். சுயானா நாட்டின் அறிவியல் மற்றும் தொழில்நுட்பத் துறை அமைச்சர் நவீன் சந்திரபால் அதனைப் பெற்றுக்கொண்டார். அருகில் (இடமிருந்து) கமிஷன் உறுப்பினர் ஆஞ்ஜெலா க்ராப்பர், எம்.எஸ். சுவாமிநாதன், காமன்வெல்த் துணைச் செயலர்-ஜெனரல் ஹம்ப்ரி மொட், கமிஷன் உறுப்பினர் பி.சி.ஓம். ஃப்ரீஜெய்லா.

Delhi, which has since trained thousands of PhD and MSc scholars. While the Rockefeller Foundation was also an active partner in the development of the All-India Coordinated Research Projects of Indian Council for Agricultural Research (ICAR), the Ford Foundation was actively involved in supporting community development projects and the Intensive Agriculture District Programme (IADP).

3) A large number of research projects were supported from funds derived from the sale of PL 480 wheat.

Collaboration with US institutions became restricted after the events leading to the emergence of Bangladesh in 1971. The nineties, however, saw a revival of this collaboration. The most significant manifestation of the new phase of collaboration was the establishment of a National Gene Bank at the National Bureau of

It is against this background that the US decision is regrettable.

As for the research and training programmes at the Almora and Leh Centres, they have been developed and are being implemented by Indian scientists. The US decision will therefore not affect them in any way.

In fact, Indo-US collaboration in agriculture since 1970 has been on a partnership mode, with each side benefiting equally from such partnerships, in terms material and information.

US agriculture benefited immensely from Indian genetic material (including Basmati rice) as well as from the work of Indian farm scientists carried out in both Indian and US institutions. The expanding Intellectual Property Rights Regime (IPR) is already eroding these bonds. The political ban on partnerships in the field of food security will only further damage collaborative research

THE US decision to not encourage collaboration with the Agricultural Research Centres at Almora and Leh is regrettable. Especially when one looks at the history of Indo-US collaboration in the field of agriculture.

It's the US which will pay the bigger price



US agriculture has benefited immensely from Indian genetic material and research. And, as the world's largest food-exporting country, it will lose out by severing partnerships in agricultural research, says **Dr M. S. Swaminathan**

Between 1950 and 1970, the brightest spot in Indo-US collaboration was in agriculture. This took various forms.

1) In the sixties, a leading US university provided support to each of our agricultural universities (which were established in the late fifties) in organising the course-credit system of curriculum development as well as in linking education, research and extension education in a mutually supportive manner. This triggered off a new era in agricultural research and education in India.

2) Individual US foundations like the Rockefeller and Ford Foundations provided critical support. The Rockefeller Foundation was associated with the establishment of the post-graduate school at the Indian Agricultural Research Institute (IARI), New

Plant Genetic Resources of ICAR at New Delhi. This important facility has been established with generous technical and financial assistance from the US government.

The research and training programmes at the Almora and Leh Centres have been developed and are being implemented by Indian scientists. The US decision will therefore not affect them in any way

devoted to the national and international public good.

In fact, the US — being the world's largest food-exporting country — is likely to suffer from severing partnerships in certain areas of agricultural research. Also, the exclusion of Indian scientists from international scientific conferences held in the US is against the cardinal principle of the International Council of Scientific Unions that, in scientific meetings, there should be no bar on participation based on nationality, religion, race, gender, colour or political belief.

(Dr. M. S. Swaminathan, agricultural scientist, is chairman of M. S. Swaminathan Research Foundation)

'White paper on environment issues soon'

By Our Staff Reporter

CHENNAI, Sept. 20.

The notification on Coastal Regulation Zone will not be scrapped. However, steps would be taken to implement the Regulation in a better way, Mr Suresh Prabhu, Union Minister for Environment and Forests, said today.

"There is no need to make any additions to the notification, which already covers all the salient aspects," Mr. Suresh Prabhu told media-persons after launching a report of the "World Commission on Forests and Sustainable Development" (WCFSD) at the M. S. Swaminathan Research Foundation here.

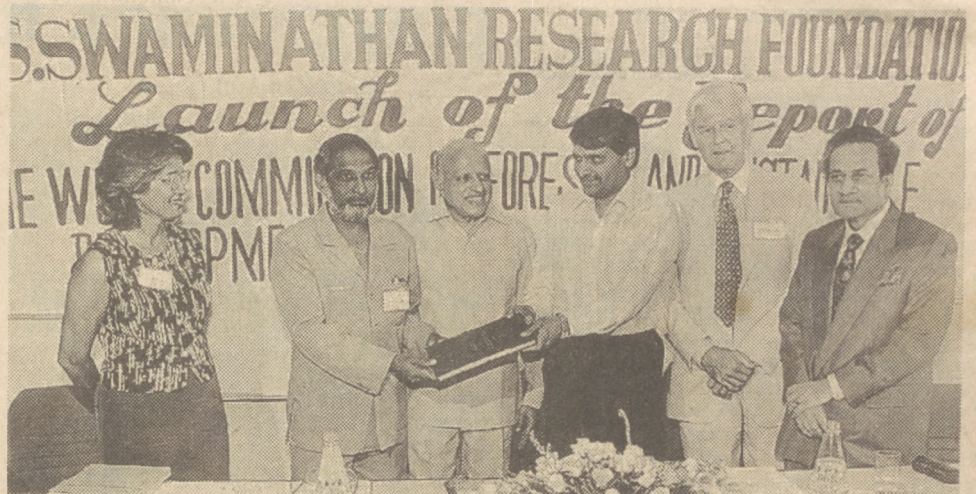
A "white paper" on issues pertaining to environment would soon be presented by the Ministry along with an action plan which would include steps to be taken for future protection of environment. It would be prepared taking into account lessons drawn from experiences and future expectations, he said.

The rights of fishermen would be protected and a committee had been formed with representatives of fishermen to study the problems faced by them. To a question on "eco labelling", he said a lot of ground-work had to be done before taking up the programme. The Ministry would soon institute an award titled 'Amrita Devi' which would be presented to individuals, NGOs or organisations involved in environment protection. The amount for the award would be substantial with a citation, he said.

The Centre was studying the Tamil Nadu Government's request to lift the ban on sandalwood export, as large quantity of sandalwood was lying in the State, he said.

Speaking after launching the report, Mr. Prabhu, said every year 10 to 15 million hectares of forest cover was lost the world-over. The loss was due to natural calamities such as global warming which led to forest fires and man-made problems such as population explosion which ultimately resulted in over exploitation of forest wealth. Efforts should be made to exploit forest resources without damaging the bio-diversity, he said.

Countries which preserved and protected forest cover, would be allowed to collect a cess from



The Union Minister for Environment and Forests, Mr. Suresh Prabhu, presenting a report of the World Commission on Forests and Sustainable Development (WCFSD) to Dr. Navin Chandernal, Minister for Science and Technology, Guyana. Dr. (Ms.) Angela Cropper, Member, WCFSD, (extreme left), Dr. M. S. Swaminathan, (third from left), Dr. BCY Freezailah, Executive Director, International Tropical Timber Organisation, Japan (extreme right), and Sir Humphrey Maud, Deputy Secretary General, Commonwealth (second from right), are also seen.

other countries. The collected amount could be utilised for afforestation and land reclamation programmes, he said.

In the view of the WCFSD, a "protected area" approach was not a sufficient response to the crisis in forests as the roots of the crisis extended outside forests. Hence, it had advocated a policy which sought to ensure no further loss or deterioration of primary forests.

The policy would require that all countries should identify, allocate and manage forests lands for conservation purposes, for corporate production and community forestry. Plantation forestry should be expanded only on degraded and vacant land. Farm forestry should be supported through establishment of more wood-lots for management by local communities. Land tenure arrangements had to be modified and other obstacles should be removed to create incentives to facilitate community forestry. The efficiency in timber industry and in ancillary

economic activities had to be increased by making use of all "waste" products from forestry operations. The Commission proposed to set up an umbrella organisation called Forestrust International. "Its activities would include monitoring the forest situation, investigating and publicising incidents of abuse of rights and power and passing critical judgments on policies pursued, recognising and rewarding exemplary practice by communities, corporations and countries in managing forests sustainably".

Earlier, Dr. M. S. Swaminathan, Chairman, M. S. Swaminathan Research Foundation, welcomed the gathering. Dr. (Ms.) Angela Cropper, WCFSD, spoke about the highlights of the report. Dr. BCY Freezailah, Executive Director, International Tropical Timber Organisation, Japan, spoke about the significance of the report to developing countries. Sir Humphrey Maud, Deputy Secretary General, Commonwealth, participated.

21/9/98

White paper on environmental issues soon, says Minister

EXPRESS NEWS SERVICE

Chennai, Sept 20: The action plan on environment policy will include release of a white paper on environment issues of the country, Union Environment and Forests Minister Suresh Prabhu said today.

Speaking to newsmen he said the government would draw an action plan to increase forest cover to 23 per cent. It would be ready with the white paper.

Dismissing doubts on the efficacy of the Coastal Regulation Zone Rules, the Minister assured that the Act would not be scrapped.

As such there was nothing to be added but at the same time the Centre would be appointing a committee under the chairmanship of an Additional Secretary in the Ministry would go into the problems of people who depend on the coastline for their livelihood.

On the Aquaculture Authority Bill, though the subject was within the ambit of the Agriculture Ministry, in his point of view, he was not for any activity that would damage ground water.

Much groundwork had to be done to get environmental labelling for products as was being done in several countries.

Though it was under consideration, there was no such plan to implement now, he said.

Earlier, after releasing the report of the World Commission on Forests and Sustainable Development (WCFSD) and inaugurating the meeting of the board of trustees of the Iwokrama International Centre for Rain Forest Conservation and

Development (ICRFD), the Minister said the Government will give the Amritadevi Bishnoi award, which would include a cash prize and citation, for meritorious work done by individuals in forest development programmes.

He said the award named after Amritadevi, of the Bishnoi community in Rajasthan who along with 363 others hugged a tree and sacrificed their lives to protect a tree from being felled.

Another award for the best services rendered by forest guards would also be instituted he said. He said 10 to 15 million hectares of forest land was being destroyed every year. Pointing out that people in India was deeply concerned about the loss of forests.

He said the country's forest cover was 19 per cent while the thick forest cover was just 0.37 per cent.

Assuring all help from the Centre for the WCFSD, he said the Government would take the contents of the report very seriously and said that all the forest development programmes would have women as members.

The Minister presented the first copy of the report to the Minister for Science and Technology Navin Chandarpal from Guyana.

Dr Angela Cropper, WCFSD member and former executive secretary of the Convention on Biological Diversity read out the highlights of the report in which she said, the Commission called upon fifteen countries to constitute themselves as a Forest Security Council - F15 - to take up the mantle of leadership on behalf of their own

and the world's forests and citizens. The proposed countries are Australia, Brazil, Canada, China, Columbia, Ecuador, Ethiopia, Ghana, India, Indonesia, Japan, Russia, Sweden, USA and Venezuela.

Pointing out that in the course of their study they discovered that there were no forests at all in 25 countries, she said the Commission proposed a set of mechanisms operating within an umbrella which was called Forestrust International.

This would enable world citizens to help build the normative framework for forest management.

Forestrust International was an entity built on four pillars each dedicated to monitoring forest situation, investigating and publicising incidents of abuse of rights and power and passing critical judgments on policies pursued, encouraging co-ordinated approaches in management criteria and recognising and rewarding exemplary service by communities.

BCY Freezailah, WCFSD member and executive director, International Tropical Timber Organisation, Japan, spoke on the significance of the report to developing countries. M S Swaminathan WFCSD member and chairman of the M S Swaminathan Research Foundation said "conservation without resources was just conversation". Society for Promotion of Wastelands Development chairperson Dr Kamla Chowdhry, Sir Humphrey Maud, Deputy Secretary General, Commonwealth and State Forest Department Secretary K.S. Sripathi took part.

Action plan to increase forest cover

Our Principal Correspondent
CHENNAI, Sept. 20

THE Union Government is instituting new national awards for forest preservation activities, according to the Union Minister for Environment and Forests, Mr. Suresh Prabhu.

Speaking after releasing the report of the World Commission on Forests and Sustainable Development (WCFS) at a function organised at the M.S. Swaminathan Research Foundation (MSSRF), Mr. Prabhu said that the Amrita Devi Bishnoi Award was being instituted. This would be given to a non-Governmental organisation, individual or an institution for carrying out the best forestry activities.

The annual award would commemorate the bravery of Amrita Devi of the Bishnoi community, who, along with 363 of her followers, laid down her life centuries ago to protect the trees in her village from being cut.

Forest guards belonging to various State forest departments would also be given awards for their work carried out for protecting the forests under their care, according to Mr. Prabhu.

He said that the Ministry had started the activities to bring out an action plan to increase the forest cover in the country to reach 33 per cent of the land area. This was the goal set out by the national forest policy.

According to him, currently, forests covered 19 per cent of the land area in the country. Of this, only 11 per cent had a canopy cover of over 40 per cent. The Ministry was in the process of bringing out a white paper on the environmental situation in the country. This and the action plan on forestry would then become part of the national environmental policy document, which would also be prepared by his Ministry, according to Mr. Prabhu.

There was need to prevent avoidable loss of forest cover. There was also need for carrying out forest regeneration activities. For carrying out these activities, there was need to find resources.

According to him, the time had come when nations had to decide on spending a certain

percentage of their GDP on forestry. Only countries that spend more than a certain percentage should be eligible to be called as developed countries. The percentage kept aside could be spent not only in the respective countries but also all across the world, since forestry was a global issue, he observed. The countries

which sacrificed their development and preserved their forests for the global welfare should be provided a cess by the other countries.

Mr. Prabhu said the Coastal Regulation Zone (CRZ) notification was strong enough to prevent the degradation of the coastal ecosystem. The CRZ notification, which was a landmark notification, was not going to be scrapped. However, improvements could be made in it.

A committee, he said, had been set up by the Ministry to look into the problems faced by the people living on the coast and suggest ways to resolve them. This committee was being headed by a senior Ministry official.

The Environment Ministry was also in the process of looking into the representation made by the Tamil Nadu Government for freeing the export of sandal wood. Although his Ministry was not in favour of giving a blanket permission for exports, the State's request was being considered on the basis of the fact that it had large sandalwood stocks, he said.

Giving a presentation of the highlights of the WCFS report, Dr. Angela Cropper, commission member, said that the world was losing 10 to 15 million hectares of forests every year. Forests had disappeared in 25 countries, 18 had lost 95 per cent of their forests and 11 had lost 90 per cent.

The commission had concluded that the protected area approach was not enough to sort the problems faced by forests. A broader approach was needed since the cause for the problems lay outside the forests, she said.

The WCFS had also recommended the computing of a forest capital index so that the countries could judge the value of their projects. Only this could provide the tool for the policy-makers to take decisions.

Bijoy Ghosh



Dr. M.S. Swaminathan, Chairman, M.S. Swaminathan Research Foundation, and Mr. Narin Chandarpal, Guyanese Minister for Science and Technology, look on as the Union Minister for Environment and Forests, Mr. Suresh Prabhu, releases a WCFS report in Chennai on Sunday.



The agriculture scientist, Dr M S Swaminathan, (right) addressing a roundtable on the National Agriculture Policy and its operationalisation, organised by FICCI, in New Delhi on Friday. the FICCI Agriculture Committee Chairman, Mr V S Aggarwal, is also seen.

■ Kamal Singh

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தெதி
'சன்'
ரிப்பு
ங்கை
பேர்
ளை
ணை

பயர்
த்துல்
லின்
பரும்
ர்கள்
சாரி
ரந்து

சென்னையில் நடந்த புத்தக கண்காட்சியில் தமிழ் பேச்சு போட்டியில் முதல் பரிசு பெற்ற மாநில மகளிர் மேல்நிலைப்பள்ளிக்கூட மாணவி ரதி சித்ராவுக்கு சிங்கப்பூர் சென்று வருவதற்கான இந்தியன் ஏர்லைன்ஸ் நிறுவனம் வழங்கிய விமான டிக்கெட்டை கல்வி அமைச்சர் அன்பழகன் பரிசாக வழங்கியபோது எடுத்த படம். வேளாண்மை விஞ்ஞானி எம்.எஸ். சுவாமிநாதன், இந்தியன் ஏர்லைன்ஸ் நிறுவன தென் பிராந்திய இயக்குனர் ஆர்.என். சாக்சேனா ஆகியோர் படத்தில் இருக்கிறார்கள்.

கடும் ஊனமுற்றோர்களுக்கு வழங்கப்படும்

பராமரிப்பு உதவித்தொகை ரூ.500 ஆக உயர்த்த வேண்டும் தமிழக அரசுக்கு கோரிக்கை

பை
ந்து
தெரி
ளது
னாக

த்ச்சி
சார்
டன்
கள்.
பரும்
யம்
லை

அவர்
நான்
ழம்பு
ல்ல
த்து.
னர்
பரில்
ான
சார்
ரப்பு
னர்.
ண்டு
வில்

திருச்சி, ஆக.14-
கடும் உடல் ஊனமுற்ற
றோர்களுக்கு வழங்கப்படும்
பராமரிப்பு உதவித் தொகை
150 ரூபாயில் இருந்து 500
ரூபாயாக உயர்த்தி வழங்க
வேண்டும் என்று தமிழக
அரசை கேட்டுக்கொண்டு,
உடல் ஊனமுற்றோர் சங்க
மாநில செயற்குழு கூட்டத்
தில் தீர்மானம் நிறைவேற்றப்பட்டது.

றப்பட்டது.

மாநில செயற்குழு கூட்டம்

தமிழ்நாடு உடல் ஊனமுற்றோர் சங்கங்களின் கூட்டமைப்பின் மாநில செயற்குழு கூட்டம் திருச்சி மாநகராட்சி பயணிகள் விடுதியில் நடைபெற்றது. கூட்டத்துக்கு மாநில தலைவர் ஜி.சிதம்பரநாதன்

தலைமை தாங்கினார்.

கூட்டத்தில் நிறைவேற்றப்பட்ட தீர்மானங்கள் வருமாறு:-

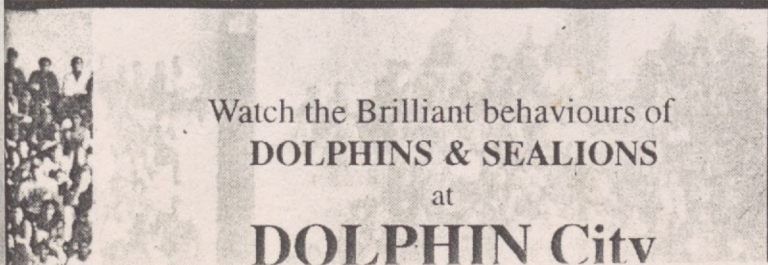
பராமரிப்பு உதவித்தொகை

* கடும் உடல் ஊனமுற்றோர்களுக்கு வழங்கப்படும் பராமரிப்பு உதவித்தொகை ரூ.150 விருந்து ரூ.500 ஆக உயர்த்தி வழங்கி, தகுதியுள்ள அனைவருக்கும் எண்ணிக்கை உச்சவரம்பின்று வழங்க வேண்டுகிறோம்.

* பள்ளி, கல்லூரி மற்றும் தபால் மூலம் பயிலும் மாணவர்களுக்கு கல்வி கட்டணத்திலிருந்து முழு விலக்கு அளிக்கவும், மேலும் தேர்ச்சி பெற்றுள்ள ஊனமுற்ற மாணவர்களுக்கு அரசு வழங்கும் கல்வி உதவித்தொகையை வருமான வரம்பின்றி அனைத்து ஊனமுற்றோர்களுக்கும் வழங்க கேட்டுக் கொள்வது.

ஊனமுற்றோர் வாரியம்

படித்து, வேலையின்றி கஷ்டப்படும் ஊனமுற்றவர்களுக்கு



Watch the Brilliant behaviours of
DOLPHINS & SEALIONS
at
DOLPHIN City

“சரியான திட்டம், ஒழுங்கான கல்வி, சமூக ஒற்றுமை மூன்றும் தேவை”

எம்.எஸ். சுவாமிநாதன், (வேளாண்மை விஞ்ஞானி.)

“மத்தியில் அமைகிற புதிய அரசு, பதவி ஏற்றதும் கவனம் செலுத்த வேண்டிய முக்கியப் பிரச்சினைகள் மூன்று. சுகாதாரம், கல்வி, விவசாயம்.

இன்னும் சில வருடங்களில் துவங்கும் அடுத்த நூற்றாண்டு அறிவுத்திறனுக்கும், திறமை களுக்கும் மக்கள் தொடர்புச் சாதனங்களுக்கும் முக்கியத்துவம் கொடுக்கக்கூடிய நூற்றாண்டாக



விவசாயத்தை
உலகளாவிய
செய்யுங்கள்

இருக்கப் போகிறது. இந்தியாவில் ஊட்டச்சத்துக் குறைவினால் மந்த மூளையோடு பிறக்கும் குழந்தைகள் எதிர்காலத்தில் எப்படி போட்டிப் போட முடியும்?

அதனால் தாய்மார்களுக்குப் போதுமான ஊட்டச் சத்து, குழந்தை களின் பாதுகாப்பு, சுத்தமான குடிநீர், கழிப்பிட வசதிகள் எல்லாம் அடங்கிய சுகாதார திட்டங்களில் கவனம் செலுத்தப்பட வேண்டியது மிக மிக முக்கியம்.

இரண்டாவது விஷயம், கல்விக்கு இன்னும் அதிக முக்கியத்துவம் கொடுக்கப்பட வேண்டும். ஆரம்பக் கல்வியிலிருந்து, பல்கலைக்கழகம், தொழிற் கல்வி வரை கல்விக்கு பட்டுஜெட்டி லேயே நிதி ஒதுக்கீட்டை அதிகரிக்க வேண்டும்.

உலகளாவிய
செய்யுங்கள்



மூன்றாவது விஷயம், பாரதிய ஜனதா அடிக்கடி சொல்லி வரும் 'சுதேசி' சம்பந்தப்பட்டதுதான். கிராமப்புற அளவில் விவசாயத்தில் மாற்றத்தைக் கொண்டு வர வேண்டும்.

வெறுமனே மானியம் கொடுப்ப தால் மட்டும் விவசாய உற்பத்தி வளர்ந்துவிடாது. விவசாயம் செய்ய சாதகமான சூழ்நிலை, நீர்ப்பாசன வசதி, விளைந்தவற்றை விநியோகிக்க, பாதுகாக்க வசதி, சரியான விலை நிர்ணயம் இவற்றை ஒழுங்குபடுத்தி னாலே விவசாயத்தில் முன்னேற்றம் உருவாகிவிடும்.

எப்போதுமே விளைபொருட் களை இறக்குமதி செய்வதில் நாம் ஆர்வம் காட்டக் கூடாது. இப்படி இறக்குமதி செய்யப்படும் போது இந்தியாவில் உள்ள பலருக்கு வேலை இல்லாமல் போய் விடு கிறது. கூடு மான வரை



முதல்
பெரிய
புள்ளி

இறக்குமதியைக் குறைத்து, சுதேசி அடிப்படையில் இந்தியாவிலேயே விளைபொருட்களை உற்பத்தி செய்யக்கூடிய ஆரோக்யமான சூழ்நிலையை உருவாக்க வேண்டும், அதே சமயம் தொழில் வளர்ச்சி என்கிற பெயரில் இங்குள்ள சுற்றுச் சூழலையும், மண்ணையும் கெடுத்து விடக்கூடாது.

சரியான திட்டம், ஒழுங்கான கல்வி, சமூக ஒற்றுமை மூன்றும் இருந்தாலே -- இவற்றை சாதித்து விடலாம்”

“ஏற்றுமதியில் கவனம் செலுத்த வேண்டும்”

டி.டி. வாசு (தொழிலதிபர்) :

சில காலமாகவே நம் முடைய பொருளாதாரம் மிக மோசமான நிலையில் உள்ளது. இதற்கு



என்பதற்கு
தீர்மானம்
முக்கியம்

புதிய ஆட்சி முதல்

சுமார் 26.3.98

என்ன செய்ய வேண்டும்?

சுமார் 26.3.98

தமிழருக்கு ஓர் ஆசியப்பரிசு

ஆசியாவின் சிறந்த பரிசுகளில் ஒன்று, ராமோன் மாக்ஸெலே பரிசு. 75,000 ரூபாய் பெறுமானமுள்ளது. நடப்பு ஆண்டுக் கான இப்பரிசைப் பெறும் பெருமை வாய்ந்தவர், தமிழகம் தந்த ஒரு தாவர இயல் விஞ்ஞானி. அவர், தற்சமயம் தில்லியில் உள்ள பாரத விவசாய ஆராய்ச்சிக் கூடத்தை நிர்வகிக்கும் பொறுப்பை ஏற்று, திறம்படச் செயலாற்றி வரும் டாக்டர் எம். எஸ். சுவாமிநாதன்.

ராமோன் மாக்ஸெலே பரிசு ஆண்டுதோறும் சர்வதேச ஒத்துழைப்பு, அரசாங்க சேவை, பொதுஜன சமூக சேவை இலக்கிய மும் பத்திரிகைத் தொழிலும் ஆகிய பிரிவுகளில் சிறந்து விளங்கும் ஆசிய பிரஜைகளுக்கு அளிக்கப்பட்டு வருகிறது.

பாரதத்தின் விவசாய உற்பத்தித் திறனை உயர்த்துவதைவிடச் சிறந்த சமூக சேவை இங்கு வேறு என்ன இருக்க முடியும்?

ஸொரோரா - 64 என்ற உயரம் குறைந்த, அதிக விளைச்சல் தரக் கூடிய சிவப்பு நிற மெக்ஸிகன் கோதுமையிலிருந்து கதிரியக்க முறையைக் கையாண்டு சடிதி மாற்றத்தின் மூலம் (Mutation) டாக்டர் சுவாமிநாதனும், அவரது துணை விஞ்ஞானிகளும், ஷர்பதி ஸொரோரா என்ற புது ரகக் கோதுமையை உருவாக்கியுள்ளனர். அம்பர் நிறமுள்ள இப்புது ரகக் கோதுமையில் உள்ள புரதச் சத்து 20 சதவிகிதம் அதிகமாகும். தவிர இதில் லைசின் (Lysine) என்ற உயர்ந்த ரக அமினோ ஆசிட் (Amino Acid) சாதாரண ரகக் கோதுமையில் உள்ளதைவிட 3 சதவிகிதம் அதிகமாக உள்ளது. இது பாலில் உள்ள புரதச் சத்துக்குச் சமமாகும். இதன் காரணமாகப் போதிய அளவு பால் அருந்த முடியாத ஏழைக் குழந்தைகளின் மூளை வளர்ச்சிக்கு இந்தப் புதுரகக் கோதுமை பெரிதும் உதவுகிறது.

டாக்டர் சுவாமிநாதனின் ஆராய்ச்சியின் மூலம் இரண்டுவித மெக்ஸிகன் உருளைக் கிழங்குச் செடிகளை ஒட்ட வைத்து, புதுரக உருளைக் கிழங்கு ஒன்றைத் தோற்றுவித்த முறை, Swaminathan Artificial Stigma Method என்ற பெயருடன் தாவர இயலில் விளங்கி வருகிறது. இதற்கு முன் கையாண்ட முயற்சிகள் யாவும் தோல்வியுற்றதன் காரணமாக, டாக்டர் சுவாமிநாதன் உருவாக்கிய முறை அயல்நாடுகளிலும் தாவர இயல் நிபுணர்களால் கையாளப்பட்டு வருகிறது.

இத்தகைய பெருமை வாய்ந்த டாக்டர் சுவாமிநாதன் நிர்வகித்து வரும் தில்லியின் பாரத விவசாய ஆராய்ச்சிக் கூடம் மிகப் பழைமையானது.



அமெரிக்காவைச் சேர்ந்த ஹென்ரி பிப்ஸ் என்ற செல்வந்தர், 1905ம் ஆண்டில் முப்பதாயிரம் பவுன்கள் நன் கொடையாக அளித்து உதவியதை யடுத்து, பாட்டுவுக்கு நூறு மைல் தொலைவில் பாரத விவசாய ஆராய்ச்சிக் கழகம் நிறுவப்பட்டது. பிப்ஸ் என்ற பெயரின் முதல் ஆங்கில எழுத்தான 'P'

ஐந்து

“ ஜனர்த்தனன் ”

ஐந்து

அமெரிக்காவைக் குறிக்கும் U S A என்ற எழுத்துக்களுடன் சேர்ந்து, PUSA என்ற பெயருடன் அந்த ஆராய்ச்சிக் கழகம் தொடங்கி இன்றைக்கும் அதே செல்லப் பெயருடன் இயங்கி வருகிறது. 1934-ம் ஆண்டில் நேர்ந்த பூகம்பத்தில் பூஸா ஆராய்ச்சிக் கூடத்தின் பிப்ஸ் ஆராய்ச்சி சாலையும், மற்றும் பல கட்டடங்களும் இரண்டாகப் பிளந்து சேதமடையவே, ஆராய்ச்சிக் கூடம் தில்லி நகரில் புதிதாகக் கட்டப்பட்டுத் தற்சமயம் சுமார் 1300 ஏக்கர் நிலப் பகுதியில் அதே பெயரில் இயங்கி, விவசாயத் துறைக்கு அருந்தொண்டாற்றி வருகிறது.

கோவை விவசாயக் கல்லூரியில் படித்துப் பட்டம் பெற்ற ஸ்வாமிநாதன் ஹாலந்து, பிரிட்

ஐந்து

ஆசியாவின் சிறந்த பரிசான ராமோன் மாக்ஸெலே பரிசு பெற்ற டாக்டர் எம். எஸ். சுவாமிநாதன்.

ஐந்து

டன், அமெரிக்கா ஆகிய நாடுகளில் இருந்து ஆராய்ச்சிகள் பல புரிந்துள்ளவர்.

பத்மஸ்ரீ உள்பட டாக்டர் சுவாமிநாதனுக்குக் கிடைத்திருக்கும் பரிசுகளும் விருதுகளும் அநேகம். அயல்நாடுகள் பல

NEWS AND VIEWS

Dr. M. S. Swaminathan takes over as Director-General, I.C.A.R.

THE dawn of 1972 announced the happy news of Dr. M. S. Swaminathan's appointment as Director-General, Indian Council of Agricultural Research, New Delhi. Dr. B. P. Pal retired from service after a distinguished career spread over 35 eventful years.

Born on August 25, 1925, Dr. Swaminathan took his B. Sc. (Agri.) from Madras University and became an associate of the IARI in 1949. He did his Ph.D. at Cambridge in 1952. In 1970, he was conferred D.Sc. (Honoris Causa) by Sardar Patel University.

Dr. Swaminathan is the recipient of several national and international awards. These include Shanti Swarup Bhatnagar Award for contributions in Biological sciences-1961; Mendel Centenary Award of Czechoslovak Academy of Sciences-1965; Birbal Sahni Award of the Indian Botanical Society-1965; Padma Shri-1967; Raman Magsaysay Award for Community Leadership-1971; Padam Bhushan-1972.

He is a member of many scientific academies. He is Fellow of the Indian National Science Academy; Fellow of the Indian Academy of Sciences; Member, National Committee on Science and Technology, and Member, National Commission on Agriculture. He is Chairman of the Food and Agricultural Committee of the Department of Atomic Energy. He is the first President of the Indian Society for Nuclear Techniques in Agriculture and Biology.

Dr. Swaminathan was chosen as the Vice-President of the 12-Member Committee set up by the World Bank, U.N.D.P. and the F.A.O for guiding international research in agriculture. He was also nominated by the United Nations as a Member of its Protein Advisory Group.

Dr. Swaminathan is actively involved in the development of the High Yielding Varieties Programme, the Dryland Farming Programme and the Multiple Cropping Programme. He was responsible for developing the National Demonstration Project in 1964 involving direct participation of scientists in conducting demonstrations in farmers' fields. He was also responsible for evolving the 'Seed Village' concept and demonstrating the feasibility of converting unskilled farm workers into skilled personnel in the Jounti seed village in Delhi State.



Dr. M. S. Swaminathan

Dr. Swaminathan has guided nearly 50 students in Ph.D. thesis work and 40 students in M. Sc. and Associates IARI. His technical competency, his speaking ability, his writing capability, his organisational ingenuity and above all, his appealing personality, have brought him universal popularity. His wide range of interests varying from science to sociology, agriculture to biology, virology to radiology, and pedology to ecology, have made him a matchless leader in all the branches of human knowledge. His fresh and smiling face, his clear and unruffled mind, his untiring and dynamic nature, all have developed in him a capacity to face challenges and make the most out of every opportunity. His approach to various problems and human relationships is a wholesome blend of science, sociology, psychology and biology. A man with all these outstanding achievements and rare attributes is the leader of this country in all the vital fields—Agriculture, Animal Husbandry and Dairying.

A Pragmatic Farm Scientist

"IMAGINE your plight to-day if you do not have the 21 million tonnes of foodgrains in stock," observed the world-renowned agricultural scientist, Dr. Norman Borlaug in New Delhi recently in an obvious reference to the drought gripping several parts of the country. It was not without significance that he made this remark on the occasion of the presentation of an award, instituted in his honour by the Coramandel Fertilizers as part of its efforts to underline the primacy of agriculture. The recipient of the award this time was one who had played a key role in bringing about the "green revolution" and one who, in the words of Dr. Bharat Ram, had been at the heart-centre of the awakening in favour of technologies to impart stability to food production.

The Borlaug Award citation aptly described the recipient, Dr. Mankombu Sambhasiyan Swaminathan as a "servant of agriculture" and commended him for evolving a strategy for agriculture rooted in science but tempered by concern for ecology and human values. Besides his scientific excellence and broad vision, his ability to synthesise important aspects from many disciplines was mentioned by Dr. Borlaug as a quality that won for him fame in the world of agricultural science.

At 54, Dr. Swaminathan has already had the privilege of receiving recognition and awards from a number of national and international bodies. These include the Fellowship of the Royal Society, Associateship of the National Academy of Sciences of USA, membership of

the All Union Academy of Agricultural Services of USSR, Magsaysay award and Bhatnagar award. His research interests are wide and varied. He began his career with studying potatoes and then switched over to wheat, jute, rice and many other economic plants.

Basically he is a geneticist and has made significant contribution to purposeful manipulation of genes in improving the yield, quality and stability of performance of several economic plants, identifying the barriers to high yields in wheat, and initiating the wheat breeding programme with the Mexican dwarf variety developed by Dr. Borlaug which set the pace for the green revolution. He has diversified into other facets of agricultural science to ensure that the research helps the farmer to raise production. The development of the concept of "crop cafeterias", mid-season corrections in crop scheduling and alternate cropping strategies for different weather con-



ditions and the whole village or watershed operational research projects, based on principles of ecology and economics are some of his major contributions.

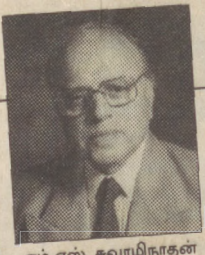
Soft-spoken, Dr. Swaminathan wears an endearing smile which hides an iron will. He has had his moments of trial a few years ago when a fierce campaign was mounted against him on grounds of some exaggerated scientific claims. The allegation was that he had claimed higher lysine content to the wheat variety Sharbati Sonora than what it actually had. A weaker person would have succumbed to the campaign but he got out of it unscathed by proving convincingly that he had not made any 'false' claim, and that the figures given by him were on the basis of the first experiment, which, however, turned out to be different in subsequent experiments.

Similarly, when a scientist of the Indian Agricultural Research Institute committed suicide, he as the head of the organisation, had to bear the brunt of the attack. He not only faced it but utilised it to bring about drastic reforms in agricultural research service.

Dr. Swaminathan had abiding interest in agricultural science from his early years but for which he would have become a police officer. Hailing from Mankombu (Kerala), he had his early studies in Kumbakonam where his father was a surgeon. He then joined the Agricultural College at Coimbatore to equip himself for managing the family plantation in Wyal but by the time he passed out of the college, his interest in genetics and plant breeding grew.

He joined the associateship course in IARI to pursue studies in genetics when he was persuaded by his family to sit for the Federal Public Service Examination as a result of which he got selected for the Indian Police Service. But, at the same time he got an UNESCO fellowship to study in Netherlands and he opted for this. After a year in Netherlands, he went to Cambridge for his doctorate and then to Wisconsin for post-doctoral research. He could have continued in Wisconsin but preferred to work at home.

On return, he first joined the Rice Research Institute at Cuttack and then the IARI where he rose from an Assistant Cytogeneticist to become the Director. Later, he was Director-General of the Indian Council of Agricultural Research for seven years. At the completion of five years, he offered to step down as he had himself laid down a five-year term for such posts. But he was persuaded to continue and two years later was made Secretary to Agriculture Ministry, the first agricultural scientist to occupy this post.



எம்.எஸ். சுவாமிநாதன்
வேளாண் விஞ்ஞானி

நாட்டின் எதிர்காலச் சொத்துகளான குழந்தைகள், சமயங்கு வகித்து வரும் பெண்களின் நலக் குறைவு குறித்து அதிக அக்கறை காட்டிட வேண்டும். அரசு நலத் திட்டங்களின் பலன்கள் மக்களை முழுமையாகச் சென்றடைய முன்னுரிமை அளித்திட வேண்டும். நுண் ஊட்டச் சத்துக் குறைவால் ஏற்படும் பசிப்பிணியை நீக்கிடவும், பாதுகாக்கப்பட்ட குடிநீர், தூய்மையான சுற்றுச் சூழலை அளித்திட முயற்சிகள் மேற்கொள்ளப்பட வேண்டும். எனவே, வயிற்றுக்குச் சோறிட்டு, நலிந்தோர்க்கு நலவாழ்வை உறுதி செய்து, பெண்கள், குழந்தைகள் நலத்தைப் பேணி, 21-ம் நூற்றாண்டின் அறிவுசார் சமுதாயத்துக்கு அரசு வித்திட வேண்டும்.

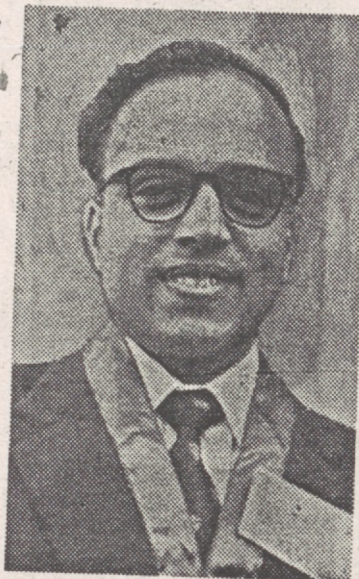
OUR SCIENTISTS-1

An Outstanding Genetist

[This is the first in a series on young and outstanding scientists of India who have made notable contributions in their respective fields.]

At 40, Dr. Monkombu Sambasivan Swaminathan—who recently received the Birbal Sahni Medal of the Indian Botanical Society—already ranks among the topmost genetists of India with international recognition.

Dr. Swaminathan, who now heads the botany division of the Indian Agricultural Research Institute in New Delhi, has been engaged for over a decade in research in plant genetics. Many are the contributions which have won for him honours from national and international scientific bodies. But modest as he is, he wants to attribute the credit to his students and fellow workers in the Institute. The highest national honour received



by him so far is the Shanti Swarup Bhatnagar Memorial Award of 1961.

International recognition came to him in August 1965 when at a world meet of genetists at Brno, the Czechoslovak Academy of Sciences honoured him with the Mendel Memorial Award—which has not been conferred before on any Indian or even an Asian genetist. The other awards received by him were the Indian Journal of Genetics Medal (1964) and Timiraezov Academy of Agricultural Medal (1965). He was also the first Indian to be selected Vice-Presi-

dent of the International Congress of Genetists (1963).

Dr. Swaminathan was born in Kumbakonam in 1925. His father was a medical practitioner. Dr. Swaminathan took to agricultural science. He specialised in genetics because he saw in it the means to increase farm output. His later findings proved him right and showed that great spurts in crop yields could be accomplished through genetic manipulations, in conjunction with changes in agronomic practices.

Among his contributions may be mentioned the "Swaminathan Artificial Stigma Method" for successfully crossing two Mexican tuber-bearing potato species. All previous attempts to make this cross had failed and the technique recommended by Dr. Swaminathan was taken up for follow-up action by foreign genetists. Similarly he accomplished the crossing of two jute yielding species which is of great value in improving the yield of jute.

More recently his primary interest has been in experimental manipulation of genes to improve the yields of wheat and cotton. As part of his research he organised a radiation genetics school in the Indian Agricultural Research Institute for studying indirect effects of radiation of plants. This work has a great bearing on the evaluation of the wholesomeness of irradiated food and some of his findings have been recently confirmed by genetists of the Cornell University (U.S.A.).

While all these have secured for Dr. Swaminathan a place among the top men of science, his most significant contribution to Indian agriculture is the initiation of Dwarf Wheat Breeding programme, which offers promise of making the country surplus in wheat output within the next few years.

Dr. Swaminathan believes in the practical application of science to supply the basic needs of the country. An example of this is the Jawahar Jount seed village near the IARI. A creation of his, the whole village is a seed farm engaged in breeding high yielding varieties of wheat and jowar evolved through genetic manipulations.

Dr. Swaminathan is married and has three daughters. He has no particular hobby. Keeping himself up to date with the latest developments in the field of genetics and attending to the needs of his family take up whatever time left after research and teaching work at the Institute.—B.S.P.

(Next: Dr. A. P. Mitra)

The Hindu - 12-3-66

உணவும் உலகும்

2. குறுங்கோதுமையும் போர்லாகும்

புகைமப் புரட்சியைப் பற்றிப்

பேசிய டாக்டர் எஸ். வேணு கோபால், நம் நாட்டில் குறுங்கோதுமை வந்த வரலாற்றையும், அதை உருவாக்கியவரைப்பற்றியும், விரிவாகப் பேசினார். அந்தப் பேருரையை சுருக்கமாகப் பார்ப்போம்.

நமது நாட்டின் உணவு பற்றிக் குறையைத் தீர்ப்பதற்கு நம் நாட்டினர் கையாண்ட முதலாவது வழி, நல்ல விளைபயனை அளிக்கக் கூடியதும், திண்ணியமான குறுங்கோதுமைப் பயிரை நம்நாட்டில் எங்கும் பயிர் செய்யும் பொருட்டு மேற்கொண்ட முயற்சி.

மெக்ஸிக்கோ நாட்டில் பயிரிடப்பட்டுவரும் குறுங்கோதுமை அந்நாட்டு உணவு வறுமையைப் போக்கியதோடு, அங்கு உணவு மிகுதியையும் கொணர்ந்தது. அந்தச் சிறந்த பயிரின் விதைகள் நம் நாட்டிற்குக் கொணரப்பட்டன. அவை பலவகையானவை. அவற்றுள் ஒன்று ஸொனோரா-64 (Sonora-64) என்பது. மெக்ஸிக்கோவிலிருந்து வந்த அந்த குறுங்கோதுமைவகை ஹெக்டேருக்கு (Hectare) 64 குவின்டால் (Quintal) விதம் மகசூல் அளித்தது. ஹெக்டேர் என்பது பதிலுயிரம் சதுர மீட்டர். அதாவது 2.47 ஏக்கர். குவின்டால் என்பது லட்சம் கிராம், அதாவது 220.46 பவுண்டு. நம் நாட்டில் அதுவரை பயிராகிவந்த சி. 281, சி. 273 என்னும் வகைகளை ஹெக்டேருக்கு 21 குவின்டால்கோதுமையே அளித்தன. முன்னால் தொழு உரமே பயிருக்கு அளிக்கப்பட்டு வந்தது. புதிய வகைக்கு இரசாயன செயற்கை உரங்களும் இடப்பட்டன. செழிப்பான செடிகளில் அதிக குறுத்துக்களும் பக்கக் கன்றுகளும் முளைத்தன. புதுவகைச் செடி மடிந்து தாழவில்லை. அவைகளின் தண்டுகள் உருண்டு திரண்டு கட்டுறுதி உள்ளவையாக இருந்தன. தானியமணி, வைக்கோல் விசிடம் முன்னையவிட மிக உயர்வாக இருந்தது. கலப்பினச் செடிகள் விரைவில் முதிர்ச்சியடைந்த பகல் வேளையின் அளவு மாறுபாடுகளால் அவற்றின் முதிர்ச்சி

(நமது அறிவியல் திருப்தி)

என்றும் பெயரை இட்டார். ஜப்பான் நாட்டில் நோரின் (Norin) கோதுமை என்னும் குறுஞ்செடிவகை ஒன்று இருந்தது. அந்தக் கோதுமையில் விதையிலுள்ள குற்றியல் ஜீன்களை (Genes for dwarfness) மெக்ஸிக்கோ நாட்டின் இளவேனிற்காலப் பயிராகிய கோதுமைச் செடிகளின் விதைகளிலுள்ள அவர் படியவைத்தார். இப்படிச் செய்ததன் பயனாக, அவருக்கு ஒரு சிறந்த செடிவகைக் கிடைத்தது. அவை நல்ல மகசூலை அளிப்பவையாயும், உரமிட்ட அளவுக்கு, நல்ல ஏற்றபடி பயன் அளிப்பவையாயும், வெயில் ஒளியால் (அதன் குறைவு மிகுதிகளால்) அதிக வளர்ச்சி குன்றாதவையாயும் - ஒளி உணர்ச்சியற்றவையாயும் என்று கூடச் சொல்லலாம்—

குறுகிய உயரம் உள்ளவையாயும், கட்டுறுதியுடைய தண்டையும் வைக்கோலையும் உடையவையாயும், மடிந்து தரையில் படியாதவையாயும் உள்ள கோதுமைவகைகள் சில கிடைத்தன. அவற்றுள் ஸொனோரா-64, லெர்மா-ரோஜா-64, மேயோ-64, பெஞ்ஜாமோ-62, பிட்டிக்கு-62 என்பவை ஒருசில. நல்ல மகசூலை அளிக்கும் இந்த ரகங்கள் சிலவற்றில் 100 கிலோகிராம் எடையுள்ள விதைகளை டாக்டர் போர்லாகிடமிருந்து இந்தியா பெற்றது. இப்படிப் பொறுக்கி எடுத்த வகையைச் சார்ந்த விதைகளையும் நம் நாட்டில் செயலில் சோதிக்கப்பட்டன. டில்லியில் உள்ள இந்திய விவசாய ஆராய்ச்சி நிறுவனத்திலும், லூதியானிலுள்ள விவசாயப் பல்கலைக் கழகத்திலும் (UPAV), நம் நாட்டில் உள்ள பிறவகை கோதுமைப்பயிர்ச்செடி செடி இனங்களோடு கலப்பின வகைகள் உருவாக்கப்பட்டன. அதன் விளைவாக கல்யாண்-சோனா (Kalyan Sona) ஸோனாலிகா (Sonallika), ஷார்பதி ஸோனோரா (Sharbati Sona) முதலிய கோதுமை இன வகைகள் உருவாயின. அவற்றின் விதை

களால் நோயைப் பற்றி அவருக்கு உள்ள நெடுநாள் அனுபவத்தின் விளைவாக அவர் கூறிய ஆலோசனையே அது. ஒருவகைத் துருநோயைத் தாங்கி நிற்கவல்ல, அல்லது அந்நோயுறாத (Rust-Resistant), கோதுமைப் பயிர்வகைகள் படைக்கப்பட, படைக்கப்பட, புதிய வகைத் துருநோய்கள் தோன்றத் தொடங்கி, அந்தச் செடிகளைப் பற்றுவின்றன.



டாக்டர் எம். எஸ். ஸ்வாமிநாதன்

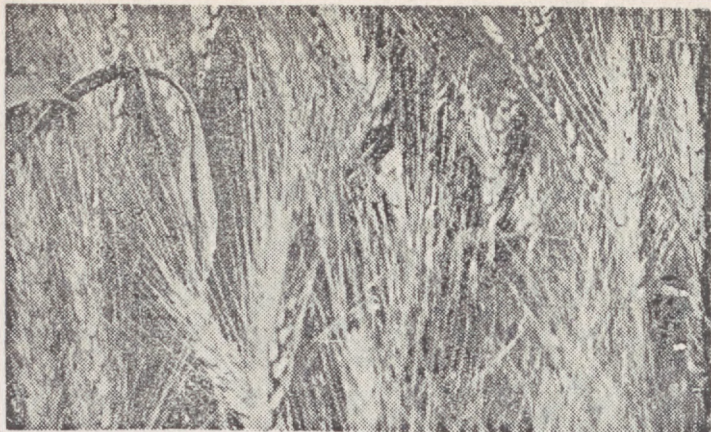
இந்திய விவசாய ஆராய்ச்சி நிறுவனத்தின் இயக்குநர். அமெரிக்க விவசாய நிபுணர்கள் படைத்துக் கொடுத்த நல்ல ரக விதைகளை இன்னும் நன்றாக உருவாக்கியவர்.

ஆதலால், ஒரு குறிப்பிட்ட மரபில் தோன்றிய செடி வகையை உருவாக்குவதை விட, பல மரபுகள் கலந்த செடி வகைகளை உருவாக்கிப் பயிரிடுவது நன்று என்பது டாக்டர் போர்லாக் கூறிய ஆலோசனை. அப்படிப் பலவகையான செடி வகைகள் பயிரிடப்பட்டால், பயிருக்கு முற்று முழுச்சேதம் ஏற்படுவதற்கு அவ்வளவு இடம் இராது. கோதுமைப் பயிரின் விளைவைத் தனிச் செடிகள் இவ்வளவு மகசூலை அளித்தன என்று கணக்கிடாமல், ஒரு பிரதேசத்தில் பயிரிட்ட செடிகள் எல்லாமாகச் சேர்ந்து எவ்வளவு மகசூலை அளித்தன என்றே கணக்கிட வேண்டும் என்று அவர் கூறினார்.

கோதுமைப் பயிர் புரட்சியின் முதல் தொண்டர் என்றும், சீர்திருத்தத் தலைவர் என்றும் கூறத்தக்கவர் டாக்டர் போர்லாக். அவர் செய்த தொண்டுகளின் விளைவாக, மெக்ஸிக்கோ நாட்டு மக்களுக்கு உணவுச் செல்வம் செழித்தோங்கிற்று. அந்நாட்டில் குறுங்கோதுமை வகைகள் எவ்வளவு நற்பயனை அளித்தனவோ, அவ்வளவு நற்பயன்களைக் கோதுமையைப் பயிரிடும் பிற நாடுகளிலும் அவை அளிக்கக்கூடும் என்பது விளைவில் தெரியவந்தது. அப்பொழுது-அதாவது 1966-ஆம் ஆண்டில்-நமது இந்தியநாடு குறுங்கோதுமை விதைகளை இங்கே இறக்குமதியாக வரவழைத்தது. இந்தப் புதிய வகைக் கோதுமை வகைகளின் துணையாலும், இந்த நாளில் கையாளப்படும் தொழில் நுட்பப் பயிரிடு முறைகளின் துணையாலும், நம் நாட்டு விவசாய விஞ்ஞானிகளும், பண்ணைக்காரர்களும் உணவுப் பஞ்சத்தை நம்நாட்டிலிருந்து துடைத்தழிப்பதில் பெரும்பான்மையும் வெற்றி கண்டுவிட்டார்கள்.

உலகெங்கும் உணவுப் பெருக்கம் ஏற்படுதலுக்குப் பேருதவி புரிந்த டாக்டர் போர்லாக் அத்துறையில் கொண்டுள்ள பெரும் பங்கை உலகம் மதித்து அவரைப் பாராட்டிற்று. 1970-ஆம் ஆண்டில் அவருக்கு நோபெல் அமைதிப் பரிசு வழங்கப்பட்டது. அவர் மனித இனத்தின் பேரூபகாரிகளில் ஒருவர். 1962-ஆம் ஆண்டு முதல் அவர் நம் நாட்டுக்குப் பலதடவை வந்திருக்கிறார். அவர் வந்தபோதெல்லாம் நம் நாட்டு கோதுமைச் சாகுபடியாளர்களுக்கு அறிவுரை கூறிவந்திருக்கிறார். நம் நாட்டிலும் இத்துறையில் பயிற்சி பெற்ற விஞ்ஞானிகள் இருந்தபடியால், அவர் கூறிய மதிப்பற்ற அறிவுரையை ஏற்றுப் பயன்பெற வாய்ப்பிருந்தது. இவ்வளவு குறுகிய காலத்தில் நம் நாட்டில் புகைமப் புரட்சி வெற்றி பெற்றதற்கு இதுவும் ஒரு காரணம்.

ஓனி நெற்பயிரைப் பார்ப்போம்.



மெக்ஸிக்கோவிலிருந்து வந்து நம் நாட்டு கங்கையாற்றின் நீரைப் பெற்று வளமாக வளர்ந்து நல்ல கதிர்களைத் தோற்றுவித்த குறுங்கோதுமை.

கால அளவில் மாறுபாடுகள் நேரவில்லை. பிரமாண்டமான மகசூலை அளிக்கவல்ல குறுங்கோதுமைப் பயிர்ச்செடிகள் உருவானது எப்படியென்பதை மறக்கலாகாது. டாக்டர் நார்மன் எர்ஸ்ட் போர்லாக் (Dr. Norman Ernst Borlugh) - என்னும் நிபுணர் வழிகாட்டி, ஊக்குவித்து அவர் சொற்படி கண்ணும் கருத்துமாக வேலைசெய்த மரபுயல்வழிப் பண்பியல் அறிவியலாரும் (Gene-Ticists) தாவரப் பயிர்களை உருவாக்கும் வளர்ப்புப் பண்ணைக்காரர்களுக்குமாக (Plant-Breeders) படைத்த புதுவகைச் செடிகளே குறுங்கோதுமைப் பயிர்ச்செடிகள். நிலத்திலிருந்து நல்ல விளைவு கிடைக்க வேண்டுமானால், மூன்று உறுப்பு ஒன்றாக சேர்ந்தாக வேண்டும் என்பது மெக்ஸிக்கோ நாட்டில் வழங்கிவந்த பழமொழி ஒன்று. விதை: இரண்டு, செயற்கை உரம்: மூன்று போர்லாக். மேலே கூறியபடி கலப்பின பயிர்கள் விரைவில் முதிர்ச்சிப்பெற்றன. பகல்வேளை மாறுபாடுகளால் அவ்வளர்ச்சி பாதிக்கப்படவில்லை. அவர் மீதிருந்த மதிப்பால் மெக்ஸிக்கோ நாட்டினர் தங்கள் ஊரில் ஒரு தெருவுக்கு அவர் பெயரை இட்டனர். அவரும் தாம் படைத்த குறுங்கோதுமை ஒன்றுக்கு தமது நாட்டிலுள்ள மாவட்டம் ஒன்றின் பெயரைக்கொண்டு ஸோனோரா

கள் மக்களுக்கு வழங்கப்பட்டன. ஸோனோரா நல்ல மகசூலை அளித்தபோதிலும், நாட்டு மக்கள் அதை விரும்பி ஏற்கவில்லை. அதன் நிறம் சிவப்பாக இருந்தது; அதன் உருவியும் அவ்வளவு பிடிக்கவில்லை. இந்த நிலையை மாற்ற, இனக்கலப்பு முறைகளைக் கையாண்டு மாற்று வகை இனங்களைப் பிறப்பித்தார்கள். அம்பர் நிறமுள்ளதும், திண்ணிய தானிய மணியை உடையதுமான, ஷார்பதி-ஸோனோரா வகை உருவாயிற்று. அதன் தானிய மணிகள் நம் நாட்டு மக்களுக்குப் பிடித்திருந்தன. இதை உருவாக்கியவர் வர்கள் டாக்டர் எம். எஸ். ஸ்வாமி ஸ்வாமிநாதனோடு செயல்பட்டதும், டில்லியில் உள்ள இந்திய விவசாய ஆராய்ச்சி நிறுவனத்தைச் சார்ந்ததுமான குழு. பஞ்சாப் விவசாயப் பல்கலைக் கழகத்தில் மூன்று ஜீன்களையுடைய ஒரு குறுஞ்செடிக் கோதுமை வகை படைக்கப்பட்டது. அதிக மழை பெய்யாத இடங்களில் கூட அது நல்ல மகசூலை அளிக்கிறது. மேலும், டாக்டர் போர்லாக் தாம் பின்பற்றி வந்த செயல் முறை ஒன்று நிறைய விளைவை அளிக்கிறது என்று தாம் கண்டதாகவும், அதைப் பின்பற்றுவது நன்று என்று சிபாரிசு செய்தார். கோதுமைப் பயிரைத் தாக்கிய துரு நோய் (Rust) என்றும்



What is right ... and what is wrong with Indian agriculture

Dr. M.S. Swaminathan, Director-General of the Indian Council of Agricultural Research, in a question and answer session with Our Special Correspondent, scans the scene to pinpoint the weaknesses in Indian farming and suggests various measures to increase productivity to levels already attained by several other countries.

SOME people assume that agriculture has been neglected in various Five-Year Plans, what is the background to that neglect?

I will not say that agriculture has been altogether neglected over the different Plan periods. This is obvious from the fact that in contrast to an annual growth rate of 0.01 per cent in food production during the period 1900-1947, the growth rate was about 2.8 per cent during 1950-1975. Also, the evolution of a production system takes place only in gradual steps. For example, in agriculture, the first task was to build up the major ingredients of scientific farming. Hence, in the early Plan periods, the emphasis was placed on major and medium irrigation projects, establishment of fertilizer factories, development of the seed industry, arrangements for credit supply and measures for procurement, pricing, marketing and storage.

Steps were also taken to strengthen our research and educational infra-structure in agriculture, animal sciences, fisheries and forestry. As a result, we have a network of well organised Central and State research institutes, 21 agricultural universities and more than 50 all-India co-ordinated research projects sponsored by the Indian Council of Agricultural Research. Probably, next to the U.S. Department of Agriculture, the In-

**Doubling of
rice yield not**

of the formulation of the Fifth Plan, I pleaded for more attention to productivity improvement.

I pointed out then, and I affirm it again, that if we do not improve crop yields, ours will be one of the most inefficient agricultural systems in the world by the 1980's. Also, the purchasing power of the marginal farmers will not improve.

To achieve productivity improvement, we need a farmer-centred approach to agricultural planning in the place of area or crop or animal-centred approaches. In a small way, a begin-

Wheat is relatively a low-risk crop

ning has been made in this direction through the small and marginal farmer agencies.

CAN it be that the green revolution has lost its momentum or is it still to attain some stature in some parts of the country?

The word, green revolution, was probably coined rather prematurely. What really did happen in the 1960's is a rapid advance in wheat production. Thus wheat production went up from about 12 million tonnes in 1964 to more than 28 million tonnes in 1976.

ANNUAL reports until 1975 of the Union Agriculture Ministry speak of the quicker gains in yields in the wheat belt and comparatively poorer show of the high-yielding varieties in the rice belt. Is this still true in the sense that the right hybrid for each variety of soil is still to be popularised?

As I have mentioned already the conditions under which wheat and rice are grown are very different. If we take the difference between the average yield in national demonstrations conducted in farmers' fields as representing the potential available at current levels of technology and compare it with the average yields in the State, we can get a measure of the untapped yield reservoir existing in an area.

The average yield in about 38 million hectares under rice in the country is only about 1.1 tonnes a hectare. Considering the fact that several countries like Australia, Japan and Spain have average yields exceeding six tonnes a hectare, doubling the rice yield in India is not a difficult task. The following steps will be necessary for a systematic effort in this area.

1. Estimation of the untapped yield reservoir existing in different rice growing areas during different seasons.
2. Identifying the major constraints responsible for low yield.
3. Specifying the precise action needed to overcome the constraints.

On the basis of the 1975-76 data, States can be classified into:

Category I with a demonstration State average yield ratio of less than two—Punjab, Jammu and Kashmir, Tamil Nadu, Maharashtra, Goa and Pondicherry;

Category II with a demonstration State average ratio between two and three—Andhra Pradesh, Haryana, Karnataka, Rajasthan, Kerala, Himachal Pradesh;

Category III with a demonstration State average ratio between three and four—Uttar Pradesh, Madhya Pradesh, West Bengal and Gujarat;

Category IV with a demonstration State average exceeding five.—Bihar and Orissa.

The research and development problems of each of these categories of States will have to be analysed block by block and

basic to the improvement of yield. Land consolidation, leveling and water management are crucial

You have spoken of disparities in yields relating to the same food crop between different regions and even between farmers in the same region and which is more. How much of these can be blamed on (a) gaps in extension work, and (b) inadequate liaison between the Central and State Agriculture Ministers?

Generally speaking, the gap between the yield obtained in demonstration in a good farmer's field and the average of area can be termed a resource-cum-management-cum-extension gap. Only a detailed constraints analysis, jointly by social scientists and agricultural scientists can help indicate in quantitative and qualitative terms the relative importance of different kinds of constraints. For example, is it

identified and have been described in numerous seminars, symposia and monographs. The remedies are also known; but the requisite action is lacking.

In fact, in countries like Japan and Taiwan, rapid advances in rice production took place only when the practice of scientific water management became widespread. We need to restructure our village panchayat in such a way that each member of the panchayat is charged with the responsibility of generating the requisite extent of social action in areas like water conservation and management, pest control and post-harvest technology. The yield obtained per litre of water by every farmer should be prominently displayed in the notice boards of the village panchayat hall and school.

Our country has a very large untapped and tapped water resources. Nearly 45 per cent of our irrigation water goes to rice but we are not getting commensurate benefit. Command area authorities have been recently

How for is finance a constraint on production, especially in view of the uneven and sometimes very poor performance of the crop loan schemes?

There is no point in quantifying the extent of shortfall in credit supply on a macro-basis. This will have to be worked out in detail, block by block. What is important is the effective link-

Introduction of HYV alone not enough

ing of credit supply with the availability of the different production inputs.

A "minimum yield guarantee scheme" was started by the Government of Maharashtra in 1975

each major dry farming zone to render timely advice to farmers.

How much of the relatively low-target farm performance is due to the farmer's disabilities as a worker or entrepreneur? What can be done to tone up his productivity?

We are yet to pay detailed attention to the efficient management of small holdings. The individual farmer can do much to improve output and reduce the cost of production. However, the next major jump in the improvement of crop production in our country will take place only when State and Central Governments base their plans not on commodities but on farmers and farming communities and when farmers in each village organise certain aspects of production and post-harvest operations together in an integrated manner.

Why is mechanisation proceeding at a slow pace? Is it because the holdings are too small? If so, what is proposed to be done to get over that difficulty? Is it



THE HINDU

**WEEKLY
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SUNDAY, JUNE 5, 1977.

Pokhran, El Nino and the monsoon

By M. S. Swaminathan

OVER a year ago, scientists discovered a rise in ocean temperatures off the coast of Peru. That was the first sign of El Nino, a climate anomaly witnessed periodically. The severe tornadoes that hit Florida and California early this year as well as the drought-induced forest fires witnessed in the Amazonian region and in Indonesia during the past 10 to 12 months have been attributed to this phenomenon. Recently, when I was in Ghana, the President, Flt. Lt. (ret.) Gerry John Rawlings, attributed the food shortage in that country to drought caused by El Nino. Several climate experts expect El Nino's effects to weaken soon.

We have been fortunate to have had a series of normal south-west monsoons during the last 10 years. It is hoped that this year's monsoon will also be satisfactory. The last serious droughts occurred in 1979-80 and 1986-87. During 1979-80, when I was the Principal Secretary in the Union Ministry of Agriculture, an integrated monsoon management strategy, consisting of the following major elements was developed.

First, establish in every district a *Crop-Weather Watch Group* consisting of climatologists, farm scientists, representatives of farmers' and women's organisations, members from the mass media and officials of the government and financial institutions. The tasks to be addressed by the group include monitoring monsoon progression, development of contingency plans and alternative cropping strategies to suit different weather probabilities, building seed reserves of alternate crops and intensifying efforts in the area of water harvesting and minor irrigation.

The aim is to both maximise the beneficial impact of a good monsoon on agricultural productivity and minimise the adverse impact of an aberrant rainfall through efficient water saving and use, crop life saving practices and contingency land use plans.

Second, demarcate in each district the most favourable areas (MFA) from the point of view of intensifying agricultural production through appropriate public policies and investment, particularly in minor irrigation and water management.

The MFA areas are those where the moisture retention capacity of the soil is high and where irrigation facilities are either available or can be created. Compensatory production programmes, designed to offset crop losses in the drought or flood affected areas,

can be introduced in the MFA areas.

Third, develop strategies for introducing effective relief and rehabilitation measures in the areas most-seriously affected (MSA) either by drought or floods. In chronically drought-prone areas, such measures should include earmarking community land for establishing cattle camps to save the lives of farm animals and identifying aquifers which can be conserved as "groundwater sanctu-

aries" for being tapped for supply of drinking water only when it is absolutely essential.

El Nino reminds of the weather phenomena beyond our control. Pokhran teaches us that given the right blend of political will and scientific skill, seemingly impossible tasks can be achieved. What is needed is the translation of these lessons in the field of agriculture.

aries" for being tapped for supply of drinking water only when it is absolutely essential.

The three-pronged strategy will help minimise both human suffering and crop losses when monsoon behaviour is abnormal and results in drought or floods. The Rural Go-down Scheme, also introduced in 1979, was designed to promote the decentralised storage of harvested produce to prevent distress sales by farmers when the harvest is good and panic purchase by consumers when crop losses are high.

The India Meteorological Department is now in a position to make a fairly accurate long and medium-term weather forecasting. Our electronic communication network, including radio and television, is very extensive. The emergence of grass roots democratic institutions, with one-third representation to women, provides unique opportunities for improving the productivity and stability of dry farming areas, which constitute about 60 per cent of the cultivated areas, through group endeavour in water saving and sharing.

We should train in each village panchayat at least one male and one female member in the science and art of monsoon management. Such trained members can be designated *Climate Managers*. Wherever possible the Agricultural University or the ICAR Research Institute concerned should provide the village-level climate managers information derived from computer simulation models to enable them to be prepared for

handling both adequate and aberrant monsoon rainfall.

The need for a micro-level understanding and management of temperature and precipitation is evident from the fact that though the monsoon rains last year were normal in national terms, the total food-grains production decreased by four million tonnes due to climatic variations at the local level.

Micro-level management promotes the use of precision-farming techniques involving plant-scale agronomy rather than just area-based approaches. Plant-scale agronomy is knowledge and information-intensive and affords opportunities for making farming intellectually stimulating, in addition to being economically rewarding. It is in this field that the panchayat-level climate managers can play a valuable role in collaboration with farmers' and women's associations and agricultural extension personnel.

What has all this to do with Pokhran? Following Pokhran-II, the term 'sanctions' are in the air. Experience shows that food is a tempting and powerful political weapon as well as source of making profit out of scarcity. The international prices of foodgrains tend to go up when developing countries feel the need to import large quantities.

India's independent foreign policy could not have been sustained during the last three decades without the progress made by our farm families in improving production and the steps taken by the Government to maintain substantial grain reserves. It is fortunate that the Government has over 20 million tonnes of foodgrains in reserve now.

Our population is growing and with increased purchasing power and urbanisation, we will have to produce more food and other farm commodities from less per capita arable land and irrigation water. Above all, we need to impart both stability and sustainability to our agricultural progress.

Agriculture also needs to become more profitable and knowledge-driven. *Sustainable food security is an essential pre-requisite for sustaining the Pokhran type independence in political decision-making.*

The National Agenda for Governance of the BJP and the alliance partners states, "We will earmark 60 per cent of the Plan funds for public investment in agriculture, rural development and irrigation." It is important that this commitment is converted into programmes which will enable our 100 million farming families to help the country maintain not only food self-sufficiency but also political independence.

In the last year of his life, Mahatma Gandhi often stressed that the first and foremost duty of independent India was to create an enabling environment where every citizen could earn his or her daily bread. Food insecurity at the level of the individual today is more due to the famine of jobs and purchasing power than due to a shortage of food in the market.

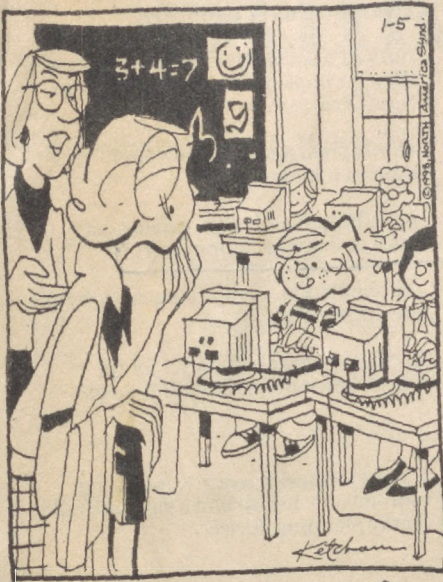
The National Agenda commits itself to "giving the entire national development efforts a human face with total eradication of poverty as the ultimate goal. For this *berozgari hatao* — eradicate unemployment — is our call." It is clear that a high percentage of new livelihood opportunities has to come from agricultural and agro-industries sectors. This again stresses the urgency for according on-farm and off-farm employment high priority. This, in turn, will call for greater investment in water conservation and sustainable use, post-harvest technology and rural roads and markets.

El Nino reminds us of the weather phenomena beyond our control and of the need to be prepared to face different contingencies. Pokhran teaches us that given the right blend of political will and scientific skill, seemingly impossible tasks can be achieved.

What is now needed is the translation of these lessons in agriculture resulting in professionalisation of agricultural planning and action at all levels, starting with the village panchayat. If this is done, the old saying "Indian agriculture is a gamble in the monsoon" can be replaced with the saying "India's agricultural strength lies in its ability to manage the monsoons."

(The writer is Chairman, M. S. Swaminathan Research Foundation, Chennai.)

Dennis the Menace



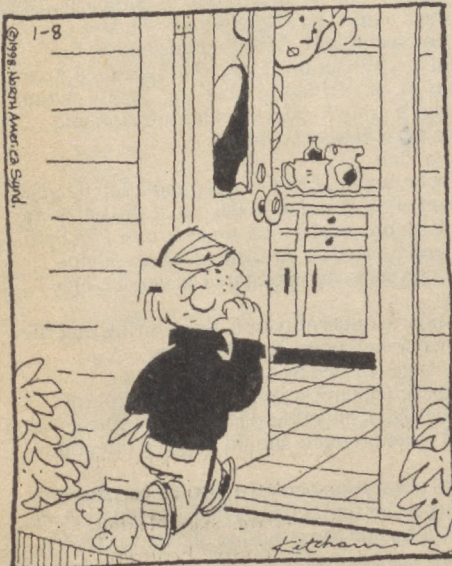
"DENNIS IS VERY GOOD WITH COMPUTERS. SO FAR HE'S TAKEN THREE OF THEM APART."



"BUT WHAT ARE YOU HIDING UNDER THE GRAVY?"



"FOOTBALL'S THE BEST BECAUSE NEATNESS DOESN'T COUNT."



"BOY, MR. WILSON MUST BE REALLY MAD AT HIS CHIMNEY. HE SAID HE'S GONNA HAVE HIS FLUE SHOT!"

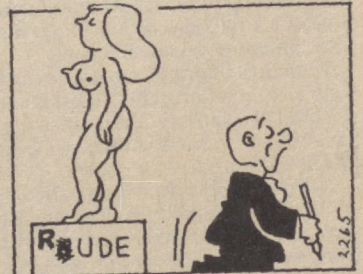
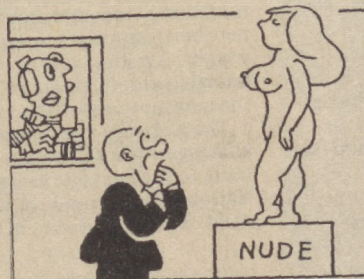


"I LOVE TO HEAR ALL THOSE CRACKLIN' SOUNDS."



"I REMEMBER THE GOOD OLD DAYS WHEN IT ONLY COST A QUARTER TO BUST A BRONC!"

Uncle Charlie



Borlaug Award for M.S. Swaminathan

NEW DELHI, Sept. 2.
Dr. M. S. Swaminathan, Secretary to the Union Agriculture Ministry, has been chosen for the Borlaug award for 1978.

Instituted by the Coromandel Fertilizers in honour of the Nobel Laureate, Dr. Norman Borlaug, the award carries a cash prize of Rs. 10,000 and a gold medal.

Mr. M. M. Rao, resident Director of the Coromandel Fertilizers, announced the choice of Dr. Swaminathan for the award here on Saturday.

The recipients in the past included two Indian scientists who were working at the International Rice Research Institute in the Philippines.

The award will be presented in New Delhi on Sept 4 when the ninth "Coromandel Lecture" will be delivered under the presidency of Dr. Norman Borlaug, Prof. Sylvan H. Wittwer, Director of Agricultural Experiment Station of Michigan State



University has been invited to deliver the lecture.

Dr. Swaminathan's research interests have been wide and extensive and he has been hailed as leader of a productive school of research workers. He has received international recognition for his many contributions to genetics and breeding of crop plants and application of agricultural sciences which have resulted in improving crop production.—Our Special Correspondent.

THE HINDU, Madras, Sept. 3rd, 1979

A PROBLEM DWARFED

From Our Correspondent

NEW DELHI, March 14.

SCIENTISTS at the Agricultural Research Institute, Pusa, have succeeded in growing a variety of dwarf Mexican wheat which could be an answer to the problem of perpetual food shortage in the country.

On Saturday the scientists took a party of pressmen around their wheat fields to show them the amazing new crop. The seeds were a gift of a renowned Mexican biologist, Dr. Bourlaugh. He developed the new dwarf wheat two years ago. It is said to be able to yield between 5,000 lb. and 6,000 lb. of wheat per acre. It could also stand extremes of weather better than other varieties.

Dr. Bourlaugh was at the Pusa In-

stitute with Dr. M. S. Swaminathan, head of the Wheat Development Division of the Botany Department, and five other scientists of the institute who have helped carry out tests for growing Mexican wheat on Indian soil.

A Rare Gift

The "food scientist" from Mexico was a very happy man. He has already succeeded in helping the Mexican farmers increase their food grain yield by 300 per cent. with the use of new strains of seed and intensive cultivation.

Now he looks forward to the day when the Indian farmer would enjoy the benefits of the "wheat gift" from Mexico.

Dr. Swaminathan explained that the new dwarf wheat was air-mailed

by the Rockefeller Foundation to India from Mexico last year. The freight alone cost 3,000 dollars. But the wheat had turned out to be a rare gift.

Trial crops were grown at various places in the country—Pusa in Delhi, Ludhiana in the Punjab, Pant Nagar in Uttar Pradesh, the Simla Hills and the Nilgiris. The wheat has shown a "liking" for Indian soil.

Several radiation-induced varieties of wheat have now been developed at the institute. It is expected that the annual yield from these varieties will be increased from five per cent. to ten per cent.

In co-operation with the Rockefeller Foundation, the institute is now working on the production of a variety of wheat with a high fertiliser response.

'The Times of India'
Sunday 15th March 64

Unique rain forest programme

By Our Agriculture Correspondent

CHENNAI, Sept. 20.

The Iwokrama International Rain Forest Programme, the world's largest adventure in sustainable management of pristine tropical rain forest in the Amazon, is a unique programme with powerful message for many developing nations endowed with forest wealth.

The programme covering 3,60,000 hectares of prime rain forests in Guyana, pledged by the small Commonwealth Country in South America for the global experiment to demonstrate that the tropical forests could provide economic benefits without destroying its biological diversity, is based on the premise that sustainable development can improve the quality of human life while operating within the carrying capacity of supporting ecosystem.

"The Iwokrama International Rain Forest Programme is the largest of its kind in the world for learning and demonstrating how a tropical rain forest can both be conserved and sustainably utilised. It is now widely recognised that more than 60 per cent of the world's terrestrial biodiversity occurs in rain forests. Many of these forests are yet to be surveyed and studied, both with reference to macro- and micro-flora and fauna," says Prof. M. S. Swaminathan, Chairman, Board of Trustees of the Iwokrama International Centre for Rain Forest Conservation and Development. The centre was legally established in Guyana in 1996 as an autonomous institution governed by an international board of trustees.

"The lessons learnt from the Iwokrama programme will have a large extrapolation domain. If successful models which link conservation and commercialisation in a symbiotic manner can be demonstrated in Guyana, such models of

partnership between industry, government and civil society can be replicated worldwide," he explains.

Iwokrama programme was launched in 1990, following the extraordinary gesture made by the people of Guyana to dedicate 3,60,000 hectares of rain forest—pristine, unexploited, undisturbed and almost entirely surrounded by rivers—to demonstrate that the tropical forests could provide economic benefits without destroying its biological diversity. The pledge was made at the 1989 Commonwealth Heads of Governments meeting in Kuala Lumpur, Malaysia.

The programme is named after the Iwokrama mountains which are a major topological feature of the site. Situated about 300 km south of Georgetown, the capital of Guyana, the location is ideally suited for demonstrating to Guyana, the Commonwealth and wider global community that the rain forest can provide sustainable economic, environmental and social benefits to poor developing countries.

Half of the Iwokrama forest is maintained as a Wilderness Preserve, to provide a reference standard of ecological processes and interactions and biological diversity. Traditional uses by the sparse indigenous Amerindian communities will be permitted together with non-destructive observational research. The other half is allocated to sustainable utilisation of its multiple forest resources. Iwokrama's fundamental objective is to define the extent to which sustainable utilisation of tropical forest resources is compatible with their conservation and to determine the impact of such utilisation on their biodiversity.

Iwokrama's mission statement was expanded into principal objectives for the centre, which are now enshrined in law: "to conserve biolog-

ical diversity and promote sustainable management and utilisation of the project site (Iwokrama Forest) and to study, develop and demonstrate methods and techniques for the conservation and equitable and sustainable utilisation of tropical rain forests that will bring lasting ecological, economic and social benefits to the people of Guyana and contribute to the world's knowledge of critical aspects of rain forest management and development".

Iwokrama is making a special effort to learn and document the traditional knowledge and management practices regarding forest goods and services by the Amerindian communities who traditionally use the Iwokrama forest. Iwokrama is committed to assisting these communities to achieve sustainable development and to safeguard their intellectual property rights. Training opportunities for employment and the sale of locally produced foodstuffs and forest products, are provided to these communities, chiefly through the Iwokrama field station.

Iwokrama work is organised into three thematic programmes — sustainable management of the tropical rain forest; conservation and utilisation of biodiversity; sustainable human development — and two cross-cutting programmes — forestry research and information and communication. "Iwokrama stands as a shining example of the steps taken by a small country, with the help of the Commonwealth and U.N. organisations, to convert the vision articulated in Agenda 21 at Rio six years ago, into grass-root level accomplishment," says Prof. Swaminathan.

The International Board of Trustees of Iwokrama is meeting at the M. S. Swaminathan Research Foundation (MSSRF), Chennai from September 21 to 24.

White paper on environmental issues soon, says Minister

EXPRESS NEWS SERVICE

Chennai, Sept 20: The action plan on environment policy will include release of a white paper on environment issues of the country, Union Environment and Forests Minister Suresh Prabhu said today.

Speaking to newsmen he said the government would draw an action plan to increase forest cover to 23 per cent. It would be ready with the white paper.

Dismissing doubts on the inefficacy of the Coastal Regulation Zone Rules, the Minister assured that the Act would not be scrapped.

As such there was nothing to be added but at the same time the Centre would be appointing a committee under the chairmanship of an Additional Secretary in the Ministry would go into the problems of people who depend on the coastline for their livelihood.

On the Aquaculture Authority Bill, though the subject was within the ambit of the Agriculture Ministry, in his point of view, he was not for any activity that would damage ground water.

Much groundwork had to be done to get environmental labelling for products as was being done in several countries.

Though it was under consideration, there was no such plan to implement now, he said.

Earlier, after releasing the report of the World Commission on Forests and Sustainable Development (WCFSD) and inaugurating the meeting of the board of trustees of the Iwokrama International Centre for Rain Forest Conservation and

Development (IICRFCD), the Minister said the Government will give the Amritadevi Bishnoi award, which would include a cash prize and citation, for meritorious work done by individuals in forest development programmes.

He said the award named after Amritadevi, of the Bishnoi community in Rajasthan who along with 363 others hugged a tree and sacrificed their lives to protect a tree from being felled.

Another award for the best services rendered by forest guards would also be instituted he said. He said 10 to 15 million hectares of forest land was being destroyed every year. Pointing out that people in India was deeply concerned about the loss of forests.

He said the country's forest cover was 19 per cent while the thick forest cover was just 0.37 per cent.

Assuring all help from the Centre for the WCFSD, he said the Government would take the contents of the report very seriously and said that all the forest development programmes would have women as members.

The Minister presented the first copy of the report to the Minister for Science and Technology Navin Chandra from Guyana.

Dr Angela Cropper, WCFSD member and former executive secretary of the Convention on Biological Diversity read out the highlights of the report in which she said, the Commission called upon fifteen countries to constitute themselves as a Forest Security Council - F15 - to take up the mantle of leadership on behalf of their own

and the world's forests and citizens. The proposed countries are Australia, Brazil, Canada, China, Columbia, Ecuador, Ethiopia, Ghana, India, Indonesia, Japan, Russia, Sweden, USA and Venezuela.

Pointing out that in the course of their study they discovered that there were no forests at all in 25 countries, she said the Commission proposed a set of mechanisms operating within an umbrella which was called Forestrust International.

This would enable world citizens to help build the normative framework for forest management.

Forestrust International was an entity built on four pillars each dedicated to monitoring forest situation, investigating and publicising incidents of abuse of rights and power and passing critical judgments on policies pursued, encouraging co-ordinated approaches in management criteria and recognising and rewarding exemplary service by communities.

BCY Freezailah, WCFSD member and executive director, International Tropical Timber Organisation, Japan, spoke on the significance of the report to developing countries. M S Swaminathan, WCFSD member and chairman of the M S Swaminathan Research Foundation said "conservation without resources was just conversation". Society for Promotion of Wastelands Development chairperson Dr Kamla Chowdhry, Sir Humphrey Maud, Deputy Secretary General, Commonwealth and State Forest Department Secretary K.S. Sripathi took part.

'White paper on environment issues soon'

By Our Staff Reporter

CHENNAI, Sept. 20.

The notification on Coastal Regulation Zone will not be scrapped. However, steps would be taken to implement the Regulation in a better way, Mr Suresh Prabhu, Union Minister for Environment and Forests, said today.

"There is no need to make any additions to the notification, which already covers all the salient aspects," Mr. Suresh Prabhu told media-persons after launching a report of the "World Commission on Forests and Sustainable Development" (WCFSD) at the M. S. Swaminathan Research Foundation here.

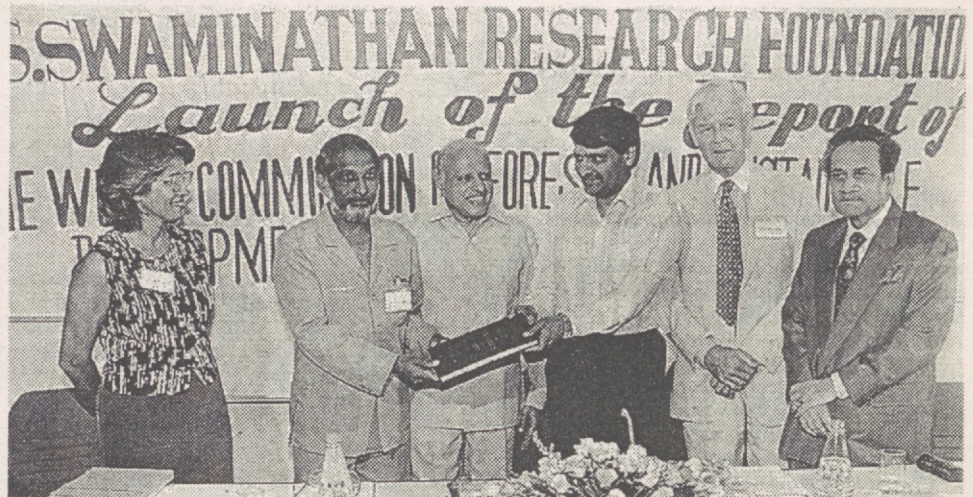
A "white paper" on issues pertaining to environment would soon be presented by the Ministry along with an action plan which would include steps to be taken for future protection of environment. It would be prepared taking into account lessons drawn from experiences and future expectations, he said.

The rights of fishermen would be protected and a committee had been formed with representatives of fishermen to study the problems faced by them. To a question on "eco labelling", he said a lot of ground-work had to be done before taking up the programme. The Ministry would soon institute an award titled 'Amrita Devi' which would be presented to individuals, NGOs or organisations involved in environment protection. The amount for the award would be substantial with a citation, he said.

The Centre was studying the Tamil Nadu Government's request to lift the ban on sandalwood export, as large quantity of sandalwood was lying in the State, he said.

Speaking after launching the report, Mr. Prabhu, said every year 10 to 15 million hectares of forest cover was lost the world-over. The loss was due to natural calamities such as global warming which led to forest fires and man-made problems such as population explosion which ultimately resulted in over exploitation of forest wealth. Efforts should be made to exploit forest resources without damaging the bio-diversity, he said.

Countries which preserved and protected forest cover, would be allowed to collect a cess from



The Union Minister for Environment and Forests, Mr. Suresh Prabhu, presenting a report of the World Commission on Forests and Sustainable Development (WCFSD) to Dr. Navin Chandernal, Minister for Science and Technology, Guyana. Dr. (Ms.) Angela Cropper, Member, WCFSD, (extreme left), Dr. M. S. Swaminathan, (third from left), Dr. BCY Freezailah, Executive Director, International Tropical Timber Organisation, Japan (extreme right), and Sir Humphrey Maud, Deputy Secretary General, Commonwealth (second from right), are also seen.

other countries. The collected amount could be utilised for afforestation and land reclamation programmes, he said.

In the view of the WCFSD, a "protected area" approach was not a sufficient response to the crisis in forests as the roots of the crisis extended outside forests. Hence, it had advocated a policy which sought to ensure no further loss or deterioration of primary forests.

The policy would require that all countries should identify, allocate and manage forests lands for conservation purposes, for corporate production and community forestry. Plantation forestry should be expanded only on degraded and vacant land. Farm forestry should be supported through establishment of more wood-lots for management by local communities. Land tenure arrangements had to be modified and other obstacles should be removed to create incentives to facilitate community forestry. The efficiency in timber industry and in ancillary

economic activities had to be increased by making use of all "waste" products from forestry operations. The Commission proposed to set up an umbrella organisation called Forestrust International. "Its activities would include monitoring the forest situation, investigating and publicising incidents of abuse of rights and power and passing critical judgments on policies pursued, recognising and rewarding exemplary practice by communities, corporations and countries in managing forests sustainably".

Earlier, Dr. M. S. Swaminathan, Chairman, M. S. Swaminathan Research Foundation, welcomed the gathering. Dr. (Ms.) Angela Cropper, WCFSD, spoke about the highlights of the report. Dr. BCY Freezailah, Executive Director, International Tropical Timber Organisation, Japan, spoke about the significance of the report to developing countries. Sir Humphrey Maud, Deputy Secretary General, Commonwealth, participated.

Unique rain forest programme

By Our Agriculture Correspondent

CHENNAI, Sept. 20.

The Iwokrama International Rain Forest Programme, the world's largest adventure in sustainable management of pristine tropical rain forest in the Amazon, is a unique programme with powerful message for many developing nations endowed with forest wealth.

The programme covering 3,60,000 hectares of prime rain forests in Guyana, pledged by the small Commonwealth Country in South America for the global experiment to demonstrate that the tropical forests could provide economic benefits without destroying its biological diversity, is based on the premise that sustainable development can improve the quality of human life while operating within the carrying capacity of supporting ecosystem.

"The Iwokrama International Rain Forest Programme is the largest of its kind in the world for learning and demonstrating how a tropical rain forest can both be conserved and sustainably utilised. It is now widely recognised that more than 60 per cent of the world's terrestrial biodiversity occurs in rain forests. Many of these forests are yet to be surveyed and studied, both with reference to macro- and micro-flora and fauna," says Prof. M. S. Swaminathan, Chairman, Board of Trustees of the Iwokrama International Centre for Rain Forest Conservation and Development. The centre was legally established in Guyana in 1996 as an autonomous institution governed by an international board of trustees.

"The lessons learnt from the Iwokrama programme will have a large extrapolation domain. If successful models which link conservation and commercialisation in a symbiotic manner can be demonstrated in Guyana, such models of

partnership between industry, government and civil society can be replicated worldwide," he explains.

Iwokrama programme was launched in 1990, following the extraordinary gesture made by the people of Guyana to dedicate 3,60,000 hectares of rain forest—pristine, unexploited, undisturbed and almost entirely surrounded by rivers—to demonstrate that the tropical forests could provide economic benefits without destroying its biological diversity. The pledge was made at the 1989 Commonwealth Heads of Governments meeting in Kuala Lumpur, Malaysia.

The programme is named after the Iwokrama mountains which are a major topological feature of the site. Situated about 300 km south of Georgetown, the capital of Guyana, the location is ideally suited for demonstrating to Guyana, the Commonwealth and wider global community that the rain forest can provide sustainable economic, environmental and social benefits to poor developing countries.

Half of the Iwokrama forest is maintained as a Wilderness Preserve, to provide a reference standard of ecological processes and interactions and biological diversity. Traditional uses by the sparse indigenous Amerindian communities will be permitted together with non-destructive observational research. The other half is allocated to sustainable utilisation of its multiple forest resources. Iwokrama's fundamental objective is to define the extent to which sustainable utilisation of tropical forest resources is compatible with their conservation and to determine the impact of such utilisation on their biodiversity.

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ical diversity and promote sustainable management and utilisation of the project site (Iwokrama Forest) and to study, develop and demonstrate methods and techniques for the conservation and equitable and sustainable utilisation of tropical rain forests that will bring lasting ecological, economic and social benefits to the people of Guyana and contribute to the world's knowledge of critical aspects of rain forest management and development".

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Action plan to increase forest cover

Our Principal Correspondent
CHENNAI, Sept. 20

THE Union Government is instituting new national awards for forest preservation activities, according to the Union Minister for Environment and Forests, Mr. Suresh Prabhu.

Speaking after releasing the report of the World Commission on Forests and Sustainable Development (WCFSDF) at a function organised at the M.S. Swaminathan Research Foundation (MSSRF), Mr. Prabhu said that the Amrita Devi Bishnoi Award was being instituted. This would be given to a non-Governmental organisation, individual or an institution for carrying out the best forestry activities.

The annual award would commemorate the bravery of Amrita Devi of the Bishnoi community, who, along with 363 of her followers, laid down her life centuries ago to protect the trees in her village from being cut.

Forest guards belonging to various State forest departments would also be given awards for their work carried out for protecting the forests under their care, according to Mr. Prabhu.

He said that the Ministry had started the activities to bring out an action plan to increase the forest cover in the country to reach 33 per cent of the land area. This was the goal set out by the national forest policy.

According to him, currently, forests covered 19 per cent of the land area in the country. Of this, only 11 per cent had a canopy cover of over 40 per cent. The Ministry was in the process of bringing out a white paper on the environmental situation in the country. This and the action plan on forestry would then become part of the national environmental policy document, which would also be prepared by his Ministry, according to Mr. Prabhu.

There was need to prevent avoidable loss of forest cover. There was also need for carrying out forest regeneration activities. For carrying out these activities, there was need to find resources.

According to him, the time had come when nations had to decide on spending a certain

percentage of their GDP on forestry. Only countries that spend more than a certain percentage should be eligible to be called as developed countries. The percentage kept aside could be spent not only in the respective countries but also all across the world, since forestry was a global issue, he observed. The countries

which sacrificed their development and preserved their forests for the global welfare should be provided a cess by the other countries.

Mr. Prabhu said the Coastal Regulation Zone (CRZ) notification was strong enough to prevent the degradation of the coastal ecosystem. The CRZ notification, which was a landmark notification, was not going to be scrapped. However, improvements could be made in it.

A committee, he said, had been set up by the Ministry to look into the problems faced by the people living on the coast and suggest ways to resolve them. This committee was being headed by a senior Ministry official.

The Environment Ministry was also in the process of looking into the representation made by the Tamil Nadu Government for freeing the export of sandal wood. Although his Ministry was not in favour of giving a blanket permission for exports, the State's request was being considered on the basis of the fact that it had large sandalwood stocks, he said.

Giving a presentation of the highlights of the WCFSDF report, Dr. Angela Cropper, commission member, said that the world was losing 10 to 15 million hectares of forests every year. Forests had disappeared in 25 countries, 18 had lost 95 per cent of their forests and 11 had lost 90 per cent.

The commission had concluded that the protected area approach was not enough to sort the problems faced by forests. A broader approach was needed since the cause for the problems lay outside the forests, she said.

The WCFSDF had also recommended the computing of a forest capital index so that the countries could judge the value of their projects. Only this could provide the tool for the policy-makers to take decisions.

Bijoy Ghosh



Dr. M.S. Swaminathan, Chairman, M.S. Swaminathan Research Foundation, and Mr. Narin Chandarpal, Guyanese Minister for Science and Technology, look on as the Union Minister for Environment and Forests, Mr. Suresh Prabhu, releases a WCFSDF report in Chennai on Sunday.

வனப் பாதுகாப்பு குறித்து விரைவில் செயல்திட்டம்

சென்னை, செப். 20— நாட்டில் உள்ள காடுகளைப் பாதுகாப்பது குறித்த செயல்திட்டம் வரையறுக்கப்பட்டுள்ளது. அடுத்த இரண்டு வாரங்களுக்குள் இதற்கு முழுவடிவம் கொடுக்கப்பட்டு இறுதித் திட்டம் வெளியிடப்படும் என்று மத்திய சுற்றுச்சூழல் மற்றும் வனத்துறை அமைச்சர் சுரேஷ் பிரபு தெரிவித்தார்.

அத்துடன் சுற்றுச்சூழல் குறித்த வெள்ளை அறிக்கையும் தாக்கல் செய்யப்படும் எனவும் சொன்னார்.

உலகக் காடுகள் மற்றும் நீடித்த வளர்ச்சிக் கமிஷனின் அறிக்கை வெளியீடு தரமணியில் உள்ள எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி அறக்கட்டளை வளாகத்தில் ஞாயிற்றுக்கிழமை நடைபெற்றது. நிகழ்ச்சியில் சுரேஷ் பிரபு பேசியதாவது:

உலகில் ஆண்டுதோறும் 1.5 கோடி ஹெக்டேர் பரப்பளவு காடுகள் அழிக்கப்படுகின்றன. ஒரு நாட்டின் பொருளாதாரத்துக்கு வனவளம் மிகவும் முக்கியமானது என்பதை இந்திய அரசு உணர்ந்துள்ளது.

ஒரு நாட்டில் குறைந்தபட்சம் மூன்றில் ஒருபங்கு காடாக இருக்க வேண்டியது

மத்திய அமைச்சர்

அவசியமாகும். ஆனால் அந்நிலையை நாம் எட்டவில்லை. இப்போது நமது நாட்டில் 19 சதவிகிதம் மட்டுமே காடுகள் உள்ளன. அடர்ந்த காடுகள் எண்ணிக்கை 0.37 சதவிகிதமாக உள்ளது. இந்நிலையை மாற்றி காடுகள் எண்ணிக்கை 33 சதவிகிதமாக உயர்த்த நடவடிக்கை எடுக்கப்படும்.

உச்சி மாநாடு நடத்த வேண்டும்

ஒரு நாட்டில் காடுகள் அழிக்கப்படுவதால் மற்ற நாடுகளும் பாதிக்கப்படுகின்றன. எனவே காடுகள் பாதுகாப்பு குறித்த உச்சி மாநாட்டை நடத்த வேண்டும். காடுகள் பாதுகாப்பு குறித்து அனைத்து நாடுகளிலும் விழிப்புணர்வு ஏற்படுத்த வேண்டும். வெளியிடப்பட்ட அறிக்கையில் காடுகள் பாதுகாப்பு கவுன்சில் ஏற்படுத்த வேண்டும் எனக் கூறப்பட்டுள்ளது. இதற்கு இந்தியா முயற்சியெடுக்கும்.

நாட்டின் மொத்த உள்நாட்டு உற்பத்தியில் குறிப்பிட்ட அளவு காடுகள் பாது

காப்புக்காக ஒதுக்க வேண்டும்.

விருதுகள் வழங்க திட்டம்

காடுகள் பாதுகாப்பு குறித்த விருதுகள் வழங்க மத்திய அரசு திட்டமிட்டுள்ளது. ராஜஸ்தானில் ஒரு மரத்தைப் பாதுகாக்க போராட்டம் நடத்தி தனது உயிரைக் கொடுத்த அம்ரிதா தேவியின் நினைவாக இவ்விருது வழங்கப்படும்.

இதைத் தவிர சிறந்த வனத்துறை பாதுகாவலர்களுக்கும் 'காடுகள் பாதுகாப்பு' விருது வழங்க திட்டமிட்டுள்ளது என்றார் சுரேஷ் பிரபு.

உலகக் காடுகள் மற்றும் நீடித்த வளர்ச்சிக் கமிஷனின் அறிக்கையை சுரேஷ் பிரபு வெளியிட கயானா நாட்டின் அறிவியல், தொழில்நுட்பத் துறை அமைச்சர் நவீன் சந்திரபால் பெற்றுக்கொண்டார்.

சுவாமிநாதன் அறக்கட்டளைத் தலைவர் எம்.எஸ். சுவாமிநாதன், காமன்வெல்த் துணைச் செயலர்-ஜெனரல் ஹம்ப்ரி மொட், கமிஷன் உறுப்பினர்கள் ஆஞ்ஜெலா க்ராப்பர், பி.சி.ஓய், ஃபீர்ஜெய்லா, கமலா செளத்ரி உள்ளிட்டோர் கலந்து கொண்டனர்.



சென்னை தரமணி எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி அறக்கட்டளை வளாகத்தில் ஞாயிற்றுக்கிழமை நடந்த விழாவில் உலகக் காடுகள் மற்றும் நீடித்த வளர்ச்சிக் கமிஷனின் அறிக்கையை மத்திய சுற்றுச்சூழல் மற்றும் வனத்துறை அமைச்சர் சுரேஷ் பிரபு வெளியிடுகிறார். கயானா நாட்டின் அறிவியல் மற்றும் தொழில்நுட்பத் துறை அமைச்சர் நவீன் சந்திரபால் அதனைப் பெற்றுக்கொண்டார். அருகில் (இடமிருந்து) கமிஷன் உறுப்பினர் ஆஞ்ஜெலா க்ராப்பர், எம்.எஸ். சுவாமிநாதன், காமன்வெல்த் துணைச் செயலர்-ஜெனரல் ஹம்ப்ரி மொட், கமிஷன் உறுப்பினர் பி.சி.ஓய், ஃபீர்ஜெய்லா.

▶ DEBATE

ISSUES



- Is population a cause of Indian poverty? Japan has higher population density
- Should the state intervene to tackle the population growth?
- Is the population "explosion" thesis a huge hoax?
- Will economic and political freedom be adequate to stabilise population growth?

Prof M S Swaminathan
Scientist. Winner of the Magsasay award

We have today as many persons below the poverty line as the entire population of India at the time of our independence, despite the fact that poverty elimination has been the major goal of national planning since the time the first five year plan was launched in 1950-51. Poverty was, however, equally widely prevalent during the colonial rule. Even when the combined population of India, Pakistan and Bangladesh was only about 290 million, over 10 million children, women and men died out of hunger and starvation between 1890 and 1900.

Thus, while a rapid increase in population, thanks to striking advances in preventive and curative medicine, has aggravated the poverty problem, population increase alone is not the cause of our unenviable position in the world in human development. Countries like the Netherlands and Japan, with very high population density, have high per-capita income and quality of life, largely because of the emphasis given to human resource development, leading to every citizen becoming a highly skilled worker. Poverty persists under conditions where the human resource is undervalued and land, buildings and other material resources are overvalued.

The population supporting capacity of many of our ecosystems such as mountain and coastal ecosystems has already been exceeded. The common property resources in villages are fast getting depleted due to unsustainable exploitation. The poor, and particularly women, suffer most from the shortage of water for domestic use and land for grazing.

Government has to play a major role in fostering a demographic transition to low birth and death rates, particularly in States where the Total Fertility Rate (TFR) is still over 2.5. A Committee of the Government of India, which I chaired has recom-

mended in a report submitted over 3 years ago a shift from the current centrally planned target and technology oriented approach to family planning to one based on a pro-poor, pro-women, pronature and pro-democratic choice orientation. The major goal should be the creation by panchayats and Nagarpalikas of a social environment where children are born for happiness and not just for existence.

The population 'bomb' or 'explosion' concept was widely prevalent in the sixties, because of the then expanding gap between food production and need

in India, China and the subSaharan region of Africa. Thanks to new technologies supported by appropriate public policies, India, China and several other developing countries have been able to keep the rate of growth in food production during the last 25 years.

1998 marks the bicentenary of the publication of

Thomas Malthus's famous essay on population. The question now being widely asked is, 'will Malthusian predictions come true in the early part of the coming millenium?' What the answer will be, will depend on Government's policies and action in the areas of education, health care, nutrition, reduction in infant and maternal mortality rates and womens' social, educational and economic empowerment. The success of Kerala, Tamil Nadu, Goa and now Andhra Pradesh in achieving the desired demographic transition has lessons for other parts of the country.

Population, if it continues to remain predominantly illiterate and indisciplined, will be a curse rather than a blessing. We should remind ourselves that today we have nearly 16% of global human population and 15% of farm animal population but only 2% of arable land, 1% of rainfall, 0.5% of forests and 0.5% of grazing land. Therefore, if population policies go wrong, it will be difficult to enter the coming millennium with the hope that every one born in our country will have an opportunity for a productive and healthy life.



'N-science can help coastal families'

By Our Special Correspondent

CHENNAI, Dec. 10.

A synergy is needed among scientific institutions to help solve important national problems and steer the nation on the path of rapid development, Dr. R. Chidambaram, Chairman Atomic Energy Commission and Secretary, Department of Atomic Energy, said here today.

Inaugurating a workshop on "sustainable livelihoods and environment management in the coastal ecosystems" at the M. S. Swaminathan Research Foundation (MSSRF), Dr. Chidambaram said, with the expansion of atomic power stations in the country, particularly in the coastal areas, there was now a unique opportunity for bringing the benefits of nuclear science to the families engaged in capture and culture fisheries, coastal agro-forestry and agriculture.

The two-day workshop is being organised by the MSSRF, FAO Bay of Bengal Programme (BOBP) and International Ocean Institute, Operational Centre (India).

Dr. Chidambaram said the Trombay mutants in groundnut, pulses and other crops would enable farmers in villages near the nuclear power plants to improve both productivity and stability of production. Neutron probe-based hydrological studies would help to promote sustainable methods of management of coastal aquifer, so that sea water intrusion into the aquifer could be avoided.

Homi Bhabha Chair

In order to examine test and popularise such techniques, Dr. Chidambaram said the Department of Atomic Energy had decided to establish

a Homi Bhabha Chair for Nuclear Science and Rural Society at the MSSRF, Chennai.

The primary objective of the Chair would be dissemination of information and mobilising peaceful usage of atomic energy for the benefit of communities living in the regions adjoining the nuclear power plants.

The Chairman of the Atomic Energy Commission took the opportunity to formally announce the appointment of Dr. P. C. Kesavan, former Director, Biosciences Group at the Bhabha Atomic Research Centre, Mumbai, as the first holder of the Homi Bhabha Chair.

With the appointment of Dr. Kesavan for taking the benefits of nuclear science to the rural families, Dr. Chidambaram said, a new chapter would begin in linking science and society in a frontier area of science and technology. The initial work of the Chair would be in the villages adjoining the nuclear power plant at Kalpakkam and in the areas surrounding the plant to be established at Kudankulam. Use of nuclear techniques for soil health care, salinity management and extension of shelf-life of perishable agriculture and marine food items would be studied, he added.

Dr. Chidambaram released a publication brought out by the MSSRF on "Biodiversity of Gulf of Mannar Marine Biosphere Reserve."

Mr. Mohan Verghese Chunkanth, Secretary, Animal Husbandry and Fisheries Department, Tamil Nadu Government, in the key-note address, commended the role played by the MSSRF as a policy research group in the Gulf of Mannar Project, besides educating the local communities on the key aspects of it.

Dr. M. S. Swaminathan, Chairman, MSSRF, welcoming the gathering, appealed to the par-

ticipants of the workshop to deliberate on the need for evolving a code of conduct for sustainable fisheries, besides coming out with a legal framework for sustainable usage of coastal ecosystem.

Dr. Kee-Chai Chong, Programme Coordinator, FAO BOBP, Chennai, proposed a vote of thanks.

Later talking to presspersons, Dr. Chidambaram said that there were plans for starting two units of 500 MW prototype fast breeder reactors in Tarapur. "I want to develop light water technology", he added. He hoped to reach 20,000 Megawatt nuclear power by 2020. Hundreds of varieties of radio isotopes could be produced by work on the research reactors.

Dr. Chidambaram was not worried about the denial of technology from outside. This only offered an excellent opportunity to integrate the country's research and development systems. The Board of Research in Nuclear Sciences, in fact, funded universities and laboratories. "We have restructured the Board of Research which would focus on four areas", which were Reactor and Nuclear Fuel Cycles, Radiation High Technology areas, including accelerators and finally basic research. The Bhabha Atomic Research Centre (BARC), and the IIT, Mumbai, will be engaged in doing research in the field of heat transfer and thermal technology.

On radiation hazards, Dr. Chidambaram said that design safety, operational safety, and a good, strong and independent regulatory system were the essential features to minimise risk.

Asked about the gestation period for nuclear power plants, he said the prevailing span of seven years could be brought down to five and a half years.

Call for transparency in modifying plants

By Our Special Correspondent

CHENNAI, Jan. 6.

Prof. James Watson, nobel laureate, today called for extreme care in the development of genetically modified organisms (GMOs) and complete transparency in the commercialisation of the results. He was inaugurating a national consultation on "genetically modified plants: implications for environment, food security and human nutrition" at the M. S. Swaminathan Research Foundation (MSSRF), here.

Prof. Peter Raven, Director, Missouri Botanical Gardens, U.S. set the context of the meeting in his presidential address by raising a number of issues concerning genetic engineering of crops.

Recombinant DNA technology was being accepted in medical research may be because it directly concerned health. However, it was facing resistance in crop engineering for certain reasons. Prof. Raven said there was a fear among the public that genetically modified food crops may reduce the choice of food. He called for complete transparency in this area of research and full protection to consumer rights. Labelling the food and leaving the choice to the customer would be one way of achieving this.

Trying to present the positive aspects of genetically modifying plants, he pointed out how, in the past, man had impacted on the genetic modification of plants and that had been accepted now. "What would happen if gene transfers that scientists are trying in the lab occur naturally," he asked. Likewise, the loss of topsoil and arable land over the past few decades had already led to a loss of bio-diversity, he said. Another problem concerned the environment. Growing uniform crops could depress the bio-diversity in the system and could affect the overall health of the environment, he cautioned.

Earlier in his overview, Prof. M. S. Swaminathan pointed out the challenges that arose because of the imbalance between food produc-



Dr. M. S. Swaminathan in conversation with Prof. James Watson, Nobel laureate, at the inauguration of the national consultation on genetically modified plants at M. S. Swaminathan Foundation in Chennai on Wednesday. Prof. Peter Raven, Director, Missouri-Botanical gardens, U.S. is at right.

tion and population in India, and called for a national policy for sustainable food and nutrition security. India would have to import huge quantities of foodgrains in the next century if it did not boost local production significantly, he said.

The Green Revolution, in the late Sixties, helped the nation by improving the yields. But self-sufficiency in food was only an illusion because nearly one-fourth of the population was without food or undernourished, Prof. Swaminathan said.

The modern rice varieties including the dwarf

ones with high yields had a complex pedigree as they were developed out of a large number of varieties with the aim of infusing good traits such as high yields, fixed crop duration and pest and disease resistance, he added.

He said the purpose of this national consultation, which was being attended by a number of distinguished scientists and Greens, was to address the public concern about genetically modified organisms and to develop a package that could be used to govern the ethical, safety and surveillance aspects involved in the process of developing genetically-engineered food crops.

The Hindu 26/1/99

Homi Bhabha Chair in Swaminathan Foundation

By Our Staff Reporter

CHENNAI, Jan. 25.

The Department of Atomic Energy (DAE) has established a Homi Bhabha Chair for Nuclear Science and Rural Society at the M.S. Swaminathan Research Foundation (MSSRF) to extend the peaceful use of nuclear energy to communities living in regions adjoining nuclear plants.

The initial work of the Chair, which will be held by Dr. P.C. Kesavan, former Director, Biosciences Group of the Bhabha Atomic Research Centre (BARC) will be in the villages adjoining the nuclear plants at Kalpakkam and the site of the proposed plant at Kudankulam. Coastal villages near Chidambaram and Pondicherry would also benefit from this partnership.

Speaking on "nuclear science for sustainable agriculture and rural development" at the inaugural function, Dr. Kesavan said the ecotechnology approach with nuclear and biotechnological tools for coastal systems could help areas such as water management, soil conservation and reclamation, integrated pest management, amelioration of coastal salinity and genetic management of abiotic stress.

Dr. Kesavan said the application of nuclear technology on agriculture had resulted in genetic improvement of crop plants and fertilizer efficiency and better pest management. Irradiation of food had become a major method for preservation and increasing shelf-life. For instance, irradiation of onion reduced sprouting and that of mushroom made it stay white longer. In both cases the shelf-life increased substantially. Fifteen food varieties had been permitted for irradiation.

The MSSRF had already initiated Integrated Intensive Farming System (IIFS) at Kalpakkam and Pichavaram which involved production and use of biofertilisers and evolution of BARC plant varieties.

Under the project, the pulse village programme would bring more dry land under culti-

vation. This would utilise some BARC mutants which were drought and disease resistant. Fishing and farming communities in the project areas would be receive concurrent attention.

Dr. Placid Rodriguez, Director, Indira Gandhi Centre for Atomic Research (IGCAR), said Vikram Sarabhai had a vision of agroindustrial complexes around nuclear centres. These complexes, aimed at sustainable development, would provide enough opportunities for the rural population which otherwise was in migration to the cities for livelihood. Sustainable development did not mean "zero growth," he added.

Of late there had been a sea change in the attitude of scientists towards traditional knowledge. There was immense useful knowledge preserved in the traditional systems and communities. For instance, 80 per cent of the all modern medicines were made from plants used by the people in the country. This knowledge could contribute to sustainable development.

In view of the large scale migration of rural population to urban centres which even led to the projection that by 2050, the country would have only 30 per cent of its population in rural areas, development should be equitable.

Prof. M.S. Swaminathan, Chairperson of the Foundation, said Dr. Bhabha was keen that agriculture should derive benefit from atomic energy. The steps he took promoted effective interdisciplinary programmes on mutation breeding, hydrological studies, food irradiation and micro-propagation.

The opportunities provided by modern science and technology would be useful only if those chosen for propagation were eco-friendly, pro-poor, gender-equal and capable of sustaining productivity. The mandate of the Chair was to realise this goal. Recalling the contribution of Dr. Bhabha, Prof. T.S. Sadasivan said the late scientist had the rare ability to go to the root of any problem.

Leave regulation of DNA experiments to scientists: Watson

EXPRESS NEWS SERVICE

Chennai, Jan 6: Regulation of experiments in genetic modification of plants must be left to scientists and not to bureaucrats, said Nobel laureate James D Watson today.

Inaugurating the two-day national consultation on 'Genetically Modified Plants: Implications For Environment, food security and human nutrition' organised by the M S Swaminathan Research Foundation here and supported by the Hindu Media Research Centre, Watson, discoverer of the Double Helix structure of the DNA (Deoxyribo Nucleic Acid), said the question of regulation of genetic modification can be decided only after the nature of problems became fully known.

It is unfortunate that while many questions regarding genetic modification of plants had to be decided, there is a clamour in certain sections for the formulation of regulations, esp-



M S Swaminathan Research Foundation chairman M S Swaminathan, Nobel laureate James D Watson and Missouri Botanical Gardens director Peter Raven at the consultation on 'Genetically Modified Plants: Implications for Environment, Food Security and Human Nutrition' Express

pecially from the environmental movements. Tracing the progress of DNA experimentation, he said that while misuse cannot be ruled out, the benefits could be many.

In his presidential address,

Peter Raven, director, Missouri Botanical Gardens, USA, said that the objective of all efforts have to be sustainability in agriculture. While tremendous advances in science have been made in the last 50 years,

25 per cent of the top soil had been lost during the same time. It is believed that 10,000 kinds of organisms will be lost by the next century, he said and added that this will mean a loss in bio-diversity on

which sustainable agriculture was hoped to be built.

While the debate on the issue of right to alter living organisms raged on, he said attention has to be focused on some of the problems - the special properties of genetically altered plants, labelling of food from genetically modified organisms, spread of genes from genetically modified organisms and their consequences, loss of resistance among different strains, innovations in areas of seed germination, the problem of growing relatively uniform crops very extensively, thus depressing the bio-diversity of the whole system and the social and economic context of using the modified organisms.

M S Swaminathan giving an overview on 'The Challenges of Food and Nutrition Security in India' emphasised the need to evolve a precautionary package and focus attention on bio-ethics, bio-safety, surveillance and food safety.

Call for transparency in modifying plants

By Our Special Correspondent

CHENNAI, Jan. 6.

Prof. James Watson, nobel laureate, today called for extreme care in the development of genetically modified organisms (GMOs) and complete transparency in the commercialisation of the results. He was inaugurating a national consultation on "genetically modified plants: implications for environment, food security and human nutrition" at the M. S. Swaminathan Research Foundation (MSSRF), here.

Prof. Peter Raven, Director, Missouri Botanical Gardens, U.S. set the context of the meeting in his presidential address by raising a number of issues concerning genetic engineering of crops.

Recombinant DNA technology was being accepted in medical research may be because it directly concerned health. However, it was facing resistance in crop engineering for certain reasons. Prof. Raven said there was a fear among the public that genetically modified food crops may reduce the choice of food. He called for complete transparency in this area of research and full protection to consumer rights. Labelling the food and leaving the choice to the customer would be one way of achieving this.

Trying to present the positive aspects of genetically modifying plants, he pointed out how, in the past, man had impacted on the genetic modification of plants and that had been accepted now. "What would happen if gene transfers that scientists are trying in the lab occur naturally," he asked. Likewise, the loss of topsoil and arable land over the past few decades had already led to a loss of bio-diversity, he said. Another problem concerned the environment. Growing uniform crops could depress the bio-diversity in the system and could affect the overall health of the environment, he cautioned.

Earlier in his overview, Prof. M. S. Swaminathan pointed out the challenges that arose because of the imbalance between food produc-



Dr. M. S. Swaminathan in conversation with Prof. James Watson, Nobel laureate, at the inauguration of the national consultation on genetically modified plants at M. S. Swaminathan Foundation in Chennai on Wednesday. Prof. Peter Raven, Director, Missouri-Botanical gardens, U.S. is at right.

tion and population in India, and called for a national policy for sustainable food and nutrition security. India would have to import huge quantities of foodgrains in the next century if it did not boost local production significantly, he said.

The Green Revolution, in the late Sixties, helped the nation by improving the yields. But self-sufficiency in food was only an illusion because nearly one-fourth of the population was without food or undernourished, Prof. Swaminathan said.

The modern rice varieties including the dwarf

ones with high yields had a complex pedigree as they were developed out of a large number of varieties with the aim of infusing good traits such as high yields, fixed crop duration and pest and disease resistance, he added.

He said the purpose of this national consultation, which was being attended by a number of distinguished scientists and Greens, was to address the public concern about genetically modified organisms and to develop a package that could be used to govern the ethical, safety and surveillance aspects involved in the process of developing genetically-engineered food crops.

NEWS

FOOD SECURITY / FAO CHIEF HOLDS OPTIMISTIC VIEW

'All-round efforts can eradicate hunger'

By Our Special Correspondent

CHENNAI, APRIL 29. "It is my conviction that there is no reason not to have a hunger-free world some time next century. The world will be able to produce enough food for everyone. It already does so, and it could produce more," said Dr. Jacques Diouf, Director-General, Food and Agriculture Organisation (FAO), Rome.

Delivering the Millennium Lecture on "the Challenges of Food Security in the 21st Century" organised by The Hindu Media Research Centre for Ecotechnology and Sustainable Development at the M.S. Swaminathan Research Foundation (MSSRF) here today, Dr. Diouf expressed this optimism. "However, unless deliberate action is taken at all levels, the chances are that the early years, perhaps even the early decades of the next century, will not be hunger-free and malnutrition will likely continue in the foreseeable future", he cautioned.

"The next century will not be hunger-free unless we do something to achieve the objective of access to food by all as early as possible in the century. The Plan of Action of the World Food Summit provides the necessary guidelines. Its objective of halving undernutrition no later than 2015, must be pursued vigorously and given operation expression in the policies and programmes of all-national governments, the international community and the organisations of civil society," he emphasised.

After giving a brief historic account of the agricultural developments in the world, he referred to the fears about an impending new world food crisis expressed as recently as two years ago. "There was, indeed a drastic slowdown in world agricultural growth in the first half of the 90s, when cereals output stagnated and fluctuated widely leading to a fall in per capita production. This decline has been interpreted by some as beginning of an era when the natural resource and technology constraints have become all of a sudden so much more binding.

"In reality, this slowdown was due, in the first place to the recent policy changes which lead to the slowdown of production growth in the main industrial exporting countries, coinciding with the short-term impacts of unfavourable weather. In parallel, there has been a trend for the growth rate of agricultural production in these countries to decline over time," he said.



The Director-General of the Food and Agriculture Organisation, Dr. Jacques Diouf, presenting a silver medal to Dr. M. S. Swaminathan, Chairman, M.S. Swaminathan Research Foundation, in recognition of his contributions in highlighting the role of women in agriculture.

avourable weather. In parallel, there has been a trend for the growth rate of agricultural production in these countries to decline over time," he said.

About global production and local food insecurity, Dr. Diouf said the root cause of food security was poverty. In the majority of countries with high concentrations of poverty, agriculture was the main source of employment and income for large proportions of the population. In such cases, development of agriculture and rural economy was an indispensable step in the direction of overall economic development and poverty alleviation, he said.

He stressed the need for poverty-reducing economic growth and all that went to make it happen. But growth alone was not enough. "One of the key lessons emerging from successful attempts to accelerate progress in overcoming hunger is the need to take into account the human dimensions of the problem by helping people help themselves, and

this is to what our common efforts must be directed," he said. The MSSRF Chairman, Dr. M. S. Swaminathan, in his presidential address, commended FAO's efforts in promoting an integrated systems approach to address the food security issue. He also lauded the policy to foster South-South collaboration, which would have greater content in the next century.

Welcoming the gathering, Mr. N. Ravi, Editor, *The Hindu*, said the organisation was happy to be associated with the MSSRF for bringing in various intellectuals in the field of science and technology, agriculture to discuss various issues concerning the masses. In this series, the special lecture by Dr. Diouf addressed a very important issue of food security, which dealt with the basic necessity of people. He highlighted the various facets of food security.

Dr.V. Balaji, Director, Informatics Centre, MSSRF, proposed a vote of thanks.

Natural resources must not be overused: FAO chief

By Our Agriculture Correspondent

CHENNAI, APRIL 29. "Sustainable agriculture is the scientific name of getting back to technologies that are simple, and ecologically sound. We should be careful not to overuse the natural resources we will need tomorrow. Whatever we take out of the eco-system has to be put back to ensure sustainability," said Dr. Jacques Diouf, Director-General of the Food and Agricultural Organisation (FAO), Rome.

In an interview, he said that the FAO had created a special department for "sustainable development", which had a strong horizontal dimension to holistically look at technology, people's participation and women development.

"In the sustainable development programme, we have holistic approach, and we analyse the consequences of various interventions. For instance, when we deal with water development, we look at the whole area of watershed management. When we develop or introduce a crop variety, we look at its impact on the biodiversity of the region," he explained.

Discussing the FAO's role in promoting the integrated farming systems in different nations, he

said a special programme on food security to deal with the human system working in diverse environments and interacting with diverse biological enterprises has been functioning successfully.

Highlighting the various roles of the FAO to foster agricultural growth and development in the world, Dr. Diouf said, "we are a technical cooperation organisation. The FAO has been a partner in endeavour in promoting sustainable capabilities in agriculture and allied disciplines in all member countries."

Dr. Jacques Diouf is the third Asian and first from Africa to head the prestigious UN body. The 61-year-old administrator from Senegal, took over as the FAO Director-General in 1994. He is visiting Chennai to attend a series of functions at the M.S. Swaminathan Research Foundation (MSSRF) and to visit some of the FAO-supported projects in the city.

Earlier addressing a press conference, Dr. Diouf briefly outlined the various FAO programmes operating in India, and lauded the progress made in agricultural production. He also highlighted the FAO's programme on information and publications. About 15,000 documents are published annually and the FAO's webpage, which was developed two years ago, has recorded about 3 million

hits a month, according to him.

To a question on the FAO's stand on the controversial "terminator" technology, which will force farmers to buy fresh seeds for every sowing and make them more dependent on seed companies, Dr. Diouf said the organisation's position was a balanced one. "The technology offers several possibilities. We believe there are risks too. We are encouraging our member countries to participate in the ethic committees, which will delve deep in to the issues," he explained.

Discussing the environmental degradation caused by the excessive use of toxic insecticides, he said the FAO had adopted a code-of-conduct for the use of insecticides. "We are systematically promoting integrated pest management (IPM) strategies in different countries. Indonesia, for example, has cut down 50 per cent of the insecticides used, and still maintained the productivity level."

Regretting the declining trend in the funds for global agricultural research and development in the recent years, he said it had led to widening the gap between the rich and the poor. "After the end of the cold war, we expected the dividends of peace would go for agricultural development, but unfortunately it was not to be."

Call for efforts to meet challenges in food security

By Our Special Correspondent

CHENNAI, APRIL 29. The Director General of Food and Agriculture Organisation of the United Nations, Dr. Jacques Diouf, today underscored the importance of embarking on a global concerted effort to help face the challenges in food security.

Speaking at the initiative meeting at the M.S. Swaminathan Research Foundation for the proposed "Millennium Fair" to be organised by the Rotary Club of Madras East at Chennai in September,

Dr. Diouf said to help achieve this objective, the FAO had been working in close cooperation with the NGOs through several of its joint programmes in the area of food security.

"In order to supplement the efforts of the FAO, we have to strengthen the relationship with the NGOs for launching several of its initiatives," Dr. Diouf said commending the efforts taken by the Rotary Club of Madras East which has planned to organise the Millennium Fair to create greater awareness among the masses.

Highlighting the important role played by research institutions and international bodies through synergy of activities, Dr. Diouf commended the M.S. Swaminathan Research Foundation (MSSRF) for its pioneering work in the field of sustainable agriculture. Mr. C. Subramaniam, former Governor of Maharashtra and Chief Patron of the Millennium Fair, emphasised the importance of providing access for the poor to food. Explaining that the FAO as a global body was concerned with the problem of food security, he said the need of the

hour was a global awakening in this regard.

Dr. M.S. Swaminathan, Chairman, M.S. Swaminathan Research Foundation (MSSRF), and Mr. K. Subramaniam, Vice-President, Computer Business Solutions India (CBSI), sponsors of the Fair, outlining the objectives of the exposition, said it would open up new vistas in the key areas of education, health, energy, and information technology.

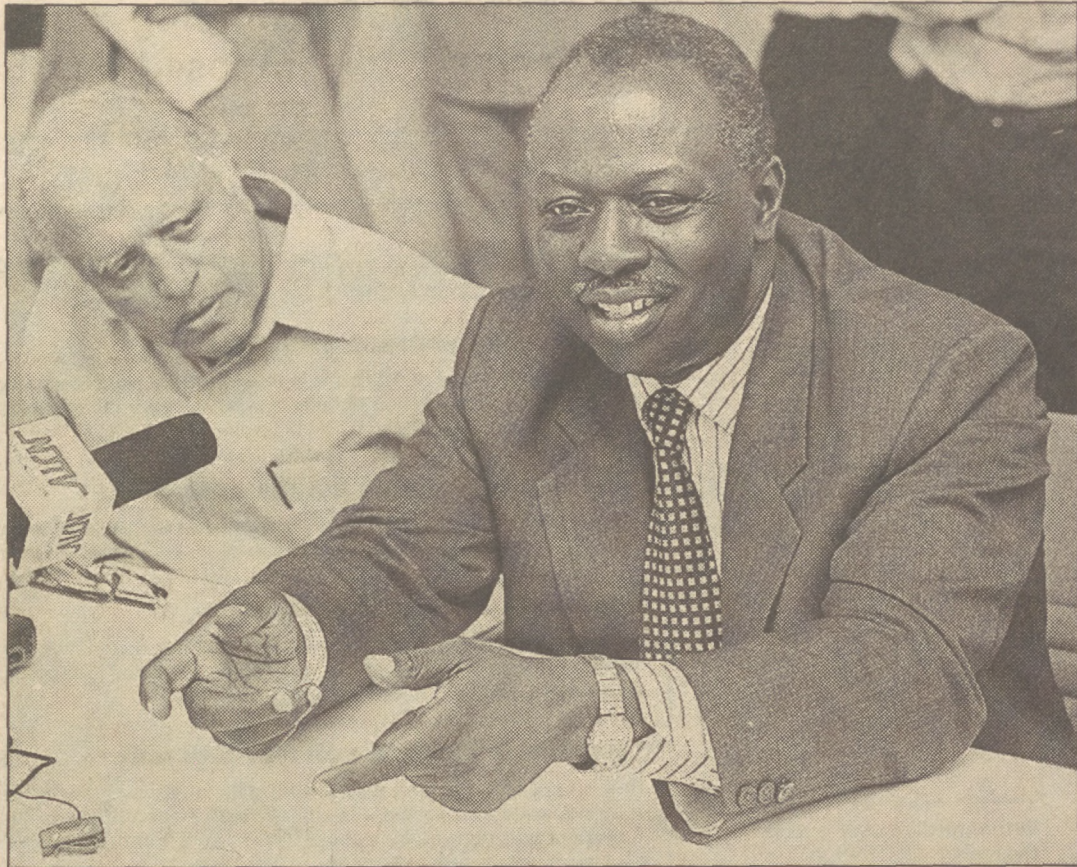
Mr. P.K. Ranganathan, Fair Coordinator, introduced Dr. Diouf. Mr. M. Srinivasan, president of the



At the initiative meeting for the Millennium Fair held in Chennai on Thursday, the former Maharashtra Governor, Mr. C. Subramaniam, is flanked by Mr. K. Subramaniam of CBSI (left), Dr. Jacques Diouf, Director General, FAO, and Mr. M. Srinivasan of the Rotary club.

Rotary Club of Madras East, noted that there was continued support extended by the MSSRF for embarking upon its community oriented programmes. Dr. M.S. Ravi, Club Secretary, was among those who spoke.

Bijoy Ghosh



Dr. M.S. Swaminathan, Chairman of MSSRF, and Dr. Jacques Diouf, Director General, FAO, at a press conference in Chennai on Thursday.

'Food shortage due to distribution problems'

Our Bureau
CHENNAI, April 29

THE food shortage problem being faced in certain parts of the world was more because of distribution problems rather than due to a shortfall in food production, according to Dr. Jacques Diouf, Director-General, Food and Agricultural Organisation (FAO), of the United Nations.

Dr. Diouf was delivering the millennium lecture on 'The challenge of food security in the 21st century' organised by the M.S. Swaminathan Research Foundation and sponsored by 'The Hindu Media Research Centre'.

According to him, statistics available with the United Nations showed that 828 million people were still affected by hunger all over the world though there was enough food to feed the whole world community.

Dr. Diouf said that the question of food security addressed the most basic concerns of man and had taken on many facets including the ecology movement which meant getting the maximum output with the least amount of energy being expended and least harm being done to the environment.

He said that for a hunger-free world in the next century, deliberate action needed to be taken at all levels and that finding a sustainable solution to hunger also meant moving away from simplistic traditional methods to modern technologies.

On the brighter side, he said that the fertility rates all over the world were falling faster than researchers had previously thought possible and that in the next millennium, food production will increase more as a result of increase in yields rather than land expansion.

The FAO already has been assisting over 100 countries in agriculture development and food security plans as a follow-up to the World Food Summit held earlier.

Earlier, addressing a press conference, Dr. Diouf said that the FAO was very active in India and had recently taken up measures to help farm exports from India which included setting up of plant quarantine facilities at five ports in the country.

FAO has also been working in close tandem with the Governmental and non-governmental agencies on quality control and pre-shipment checks to help ex-

ports. Dr. Diouf also pointed out the need for an ethics committee consisting of leading scientists from all over the world to harness technology in a positive manner so as to ensure that only commercial interests are not served.

He also said that the overseas development assistance to the FAO has come down to represent the lowest in its history and that the organisation has been requesting for a reversal of this trend. According to him, it was sad that though the cold war had ended, the 'dividends of peace' had not yet percolated down towards the development of the socio-economic sectors of the world and the gulf between the rich and the poor was widening.

On FAO's forecast on the Indian agricultural scenario, he said that though India had made tremendous strides in food production through the Green, White and Yellow revolutions, the rate of population growth will be a problem.

He also pointed out that India could face tremendous problems due to water salinity and water clogging as the stress earlier was on irrigation and not on drainage.

Financial Express Aug 18/96.

Plan to intensify farm development in metros

FE NEWS SERVICE
MADRAS, AUG 7

THE Government is planning to intensify development of agriculture around the metros and large towns in the peripheral areas, said U Venkateswarlu, Minister of State for Urban Affairs and Employment and Parliament Affairs, Government of India. "Agriculture should be integrated into urban areas as part of urban development and not remain apart from it, relegated to the rural sector."

The Minister, himself a well-known agriculturist made his speech on the occasion of releasing the sixth annual report of M S Swaminathan Research Foundation. He said he could utilise his portfolio of Urban Development for this purpose and combine it with the expertise the institute offered.

The idea would be that fresh vegetables, milk, eggs, cereals are available close by - without having to come from long distances and sustain the city's population. The Prime Minister has agreed to the idea, and the Food and Agriculture

Organisation is willing to fund the scheme, Venkateswarlu said. There would be cold storage centres every four to five km and all harvest would be brought, packed and transported in three hours time, he said.

The Minister also highlighted the work done by the institute in the poverty alleviation programme of rural women and children. He requested the help of the institute for a similar poverty alleviation programme for urban women also.

The achievements of the year 1995-96 were highlighted. On coastal systems research, studies on the coastal wetland-mangrove ecosystems in Tamil Nadu, Andhra Pradesh, Orissa, and Bengal had already been initiated. With the help of experience gained during the last six years on the conservation of genetic diversity in mangrove wetlands, the new project's aim will be to standardise the technologies and management practices necessary for promoting integrated conservation and development projects in the coastal wetland areas.

A technical resource centre

for the implementation of the equity provisions of the convention on biological diversity (TRC for CBD) was dedicated to tribal and rural families on July 10 this year. This was set up because the primary conservers of agrobiodiversity remained poor, while those who utilised the genetic material became rich.

The centre was set up to ensure that benefits also went to those who deserved it first - like tribal practitioners. Programme area 300 involves eco-technology and sustainable agriculture. Eco-technologies comprising the blending of traditional and frontier technologies so as to combine both economic viability and environmental sustainability, provide the foundation for all projects involving integrated intensive farming system, integrated pest management system and bio-villages.

Programme area 400 targeted rural poor women and children and programme area 500 gave thrust to education, communication training and capacity building, ranging from farmer to farmer learning to advanced post graduation courses.

'Protect India's public sector breeding enterprise'

— Dr. M. S. Swaminathan and Dr. S. Nagarajan

Harish Damodaran

THE year 1998-99 was a landmark for Indian agriculture, with the total foodgrains production crossing 200 million tonnes, which is four times that produced when the country became a Republic. This "success story", for all its limitations, is thanks largely to the country's agricultural scientists, who have been responsible for developing high-yielding varieties responsive to irrigation and fertiliser application and evolving farm management techniques suitable to the new intensive cropping regime.

Business Line spoke to two of them: Dr. M. S. Swaminathan (MSS) and Dr. S. Nagarajan (SN). While the former is a legendary crop scientist and institution builder, the latter heads the Directorate of Wheat Research (DWR) at Karnal (Haryana), which co-ordinates wheat research all over India.

Excerpts from the interview:

Dr. Swaminathan, what is your reaction to this year's record wheat harvest of nearly 71 million tonnes?

MSS: It is a tribute to the farmers' enthusiasm, particularly Punjab. The record wheat crop this year is the greatest gift to the tercentenary of the Khalsa and is a very appropriate way of celebrating 300 years of the Sikh movement. Guru Nanak's main point, after all, was that there should be no hunger.

I am reminded of a meeting we had in Delhi immediately after the new semi-dwarf Green Revolution wheat varieties were introduced. At that time (mid-1960s), India used to hardly produce around 10 million tonnes of wheat. I remember at that meeting, the eminent economist and planner, Dr. V. K. R. V. Rao stated that he would consider the new varieties to be a success, if they somehow enable us to touch 15 million tonnes. And, today, we are talking of over 70 million tonnes!

So this whole jump from 6-10 million tonnes in the 1950s to 20 million tonnes by the late 1960s and to over 70 million tonnes now...Has the Green Revolution then basically been a Wheat Revolution? The share of wheat in the total foodgrains production, too, is over 35 per cent now, from 12-13 per cent in the 1950s...

MSS: It has been wheat as well as rice revolution. For wheat, it is more obvious because 85 per cent of the area under it (25-27 million hectares) is irrigated. Whereas,



Dr. S. Nagarajan, Project Director, Directorate of Wheat Research, Karnal.

for rice, out of the total acreage of 40-42 million hectares, about 60 per cent is still unirrigated and rained. The rice grown in the whole of eastern India is still largely monsoon dependent. If you take the irrigated rice area alone, the performance is definitely comparable to that of wheat.

Therefore, on the whole, I would describe the Green Revolution as a wheat and rice revolution. Of course, there has also been tremendous progress in the oilseeds production, which has doubled from 12 million tonnes to 24 million tonnes after the launch of the Technology Mission. Similarly, in animal products such as poultry, production has gone up nearly hundred times in recent times. Milk output too has shot up from 20 million tonnes to over 70 million tonnes.

Only in pulses and coarse cereals, has the production lagged behind. This is unfortunate because the so-called coarse cereals such as ragi and bajra are actually very nutritious cereals. My feeling is that these crops have not done as well as others mainly because of insufficient market demand. Crop production is largely conditioned by demand which, in turn, is influenced to a great extent by the public distribution system.

People, after all, started consuming wheat products only after the grain was made available through ration shops. I remember when I was a boy, I never saw any *chappati* or *puri*. Wheat came to South India only after the Second World War, when the government began distributing the PL-480 wheat imported from the US. And when the PDS feeds you with only

rice and wheat, even those who do not consume wheat begin to use it.

So, the progress of the Green Revolution was most in the case of crops, where production and marketing have been linked into a system that has stimulated farmers to produce. And here an important element has been the government's announcement of a floor price to farmers before sowing and implementing the floor price through actual purchases. As you know, at one stage, the government had over 30 million tonnes in its godowns.

Not many countries have done this. The African countries, for example, simply do not have the capacity to do it. They may sometimes announce a floor price but when production goes up, market prices crash like what we recently saw for onions here. In wheat and rice, the progress has been due to government policies in input-output pricing, apart from just technology. And within this, you are right to note that the maximum progress has taken place in wheat.

Would you identify any specific reason for wheat registering the maximum progress compared to even rice?

MSS: First, the scientific underpinnings have been very strong for wheat, especially in terms of anticipating and planning for new problems and incidence of pests and diseases. This is unlike in rice, and what we are seeing now for cotton, where pest problems are very serious.

Though in the case of wheat, and rabi crops as a whole, fungal (rust) diseases are more important than insect pests, the scientists here have done good work in

their gene deployment strategy and planning, which has insulated farmers from violent yield fluctuations. For example, now they are planning against a new race of yellow rust — virulence against Yr9 gene, as they call it.

All this and the implementation of a floor price has given farmers the right stimulation to produce wheat. They are not so sure about cotton, whose yields are very low in this country. Ultimately, farmers' decisions are conditioned by three factors — the cost of production, the risks involved and the expected return.

SN: In wheat, what we have done is to keep our breeding programme one step ahead of pathogenic evolution. For example, till the early 1990s, a major part of the wheat area in North Western India used to be covered by two varieties — HD-2329 and HD-2285 — which have now become susceptible to brown and yellow rusts. We have succeeded in phasing out these and replacing them with alternative varieties, such as PBW-343, UP-2338 and WH-542, with in-built resistance against rust.

In fact, this year we deliberately "created" the rust epidemic in our test fields and what we saw was that even with these man-made rust conditions, the new varieties were able to withstand the disease pressures very well. We are now preparing for a new yellow rust race, which have virulence against the Yr9 resistance gene and have entered India about three years ago from West Asia. Through our advanced screening process, we have been able to identify lines that are resistant to this new virulence of yellow rust. We hope to incorporate these genes in our varieties in due course.

The broad strategy has been to diversify the resistance base against rust pathogens and keep the varietal dynamics shuffling year to year to safeguard against pathogenic hazards. Today, in the Indo-Gangetic plain, where some 18.5 million hectares are under wheat, nearly 60 varieties are grown under different sowing dates, creating a genetic mosaic that acts as a temporal and spatial hurdle against the spread of rusts. **That raises an important point...There is this view that the genetic (physiological) yields of the Green Revolution wheat varieties have plateaued in recent times, and whatever new varieties being introduced now are basically those that are only re-**

sistant to various biotic and abiotic stresses and do not embody any significant increase in yield potential per se...

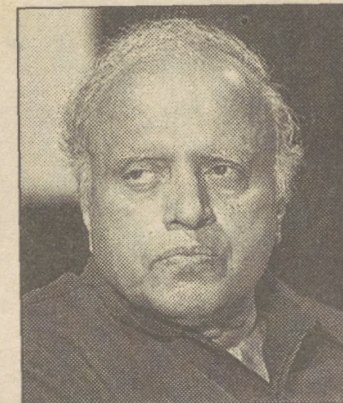
MSS: Well, I feel that this so-called plateauing of yields is largely a Western concept and more relevant to those countries where usually a single crop is taken. Here, we have multiple cropping. Punjab farmers, for example, grow basmati or a short-duration, high-yielding variety of rice and then wheat and probably a crop of potato in between. So, really speaking, what is relevant here is yield per day, not per crop. The plateau comes only when you start looking at yield per crop.

In the West, you basically have a long-duration winter wheat which gives yields of up to nine tonnes. Here too, it is potentially possible to get 7-8 tonnes with the existing varieties and with the proposed hybrid wheat being talked about, the yields can go up even further. But, ultimately, what we should look at is the yield per hectare per year from, say, the irrigated cropping systems of North-West India and not just from one crop. And if you see the yield of the whole system, you will find that it has steadily improved and not gone down. This is despite farmers confronting problems of salinity and moisture stress in their soils.

The confusion comes only when one takes the yield of a high-yielding variety such as Kalyansona in 1968, which was 6.5 tonnes, and then say that yield levels have not increased much since then. But, then, in those days, there was hardly any wheat crop in Punjab. They used to grow a crop of bajra or something like that, mostly rain-fed. Now, they have the wheat-rice rotation, as a result of which the whole system has changed. In fact, I have always been telling scientists that, in our publications, it would be more appropriate to indicate yield per hectare per day in a multiple cropping system.

Dr. Nagarajan, could you elaborate further on this aspect of viewing cropping systems' productivity as a whole, rather than simply yields of individual crops?

SN: As Dr. Swaminathan has noted, in the early days, the cropping intensity even in many parts of Punjab and Haryana was very low. Since there were no crops during the rains, and farmers there were mostly growing only a single crop of wheat per year, the issue of systems interaction did not arise in the first place.



Dr. M. S. Swaminathan, the architect of the Green Revolution.

But with access to irrigation and wheat varieties of varying maturity periods — a major contribution of the Green Revolution is that you have today wheat varieties of maturities ranging from 100 to 145 days — and by choosing an appropriate variety, farmers could go ahead with higher cropping intensity. This has happened in the last 20 years or so. Rice-potato-wheat is a reality in many parts of Punjab and we have to, therefore, look into systems productivity by examining aspects such as systems nutrition — how much fertiliser we apply — and at the same time develop varieties that will fit into this intensive system of farming.

That is one of the reasons why we are trying to develop wheat varieties by growing them from the beginning in the rice fallows (left-back fields of rice), evaluating the early generation material and conducting our station and yield trials in that rice-wheat ecosystem so that it is finetuned from Day One to the slot it has to eventually fit into.

The availability of varieties of different maturity periods has enabled us to sow wheat now even as late as the first week of January. About 30 years ago, nobody would have believed this could have happened. But today we have varieties that can be sown in the first week of January and still give you a three-tonne yield. This is a breakthrough because wheat at the time of harvesting under late sown conditions has to face very harsh environment and being a cold season crop, it is not meant for it.

Therefore, we have incorporated resistance to heat in these new varieties, which means they can be sown even in the month of January. That is a big technological

breakthrough in plant breeding, especially in the eastern region along the river, where water does not get drained off easily and the field can be prepared only after the water level goes down by December. So there is substantial area starting from Eastern Uttar Pradesh going up to Bengal, where wheat is sown late and the new varieties have helped.

The other breakthrough we have made in the systems approach to cropping is in the development of new techniques such as zero tillage, reduced tillage and raised-bed cultivation to reduce seed rate and unit fertiliser and water application. The Pantnagar zero-tillage machine has been demonstrated on almost 5,000 acres in Haryana alone. In this case, without preparing the field after harvest of rice, using the residual moisture, the farmers are able to sow a crop of wheat. This also suppresses the weeds and optimises the time and thereby gives a yield advantage.

Then came the sprinkler irrigation in about half a million hectares of Rajasthan and Madhya Pradesh. Getting three-four tonnes of wheat in MP today is not a problem at all because there are varieties which respond to just 1-2 irrigations and yet give substantial yields. So, I believe that in the next couple of years, you will be seeing a big growth in wheat production coming out of these non-traditional areas by access to new technologies. Sprinklers are a new technology. Zero tillage is a new technology. Short duration wheat is a new technology.

Dr. Swaminathan, one of the reasons for the success of the Green Revolution has been the free international flow of germplasm and our access to material from institutions such as the Consultative Group on International Agricultural Research (CGIAR) network. Do you feel that with the global intellectual property regime now in place, this free flow would be impeded and undermine the potential for a second Green Revolution? Would you suggest any alternative framework in this direction?

MSS: I think that the free flow of germplasm fortunately is still continuing and in the immediate future, lack of available germplasm will not be a constraint. True, as every country develops its own *sui generis* system of plant variety protection and IPR regimes, secrecy and privatisation of research can create problems. But, at the moment, the world has, in my view, enough germplasm

available. The CGIAR institutions hold nearly six lakh accessions. Dr. Nagarajan's institute here has 10,000 strains. And these are not merely accessions, but value-added accessions in the sense that one knows what they contain.

If I see the next 10 years down the road, scientists in the public sector — I am talking about institutions such as the Indian Council of Agricultural Research and the CGIAR — have adequate genetic resources which have not been fully utilised still. The International Rice Research Institute, Manila, has 100,000 strains of rice available. Even our gene bank at Delhi (National Bureau for Plant Genetic Resources) has some 400,000 accessions.

The real issue is how to use the gene banks and analyse what those germplasm contain. And that is going to be expensive. Collecting and putting them in cold-storage is only one aspect...the tip of the iceberg. But analysing, cultivating them and identifying the genes — there is a lot of work to do there. Moreover, with the modern biotechnology and genetic modification recombinant DNA experiments, it has also become possible to incorporate genetic factors from totally unrelated species more easily.

Of course, novel genetic combinations are available with some people, particularly private companies which will certainly create them out of pre-existing material in nature. Take Monsanto's Bollgard cotton. Bt. toxin exists in nature, but Monsanto has put it into cotton itself. So, those kinds of new genotypes — novel genetic combinations — which did not exist in nature will be created year after year, though it would be only from pre-existing material. If the Bt. gene did not exist, then the Bollgard, too, would not have. Therefore, you require genes, which only, after all, can be recombined in a new way using recombinant DNA technology.

It is precisely for this reason of protecting the genetic resources we have today and preventing others from exploiting our work that we should enact as soon as possible these two very important pieces of legislation — the Biodiversity Act and the Plant Varieties Protection and Farmers Rights Act. It is in our own interest to enact them, particularly since India has the largest public sector breeding enterprise in the world, and it is necessary that its public good character is protected.

Fighting Hunger in The Computer Age

By RASHME SEHGAL

HUNGER is about people. It is about 72 million Indian families spending the better part of their lives scrounging for a square meal. These families live below the poverty line and according to the World Bank, earn enough to eat 400 gm of rice or wheat, 120 gm of vegetable and 40 gm of dal every day, barely enough to stave off starvation.

This seems ironic at a time when grain production has touched the 200 million mark. During the early 90s, food production in India rose faster than in any other nation except China. We have also emerged as a major milk producer and yet, World Bank statistics suggest that millions of Indian families have access to only one cup of milk every three days.

Thus even as surplus food stocks are pouring out of our granaries, we continue to have hunger and malnutrition in astronomical proportions. Half of all children below five are malnourished and one-third of all newborns are of low birth weight because their mothers suffer from anaemia.

Experts have finally realised that the only way hunger can end and some measure of rural/urban prosperity ushered in is by increasing the purchasing power of the poor. The moot question is how?

Some NGO groups are making a determined bid to end the scourge of hunger. One such group is the Chennai-based M S Swaminathan Research Foundation which has launched the Global Hunger Project to create a veritable zone of hunger-free villages by introducing simple but meaningful interventions aimed at strengthening livelihood security for the poor.

Hunger-free Zone

Their objective from the start is to limit themselves to playing a catalytic role whereby small, marginalised farmers, and women folk who comprise a large chunk of the labour force, are reached out for assistance. Once the groups have been identified, it is made clear to them that they will be provided financial and technical assistance only up to a certain point after which they must continue on their own. The aim is to create a feeling of involvement and allow personal initiative to develop rather than expect gratis from a maibaap sarkar.

Swaminatham and his dedicated team first created an extensive

database providing details of families, their income levels, land holdings and documenting the basic reasons for their poverty in several villages across Tamil Nadu. Once this information was logged into a computer which every villager had access to, the team chalked out a suitable area-specific poverty alleviation strategy.

The second step was to get down to the nitty-gritty task of helping create additional sources of income through sericulture, fisheries, mushroom cultivation, dairy, handicraft and other means of livelihood. To get these initiatives going, the village poor needed access to low interest loans which because of this information backup, were far more readily available than in the past. With the schemes being underway in 150 villages, it was found that most of these projects led to a spurt of income generation within the first year of their introduction.

An interesting spinoff from this intervention has been that activists and technical experts working in a particular area, often found themselves having to deal with other social problems as well. For example, working in the districts of Madurai, Periyar and Salem brought them face-to-face with the problem of female foeticide.

Female Foeticide

Their interactions with the village folk made them realise that female foeticide is not linked with poverty as much as it is with social attitudes. Villagers in foeticide-prone areas never complained of lack of food. Rather it was their inability to perform expensive rituals which they considered to be the ultimate form of poverty. Elder women in these villages disclosed that problems of dowry were rare when they were married off in the 50s and 60s. Today, the same were widely prevalent because of rising expectations and an increasingly ostentatious lifestyle. Men, it was found, dodged the whole issue of foeticide claiming they had no hand in it since it was the women who killed the girlchild.

The rural poor are spending 82 per cent of their income on food as against the urban poor who spend 78 per cent. Despite such massive outlays, they struggle to keep themselves alive. The only way out of alleviating hunger is by extending similar income generation schemes to all corners of the country.

SUNDAY,
MAY 30, 1999

THE NEW INDIAN EXPRESS
CHENNAI

Society formed to build women's Bio-tech park

EXPRESS NEWS SERVICE

Chennai, May 29: The Department of Biotechnology (DBT), the M S Swaminathan Research Foundation (MSSRF) and the Tamil Nadu Industries Development Corporation (TIDCO) have formed a society to build a women's biotechnology park at Kelambakkam.

The biotechnology project was inaugurated by President K R Narayanan in July 1998.

Biotechnology department's secretary Dr Manju Sharma said a team of eight entrepreneurs will build industrial modules like food, biotechnology, floriculture, medical diagnostics, pathology testing facilities, hatcheries for ornamental fish, herbal products, fortified food processing plants, spirulina production and organic composting. The State Government has given 20 acres for the project.

Dr M S Swaminathan, who heads the society, said the park will begin functioning by the beginning of the next millennium. The park will be ecologically designed by Roopmati Anand, an architect.

It will have information centres, research and testing laboratories and central warehousing. The technologies developed by DBT will be given free cost to women entrepreneurs.

TIDCO chairman R Gopalan said that the park will initially have 20 industrial sheds.

Out of the initial investment of Rs 6.25 crore, the DBT is giving Rs 4 crore. The State Government is giving money for the land and Rs 1.55 crore will be obtained from banks shortly.

The society has the DBT advisor, representatives of TIDCO, State Government and MSSRF as its members. It will also include women entrepreneurs, experts and representatives from funding agencies.

A scientific advisory which has Dr Kunthala Jayaraman, Technology Dean of Anna University and Dr Joseph Thomas of SPIC as its members has been formed.

The United Nations Development Programme will give training and information. A renewable energy source and a quality control unit and are planned to be build in the park.

Biotech park for women to be operational soon

Our Bureau

CHENNAI, May 30

THE Rs. 10-crore biotechnology park for women will become operational by the year-end and provide a boost to women entrepreneurs interested in business ventures involving biotechnology application in agriculture, food and medicine.

Named the Golden Jubilee Biotechnology Park for Women, it is the first of its kind being established in collaboration with the M.S. Swaminathan Research Foundation (MSSRF), the Department of Biotechnology (DBT), the Government of India, the Tamil Nadu Government, and implemented by the Tamil Nadu Industrial Development Corporation (TIDCO).

The 20-acre industrial park will be located at Siruseri, on the old Mahabalipuram route South of Chennai. The venture was registered as an autonomous society with Dr. M.S. Swaminathan chairing the governing body with representations from the State Government, DBT, TIDCO, MSSRF and the funding agencies.

Briefing presspersons about the project, Ms. Manju Sharma, Secretary, DBT, said that the project was one of the 12 approved programmes for commemorating the 50th anniversary of India's independence.

In the first phase, the DBT will bring in Rs. 4.5 crores of the Rs. 6.25 crores for the venture. In addition, the DBT would provide proven technology for biotechnology-based projects free of cost to entrepreneurs at the park, she added.

Prof. M.S. Swaminathan, said that at the park, the highest standards of environmental management would be adhered to in accordance with Agenda 21 of

the United Nations Conference on Environment and Development (UNCED) dealing with environmentally sound management of biotechnology.

Mr. R. Gopalan, Chairman and Managing Director, TIDCO, said that the society would be structured as a financially self-supporting venture with lease rentals as a major source of revenue. Common infrastructure facilities such as roads, water supply and power will be provided. Two modules, shed modules with built-up space and land modules will be available for entrepreneurs.

The project will achieve financial closure shortly, with funds from the DBT, land cost being borne by the Tamil Nadu Government, and Rs. 1.55-crore term loan assistance from banks. The first phase will go onstream by the end of the calendar year and will generate an employment potential of about 1,000, he added.

The project was envisaged at a meeting of women scientists and technologists organised in 1996 by the UNDP and the MSSRF in Chennai. The foundation stone for the project was laid by the President, Mr. K.R. Narayanan in July 1998.

KERALA

State to formulate policy on agriculture

THIRUVANANTHAPURAM:

An agriculture policy for making the State self-sufficient in agriculture production will be formulated and announced in the current financial year, the Agriculture Minister, Mr. Krishnan Kaniyamparambil, said.

By announcing an agriculture policy, the Government aimed at pepping up the agriculture production and productive capacity in the State. A committee headed by Prof. M.S. Swaminathan had been assigned for policy-making, he said.

The Minister said priority would be given to paddy cultivation with stress on technical upgradation to make cultivation cost-effective and profitable. The Government would extend paddy cultivation to another 30,000 hectares of barren land and would strictly oppose any attempt to fill up the paddy fields in the State for other uses, he said.

— PTI

Biotechnology park for women: chances brighten

By Our Special Correspondent

CHENNAI, MAY 29. The prospects of early establishment of the "Golden Jubilee Biotechnology Park for Women" at Kelambakkam on a 20-acre plot near Chennai, brightened today with the Tamil Nadu Government formally creating a Society under the Tamil Nadu Societies Registration Act to implement the project.

The project has been initiated by the Department of Biotechnology (DBT) in collaboration with the M.S. Swaminathan Research Foundation (MSSRF) and the Tamil Nadu Government to commemorate the 50th anniversary of India's Independence. The Tamil Nadu Industrial Development Corporation (TIDCO) is the implementing agency. The DBT's grant-in-aid sanctioned for the project is Rs. 4 crores.

Addressing a press conference here on Saturday, Dr. (Mrs.) Manju Sharma, Secretary, DBT, said after examining the feasibility report and viability of the project, the TIDCO had suggested that it would be more desirable that the project be executed by setting up an autonomous society to help expedite its execution.

Commending the Tamil Nadu Government's initiative in accepting the proposal Dr. Manju Sharma said it was decided that the proposed park would be managed by a governing body consisting of representatives drawn from the DBT, Government of India, Tamil Nadu Government, TIDCO, MSSRF, two women entrepreneurs, two outside experts, and representatives from the funding institutions. Dr. M. S. Swaminath-

an, Chairman of the MSSRF, will be the Chairman of the governing body.

Explaining how the project was conceived at a meeting of women scientists and technologists in December 1996 here, she said the primary concern of the inherent capabilities of women in management and the need for women entrepreneurship development was raised. It was also felt necessary that resource and strengths of women need to be channelised to develop their full potential to help them take their rightful place as equal partners in all spheres. In order to give shape to these ideas, the concept of setting up a "Women Biotechnology Park" came up.

The park would be designed based on the principle of decentralised production supported by appropriate centralised services to promote a series of hi-tech biotechnology-based enterprises aimed at capturing a number of niche markets in the areas of agro, food and medical biotech.

The main objectives of the park would be to bring together women entrepreneurs, scientists, financial institutions and industry. It would generate the skilled employment opportunities. Application of proven biotechnologies as also commercialisation of these technologies would be accorded top priority. Besides acting as a training centre and promoting regional economic development, she said a batch of eight entrepreneurs have been shortlisted who would be setting up their industrial modules covering varied areas of food biotechnology, floriculture, medical diagnostics,

and pathological testing. The MSSRF would act as the technology resource centre and the SPIC Science Foundation and other research institutions would provide scientific and technological inputs. "I strongly feel with this proposed venture, the biotechnology movement itself will kick off to a more brighter start in the new millennium", she added.

The "niche park" would eventually serve as a role model to foster technological and economic empowerment of women, Mr. R. Gopalan, the TIDCO Chairman, said. Based on a detailed project report prepared by the ITCOT, and under the first phase, 20 shed modules and 44 land modules would be developed at a cost of Rs. 6.25 crores. The eco-friendly park, he said, would also have the required support facilities including roads, electricity, water, drainage, effluent treatment, landscaping, transport and communication. Thanking the DBT for the grant-in-aid and the keen interest shown by the Tamil Nadu Government by providing the land, Mr. Gopalan said the balance cost of Rs. 1.55 crores would be raised through financial institutions. "We are confident that the first phase would be commissioned in the next six months and provide employment for over 1000 persons", he added.

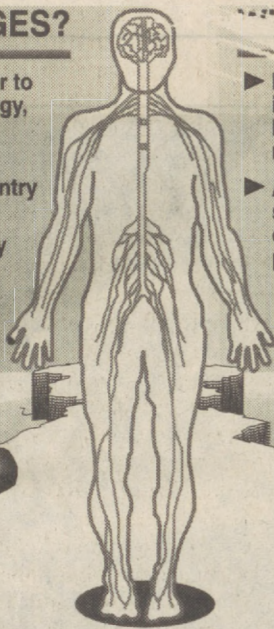
Dr. M. S. Swaminathan, said a scientific advisory committee comprising experts had also been constituted to help provide the right impetus for the project which would have the highest standards of environmental management.

THE BIG LEAP FORWARD

The unravelling of the human genetic jigsaw — currently being avidly researched in America, France and Britain — is likely to be completed by 2003, with the US alone spending \$250 million last year on the exercise. Indian technocrats are now urging the government to invest up to Rs 1,500 crore every year for the next ten years so that the country finds itself on a firm footing on the world biotechnology map.

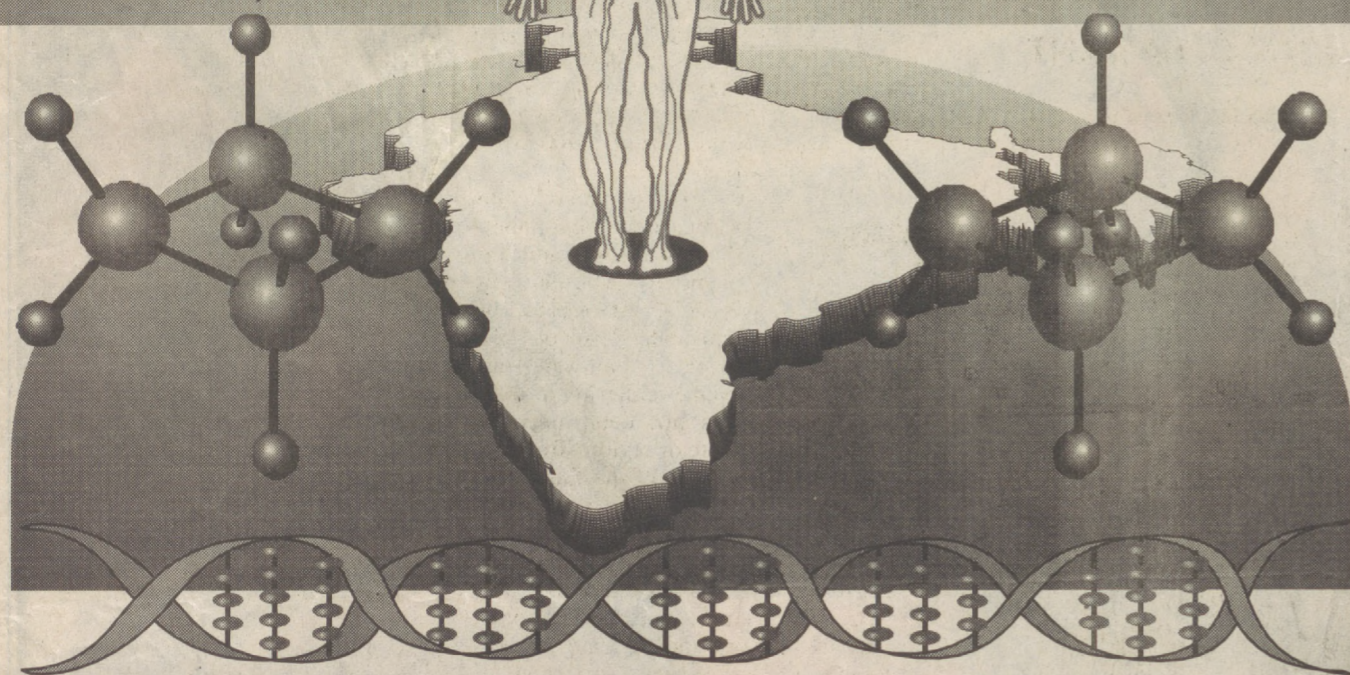
WHAT ARE INDIA'S ADVANTAGES?

- ▶ India has the biodiversity and skilled manpower to become a big-time global player in biotechnology, the next century's sunrise industry.
- ▶ With its 4,635 distinct human communities, including 75 endangered tribal groups, the country is a 'living laboratory' for human genetics.
- ▶ Our social milieu offers scientists extraordinary opportunities to exploit the newly-developed method of 'homozygosity mapping', for it isn't uncommon to find three generations of in-bred families in India, a rarity elsewhere.



WHAT DOES INDIA STAND TO GAIN?

- ▶ India's extraordinary genetic diversity will help researchers identify genes predisposing particular people to particular hereditary diseases. Armed with this knowledge, scientists now hope to find cures for diseases considered incurable.
- ▶ A greater understanding of plant genetics, meanwhile, will spur Indian crop scientists to foster genetically modified organisms, or supercrops, to enhance agricultural production with the judicious use of biotechnology.



IE Graphics/B.K. SHARMA

were on, saying these new-world plants wouldn't benefit the country's small peasants. Clearly, then, the new initiative — which targets both plant and human genomes — comes at a time when India is struggling to assimilate the social, ethical and legal issues that will unfold as a result of such techniques.

These issues gain greater significance because India is considered a 'living laboratory' for studying human genetics. A monumental study by the Anthropological Survey of India, titled *People Of India*, concluded "there are 4,635 distinct human communities like castes and tribes, including as many as 75 endangered tribal groups, 324 functioning languages and 25 scripts ... all over India."

ADD TO THIS complex background India's unique social and religious practices — like the strict norms that govern marriage within a structured caste system — large family sizes and, above all, a population of close to a billion people, and you have unmatched opportunities, and challenges as well, to understand the human genome. "The extraordinary genetic diversity you find in India will be helpful to identify predisposing genes," avers Watson. Armed with such knowledge, scientists hope to find cures for a range of diseases.

We already have 14 genetic counselling centers spread all

■ **Manju Sharma (right), Secretary, Department of Biotechnology, became the first top government functionary to articulate the need for gene patents, when she declared: "Rules should be so changed that our scientists can patent the novel genes and products they find in India itself."** In the picture, she's feting her successor as Indian Science Congress Association President, **R. A. Mashelkar**



worked on. "The social milieu of India offers extraordinary opportunities to exploit the newly-developed method of 'homozygosity mapping', for it is not uncommon to find three generations of in-bred families in India, a rarity in most parts of the world," says Sharat Chandra, a molecular biologist at the Indian Institute of Science, Bangalore.

The Indian Statistical Institute (ISI), Calcutta, aims to prepare 'genographic maps of India', and researchers here have studied 14 different populations and are now busy mapping the distribution of the commonest disease-causing genes.

A countrywide network of centres of excellence would soon be established to bring under one roof all the expertise needed to understand the human genome. The first such think-tank — Centre for Human Genetics Research — is likely to come up at Bangalore.

and forever-lasting fruits, plant genomics is considered the greatest idea for the 21st century. Not to be left behind, India set up its first Plant Genome Research Centre last year at Jawaharlal Nehru University, New Delhi, with an initial investment of about Rs 1 crore. Scientists, however, are still not clear about which plant to target first, with different interests lobbying for different plants.

Here again, the world is moving really fast. The US has targeted the corn genome and the Japanese have made a head-start on the rice genome. Which is why some Indian scientists say there's no need for us to undertake research in this area, for all sequence data are likely to be available in the public domain. But Akhilesh Tyagi, a molecular biologist who has considerable experience of plant gene sequencing at the University of Delhi, says "genomic databases may be available in the public domain, but even to understand and assimilate this data is a Herculean task." Tyagi feels investing substantially in plant genome research is important to keep scientists from getting deluged by incomprehensible data.

"restraint would be a good idea till bio-safety issues are amicably resolved." Watson does not agree with Shiva and has literally put all his high-profile international prestige and weight behind the new Indian initiative. With his hallmark wry humour, he says: "The only person till date to have been harmed by DNA is Bill Clinton. No one has ever gotten sick because of DNA." He was obviously referring to the DNA test run on Monica Lewinsky's semen-stained blue dress.

Though the political climate may not be conducive for India to amend its patent laws with the speed they demand, but being a signatory to the World Trade Organisation, the country will have to harmonise its IPR regime with that of the rest of the world. And that's one demand Manju Sharma, the country's high priestess of biotechnology, has no hesitation in supporting. "India should start permitting the patenting of genes," she says, "and rules should be so changed that our scientists can patent the novel genes and products they find in India itself." This is the first time a senior government functionary has articulated the need for gene patents.

Laws, of course, can be altered. But the greater need is public awareness about genetically modified organisms (GMOs). In the months gone by, the country has seen a raging controversy about the possible introduction of the 'terminator gene'. "Changing public perception of GMOs should be a major effort," feels M. S. Swaminathan, the renowned agricultural scientist. "Good bioethics, bio-safety and bio-surveillance should be developed as part of the precautionary package." He stressed the need for setting up of a non-partisan group to "dispel these fears." It'll be a good first step to take, for "India has a billion mouths to feed." And the country's only option is to increase productivity, which, in the words of Sharma, "can only come through the judicious use of biotechnology."

(Pallava Bagla is the India Correspondent of Science magazine)

Joining The Brave New World

■ *With the scientific establishment committing the country's resources to the Human Genome Project, the world is looking to us for solutions to the many genetic riddles that have eluded an answer. PALLAVA BAGLA reports on this most tangible outcome of the Indian Science Congress*

"Biotechnology will be the key to India's future both in modern agriculture and the pharmaceutical industry, hence India should take DNA technologies far more seriously," says James Watson, the legendary discoverer of the DNA's double helical structure. At the recent Indian Science Congress

in Chennai, Watson chaired a day-long brainstorming session called the Genome Summit.

And his plea didn't go unheeded, for the Summit recommended that India ought to put genomic research on the front-burner. Says Manju Sharma, Secretary, Department of Biotechnology, Government of



India: "Our nascent genomics programme will be strengthened with more dedicated centres of excellence being established soon."

It may be easier said than done, though. It was just a month ago that agitating farmers had burnt fields where trials of genetically engineered cotton

■ **James Watson (right), discoverer of the double helix, urged India to secure its future with biotechnology at the Chennai Genome Summit. He found a receptive audience, which included M. S. Swaminathan, but the private sector was visibly absent**

over the country and the most common genetic diseases, like thalassemia and neurological disorders, are being intensively

Another area of genomic research is plant genetics. From supercrops resistant to all kinds of pests to extra-large vegetables

THERE IS, of course, a flipside to all these grand plans. India's laws governing intellectual property will have to be strengthened before industry is going to show any interest in this new-found excitement about 'new biology'.

India doesn't recognise product patents in agriculture and pharmaceuticals, and any form of life still cannot be patented. Surprisingly, or maybe not, industry went literally unrepresented at the Genome Summit. "India should get its local industry on-board its research programme at the earliest. India should be seriously looking at private-sector funding for its programme," says Watson, who admits that his "biggest mistake was not to appreciate the commercial value of the human genome."

Though there are others, like ardent environmentalist Vandana Shiva, who caution that in this current "Wall Street phase of biotechnology," with big MNCs pumping huge amounts of money into DNA research,

'Agro policy should be job-oriented'

UNITED NEWS OF INDIA
MARCH 29

LEADING agricultural scientist and UNESCO professor in ecotechnology Dr M S Swaminathan today said that the country's agricultural policy should be aimed at job-led economic growth and stressed the importance of safeguarding ecological foundations essential for sustainable advances in agricultural productivity.

Delivering the 9th T V Chidambaram memorial lecture on 'Population, Environment and Food Security', organised by the South Indian Education Society (SIES) today he said that there was an urgent need to improve the productivity of the rain-fed areas covering 63 per cent of the total cultivated area. "We should take advantage of the diversity of growing conditions prevalent in the country which enables the cultivation of a wide range of vegetables, fruits and flowers."

Indian farming provides food to nearly a billion people and livelihood to 65 per cent of the population, he said. Dr Swaminathan said that attention should be given to protecting employment intensive sectors like textiles and animal husbandry. "Cotton cultivation, textile manufacture and trade provide livelihood opportunities to about 60 million people in the country. Promotion of a green health movement based on medicinal plants and herbs will help to ensure improvement in income of millions of tribals and rural families," he stated.

Speaking on the future challenges, he said that India's agricultural strategy for the 21st century will have more emphasis on producing more per unit of land, water, energy, capital and labour through means that would ensure that productivity improvement is not associated with long term ecological and social harm.

A SCIENTIST'S CALL



Agricultural scientist Dr M S Swaminathan delivering his lecture on 'Population, Environment and Food Security' at SIES College, Sion on Monday. Express Newslines photo by Vasant Prabhu

Gender and biodiversity

GENDER DIMENSIONS IN BIODIVERSITY MANAGEMENT: M. S. Swaminathan — Editor; Konark Publications Pvt. Ltd., A-149, Main Vikas Marg, Delhi-110092. Rs. 300.

The term "gender", as broadly defined at a meeting convened by the International Plant Genetic Resources Institute (IPGRI) and the FAO in Rome, in October 1996, "refers not to women alone, but to the different socially constructed roles of, and relationships between, men and women across time and space as well as among variables of age, wealth, caste, ethnicity etc."

The incredible contributions of the indigenous people of India, to our knowledge base of the life-supporting edible, medicinal and commercial plant and animal diversity, and their conservation through the ages, are briefly traced in this book.

The first three chapters are general, closing with an agenda for action, and the rest of the seven chapters are case studies, authored chiefly by women, who have based their narrations on their original field surveys and studies.

Representative ecosystems in India, which are biologically rich and unique, ecologically sensitive and culturally also very diverse, like the biodiversity "hot spots" such as Arunachal Pradesh and Mizoram in the eastern Himalayas, Wayanad in the Western Ghats, coral islands like Lakshadweep, mangrove ecosystems like Bhitarkanika in Orissa, Jeypore tract, the cradle for rice gene pool, and the Kolli Hills, with their Sami Sola (sacred grove) culture of the tribal Malayalis, with their rare as well as endemic species and valuable gene pools, and their conservation for

generations through their diversity of cultural practices like the native herbal medicines, sacred groves and other traditional systems, are narrated.

These case studies may apparently look like narrations in cultural anthropology and ethnobiology, but their focus is on biodiversity conservation through diverse cultural and gender-wise practices in India.

However, in a predominantly patrilineal and patriarchal indigenous cultures of India, where women, despite their innate potential for resourcefulness, are superstitiously discriminated and prejudiciously alienated from participating in all productive activities and are relegated only to post-harvest processing of the produce, management of income and of households, this book highlights the need for justice and equality, not only among diverse castes, wealth groups and ethnicities, but much more, between sexes, and as one author rightly puts it, "The prospects for a gender approach and biodiversity management is not encouraging olden day laws have to be improved."

As the "agenda for action" in this book sums it up, the message of these compilations is to integrate gender dimensions in conservation, sustainable utilisation and equitable sharing of benefits.

At a time when no literature is available on this novel and challenging subject, this book would be a trend-setter for more field surveys and assessment of the diverse ancient Indian practices and contributions to a modern global subject of biodiversity conservation.

P. J. Sanjeeva Raj

'Adopt Agenda-21 for sustainable future'

By Our Special Correspondent

CHENNAI, April 7.

Sustainable future of mankind in the next century cannot be assured unless all countries adopt Agenda-21, the programme for sustainable development, outlined by the World Conference on Environment and Development at Rio de Janeiro. Dr. Maurice Strong, Under-Secretary-General of the United Nations, said here today.

The chief task of governance in all societies, including developing countries, in the coming decades would be to rid the world of hunger and poverty through a multi-faced approach to sustainable development embracing population policy, energy policy, application of advanced technology to raise farm productivity and incomes, gender justice and empowerment of the people, Dr. Strong said.

Delivering the "Hunger Project Millennium Lecture", he complimented the Hunger Project on focussing its attention on poverty that was not dramatic or stark but on poverty that was long-term, debilitating and lethal, depriving masses of people of the opportunity to participate in productive economic activity, access income, ensure healthy and safe motherhood and healthy and intellectually and spiritually vibrant younger generations.

Dr. Strong emphasised that advances such as biotechnology and information technology could be and should be used to empower the rural population, as was already being done by projects being implemented by the Dr. M.S.Swaminathan Foundation. If the owners of technology, such as big companies, used it to "victimise, people, through methods such as promotion of 'terminator genes', the state should intervene and not leave the task to the market mechanism.

The problem of hunger at present was not lack of availability of food but of raising the capacity of the peasant farmer to increase production to such a level as to ensure for him a sustainable livelihood.



Mr. M.A. Parthasarathy, founder-trustee, World Wilderness Trust, presenting the "Legend in his life-time" award to Mr. Maurice Strong at the Hunger Project Millennium lecture in Chennai on Wednesday. The other awardee, Dr. M.S. Swaminathan, is seated. The president of the Project Hunger, Ms. Joan Holmes, is at extreme left.

The test of policies and actions, as the 'talisman' prescribed by Mahatma Gandhi said, should be whether they would benefit the hungry and starving millions and help them attain a measure of self-reliance, said Dr Strong, who is Rector of the UN University of Peace in Costa Rica.

Dr. M.S.Swaminathan, who presided, said those who understood the value of biological diversity often did not appreciate the value of

human diversity.

At the meeting, Dr. Strong and Dr. M.S.Swaminathan were presented with the "Legend in his Lifetime Award" by Mr. M.A.Parthasarathy, founder-trustee of the World Wilderness Trust.

Ms. Joan Holmes, president, The Hunger Project, who introduced Dr Strong, endorsed the famous words addressed by Indira Gandhi to the Stockholm Conference that poverty was the biggest polluter.

The Hindu, 8 April '99

NATIONAL



The Deputy Chairman of the Planning Commission, Mr. K. C. Pant, exchanging pleasantries with Dr. Maurice Strong, Under-Secretary General and Special Adviser to the Secretary General of the United Nations, at a consultation meeting of the Hunger Project in Chennai on Wednesday. Others from left are Dr. M. S. Swaminathan, chairman, Global Board of Directors of the Hunger Project, Dr. Brenda Gael McSweeney, Resident Representative in the UNDP-India office, and Ms. Joan Holmes, president of the Hunger Project.

Plan panel for interaction with people

By Our Staff Reporter

CHENNAI, April 7.

The Planning Commission will create a separate cell to enhance the participation of non-governmental and voluntary organisations in development activities. A decision to this effect was taken recently, the Deputy Chairman of the Planning Commission, Mr. K. C. Pant, told presspersons after inaugurating a consultation meeting on "Towards a hunger-free India — the final milestone", at the M. S. Swaminathan Research Foundation (MSSRF). The Planning Commission, he said, "would like to see a lot of interaction" with the people through NGOs and voluntary organisations.

To a query on the status of the Ninth Plan, he emphasised the need to achieve a seven per cent GDP growth in the next three years to achieve the revised target of 6.5 per cent in the Plan period. The revision was necessitated after two years of below-target growth of 6.5 per cent.

Commending Dr. M. S. Swaminathan, Chairman of the MSSRF and Global Board of Directors of the Hunger Project, for mooted the idea of a scheme for pregnant women, he said, "The idea of a special programme for expectant women is worth examining." The Planning Commission, he added, was keen to see the convergence of all schemes for women.

Earlier, addressing the meeting, Mr. Pant called for changes in the terms of the World Trade Organisation (WTO) for developing countries such as India. "As international trade in agricultural commodities becomes more open under the aegis of the WTO, with the attendant trend towards equalisation of prices across countries, there must be a certain degree of sensitivity to the specific needs of labour-surplus countries like India," he said.

If the income from agriculture was lower than the threshold required for meeting the minimum nutritional needs of those engaged in it, "then there may be no alternative but to deliberately alter the terms of trade in favour of agriculture by either providing higher prices or by subsidising the inputs." Both the alternatives were under attack, reflecting an "excessively economic view of things", and neglecting the social and humanitarian considerations that must guide all policy, national and international, Mr. Pant said.

In his address, Dr. Maurice Strong, Under-Secretary General and Special Adviser to the Secretary General of the United Nations, said poverty and hunger were "inextricably inter-related" and could not be dealt with on a single issue basis.

Noting that hunger was unacceptable and unnecessary and a hunger-free India and world

was entirely possible, he said, "the issue needs to be addressed as a package". The major challenge of the next millennium was the elimination of poverty.

Dr. Brenda Gael McSweeney, Resident Representative, UNDP-India office, said the UNDP policies were "looking at the feminisation of agriculture and poverty". The UNDP was prepared to assist the State Governments to chalk out programmes for eradicating poverty and hunger.

Dr. M. S. Swaminathan said the Foundation had recently initiated a project for sustainable livelihood in Chennai and Mumbai. Noting that gender inequality contributed a lot to poverty and hunger, he said in the next census the gender ratio between males and females would be around 1,000 to 850 respectively. Expressing concern over the inadequate birth weight of children, he urged the Government to introduce a scheme for expectant women on the lines of the 'Annapoorna' scheme.

Ms. Joan Holmes, President of the Hunger Project, said it had been extended to Bangladesh, Africa and Latin America. Quoting from a recent study, she said South Asia had the largest number of under-nourished people not because of inadequacy of food grains but because of the "worst subjugation of women".

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P. J. Sanjeeva Raj

IPR as a tool of neo-colonialism

BIOLOGICAL AND SOCIAL ISSUES IN BIOTECHNOLOGY SHARING: Krishna R. Dronamraju; Ashgate Publishing Limited, Gower House, Croft Road, Aldershot, Hampshire GU11 3HR. Price not mentioned.

This book, the publisher says, is the first of its kind to present a comprehensive summary of the global as well as institutional issues which are involved in biotechnology sharing and covers the controversial subject of intellectual property rights (IPR). Prof. M. S. Swaminathan in the foreword, has commended the timing of the publication of the book, when the provisions of Trade Related Intellectual Property Rights (TRIPS) will be coming up for a review. Today there is a revolution in biotechnology and it is playing an important role in manipulating living organisms, molecular mapping of chromosomes and genetic engineering. While the industrialised countries utilise their genetic engineering skills and get all their findings protected under the IPR regulations, the less developed countries, rich in biodiversity but lacking in skills, remain marginalised. When TRIPS comes up for a review, says Prof. Swaminathan, the provisions of the Convention on Biological Diversity (CBD) relating to equity and ethics should be integrated with those of conventional IPR which lays emphasis only on patents and copyrights.

As the author has pointed out in the introductory chapter, the IPR issues are here to stay for good or evil and will play a leading role in international relations. In the author's words, the successful transfer of biotechnology depends on the level of public perception within the socio-political, religious, moral and ethical context of the community in question and is not influenced by economic and scientific considerations alone. Biotechnology affects the society in several ways through its commercial success, media coverage, breakthroughs resulting from R&D as well as misgivings and apprehensions arising out of the application of the technology itself.

Discussing the culture of patents in science the author has raised a valid point: patents do not necessarily relate only to the major advances in science but can apply with equal relevance to incremental changes as well. An important element in filing a patent claim is the correct sense of timing to attract industrial attention together with making suitable

provision for possible future claims in the event of further data becoming available. In a related issue the author asks: are micro-organisms, being products of nature, patentable? What happens when a man-made micro-organism makes its appearance? Here the author refers the reader to the U.S. Supreme Court decision in 1980 when it approved such an organism, a bacterium created to break down one of the four main components of crude oil (Chakrabarty patent).

He then proceeds to discuss various classes of biotechnological innovations and traces the history of the science from the organismic methods of the past to the advanced cellular and molecular methods of today which are engineered to radically alter and manipulate the germplasms to produce virus resistant transgenic plants and gives a few examples of patent claims before taking up a detailed discussion of various international treaties relating to patents and plant varieties as well as biological diversity which expresses the variability among all living organisms and serves as an index of the biological wealth of our planet.

When organisms are genetically modified through biotechnology, are there potential risk factors associated with the process? The author cites an example to amplify the question: Ciba developed a technique to genetically modify maize through the use of a marker gene for achieving a successful genetic transformation. The marker gene used by Ciba is resistant to antibiotics. Can this marker gene infect other bacteria that could end up in the humans and animals and cause fatalities? Regardless of this apprehension, the U.S. Drug Administration approved the sale of this modified variety of maize. Many new food technologies that are widely accepted in the U.S. are still not whole-heartedly acceptable to the EU which is influenced by traditional European concerns against such new technologies. He then discusses the human behaviour and social changes affecting the biological diversity over a period ranging from pre-1500 A.D. to the present day. The book draws the reader's attention to the incongruity inherent in the laws and regulations pertaining to the IPR which create a fear of economic uncertainty in the developing countries. The lopsided application of the IPR regulations results in the flow of bioresources from

the poor to the rich. The author has rightly compared this scenario to the mindless exploits of the colonial empires of the past that systematically plundered their territories to enrich themselves. Today individual groups and companies from the industrialised nations with their single-minded quest for financial windfalls employ this technology to their sole advantage with utter disregard for the grave economic consequences faced by the poor. This, as the author says, exposes a mindset similar to that of the colonial powers of the past.

The chapter on ethical issues discusses several ethical and moral questions raised by the so-called transfer of technology. The IPR protected innovations can lead to the exploitation of the technology importing countries by the technologically advanced countries that create these technologies. In the ultimate analysis such an exploitation is motivated by economic greed and not by any internationally agreed convention. On the other hand, a uniform intellectual property system, says the author, should support three distinct characteristics: include all forms of intellectual property, an efficient public administration and an appropriate judicial system to enforce individual rights. Also involved are issues related to global activity, international cooperation, infrastructure and human cost. Opening up to the global market without adequate infrastructural support will fail to produce economic gains as it has happened in India. Another example cited by the author is India's big pharmaceutical industry and low drug prices. By liberalising its pharmaceutical industry India would face increased drug prices and the fallout could be an increase in infant mortality. The beneficiaries, yet again, would be the western pharmaceutical giants who would reap the surplus profits that the system would generate.

The author concludes with one optimistic note: since the Uruguay Round, many developing countries are becoming increasingly aware of the inequities of international trade and tariff and many of them are bracing themselves for protecting their rights.

We owe the author a deep sense of gratitude for this labour of love in the cause of science for human welfare.

C. V. Subramaniam

'Anti-dumping acts affecting textile exports'

By Our Special Correspondent

CHENNAI, Feb. 10.

The Union Minister for Textiles, Mr. Kashiram Rana, today called for an "open debate" in the World Trade Organisation (WTO) to arrive at a decision on technical standards, so that individual member-countries did not apply their own standards in violation of "clear and unambiguous provisions" under the GATT on technical barriers to trade. "This will certainly create a congenial atmosphere for expanding the world trade in textiles", he said, inaugurating the four-day 79th World Conference of the Manchester-based Textiles Institute, an international organisation of textile professionals.

Mr. Rana said though Article VI of the General Agreement on Tariffs and Trade 1994 (Anti-Dumping measures) and the Agreement on Subsidies and Countervailing Measures were intended to promote liberalisation and globalisation of international trade, domestic industries in the developed countries, particularly the European Union (EU), had been increasingly invoking various provisions of these agreements against a number of countries including India.

"An atmosphere of instability and uncertainty has been created in the Indian textile industry on account of repeated anti-dumping actions taken on the same commodity. This has affected exports and production and led to underutilisation of capacity", Mr. Rana said.

He said Article 15 of the WTO Anti-Dumping Agreement mentioned 'explicitly' that "special regard must be given by developed country members to the special situation of developing country members" and that "constructive remedies provided for in the agreement shall be explored before applying anti-dumping duties where they would affect the essential interest of developing country members". Yet these provisions were virtually ignored in pursuance of anti-dumping measures.

The Minister said the textile trade within the Asia-Pacific region was rapidly expanding and there was scope for accelerating this trend so that the dependence on trade with quota countries like the U.S., the EU and Canada could be reduced.

Dr. M. S. Swaminathan, agricultural scientist,

delivering the William Mather Lecture of the Textile Institute on "textile industry and rural livelihood security", said the WTO allowed all member-countries to resort to protectionist measures on the ground of ecological and food security. Since the food problem in India was not one of availability but of access because of lack of purchasing power and gainful employment, India should restrict imports that threatened mass unemployment.

Mr. D. Jayavarthanavelu, who has become the first Asian to be elected World President of the 89-year-old Textile Institute, said the confer-

ence, devoted to the theme "Winning strategies for the new millennium", was taking place appropriately at a time when the demographics of textile consumers were changing worldwide and when the Internet was threatening to render retailing redundant.

Mr. Terry Hennessey, Director-General, Textile Institute, said its endeavour was to contribute positively to the development of all industry sectors associated with it.

Mr. Kishan Vidhani, Chairman of the institute's council of administration, said the next conference would be held in Manchester.



The Union Minister for Textiles, Mr. Kashiram Rana, lighting the lamp to inaugurate the 79th World Conference of the Textile Institute in Chennai on Wednesday. Also seen are (From left) Mr. Kishan Vidhani, the World President of the Institute, Mr. D. Jayavarthanavelu, World President, Mr. David Buck, Mr. Terry Hennessey and Mr. M. S. Swaminathan. Photo: M. Moorthy.

TN may lose women's biotech park

By T. S. Shankar

CHENNAI, Feb. 10.

The much-hyped women's biotechnology park, proposed near Chennai, may be facing the prospect of being moved to another State.

While the Tamil Nadu Government has not yet taken steps towards commissioning of the scheme, the Madhya Pradesh and Andhra Pradesh Governments have shown interest in helping establish the park in their States.

The Rs. 10-crore prestigious project aims at providing a remunerative career-oriented self-employment programme for women. The park, planned to come up on a 20-acre site at Kelambakkam, 40 km from Chennai, will promote a series of hi-tech biotechnology-based enterprises.

On July 29 last, the President, Mr. K. R. Narayanan, laid the foundation stone for the "Golden Jubilee Biotechnology Park for Women" in the presence of the Chief Minister, Mr. Karunanidhi.

The project was envisaged with sponsorship from the Department of Biotechnology (DBT), Government of India sanctioning about Rs. 4 crores, with similar State Government grant in terms of land development, technical guidance from the MSSRF and the Tamil Nadu Industrial Development Corporation (TIDCO) playing the role of the implementing agency. Accordingly, a business plan for the park was prepared and the Tamil Nadu Government had entrusted the project to TIDCO.

"We are still persuading the Tamil Nadu Gov-

ernment and I am expecting an early response", the DBT Secretary, Dr. Manju Sharma, told THE HINDU when she was contacted in New Delhi.

Sources at the MSSRF explained that out of nearly 300 applications received, more than 65 women entrepreneurs were shortlisted and project details of 10 entrepreneurs had been already put on the Internet.

Meanwhile, as a last ditch effort, the DBT sent a message to the State Government on Monday, expressing the urgency of developing the land and establishing a few sheds for technology transfer activities. It is stated that the State Government was yet to respond to its suggestion that if TIDCO was unable to implement the project, the involvement of the State Science and Technology Council could be considered.

In the letter addressed to the State Chief Secretary, Dr. Manju Sharma stated that the services of the SPIC Science Foundation along with the M.S. Swaminathan Research Foundation (MSSRF) could be sought for establishing the park. "I understand that entrepreneurs are already expressing their anxiety and would like to get the project started as early as possible", Dr. Sharma had said.

She also expressed her willingness to have a meeting to discuss the modalities. Dr. M. S. Swaminathan, Chairman of MSSRF, had been requested to hold the meeting of the Advisory Committee at the earliest to pursue the matter further.

Meanwhile, sources at the MSSRF explained that Tamil Nadu would lose its "leadership role"

if there was further delay in the implementation of the project.

The park, if fully developed and dedicated, would serve as a model to foster the technological and economic empowerment of women. Its design was based on the principle of decentralised production supported by appropriate centralised services to encourage the biotechnology-based enterprises, aiming to capture a number of niche markets in the areas of agro, food, and medical biotech.

Tracing the history of the project, the sources noted that at a meeting of women scientists and technologists held at the MSSRF in December 1996, the need for embarking on a women entrepreneurship development programme was stressed. Accordingly, to give shape to this idea, a task force on biotechnology-based programme for women and rural development was constituted by the DBT and the proposed park was approved as one of the programmes for commemorating the 50th anniversary of India's independence.

TIDCO sources, while acknowledging the State Government's interest in the project, said that as the biotech park might not be in tune with its activities, TIDCO could be delinked and some other agency entrusted with the task.

"After discussing more than eight alternatives, the TIDCO has narrowed down to an agency and with the assistance of ITCOT prepared a detailed report taking into account the various implications. The report would be sent to the Government in the next few days".

மக்கள் குரல்

சென்னை 8-8-96

7



சிறந்த சுற்றுப்புற சூழலை கடைபிடித்த 'நிக்கோ' கார்ப்பரேஷனுக்கு 'விஞ்ஞானி எம்.எஸ்.சுவாமி நாதன் விருதை' சென்னை கிழக்கு ரோட்டரி கிளப், எர்த்கேர் நிறுவனம் சார்பில் எம்.எஸ். சுவாமி நாதன் வழங்கினார். பென்டாபோர் சாப்ட்வேர் நிர்வாக இயக்குனர் வி. சந்திர சேகர், ரோட்டரி கிளப் தலைவர் கே. கே. ரமணி, எர்த்கேர் சேர்மன் பி.வி. ஆர். கிருஷ்ணாராவ் உடன் உள்ளனர்.

தாவர இனங்களைக் காக்க வேண்டும்: மாணவர்களுக்கு எம்.எஸ்.சுவாமிநாதன் வேண்டுகோள்



சென்னையில் ஞாயிற்றுக்கிழமை நடந்த தேசியக் குழந்தைகள் அறிவியல் மாநாட்டின் துவக்கவிழாவில், சிறப்புத் தபால் தலையை கல்வி அமைச்சர் க. அன்பழகனிடம் அஞ்சல்துறைத் தலைவர் எஸ். ஜெயராமன் வழங்கினார். உடன் (இடமிருந்து) வேளாண் விஞ்ஞானி எம்.எஸ். சுவாமிநாதன், அண்ணா பல்கலைக்கழகத் துணை வேந்தர் ஆர்.எம். வாசகம், அறிவியல் தொழில்நுட்பத்துறை இயக்குநர் டாக்டர் நரேந்தர் கே. சேகல். (வலது) மாநாட்டில் கலந்துகொண்ட மாணவர்கள், ஆசிரியர்கள்.

சென்னை, டி.ச. 27 - தாவரங்களையும், உயிரினங்களையும் பாதுகாக்கும் பணியில் பள்ளிக் கூடங்களும் மாணவர்களும் ஈடுபட வேண்டும் என்று வேளாண் விஞ்ஞானி டாக்டர் எம்.எஸ். சுவாமிநாதன் கூறினார். குழந்தைகளுக்கான 6-வது

இருக்கிறது. தற்போது நகரங்கள் பெருகி வருவதால், இயற்கை வளம் அழிந்து வருகிறது. தாவரம் மற்றும் உயிரினங்களை அழிவிலிருந்து காக்க பள்ளிக் கூடங்களும், மாணவர்களும் முயற்சி செய்ய வேண்டும். ஏதாவது ஒரு தாவர

அவற்றைப் பாதுகாத்து வருபவர்கள் நம் கிராம மக்கள்தான். எனவே தாவர வகைகளை பாதுகாப்பதன் மூலம்தான் நம் உணவுப் பொருட்களை பாதுகாக்க முடியும். எல்லோருக்கும் அன்பு செலுத்தக் கூடியது மரம்தான். தன்னை வெட்ட

வது வாரத்தில் நடக்கும். தமிழ்நாடு முழுவதிலும் இருந்து 2000 மாணவர்கள் இதில் கலந்து கொள்வர் என்றார் அன்பழகன். இம்மாநாட்டையொட்டி சிறப்புத் தபால்தலைகள் அடங்கிய அட்டையை அஞ்சல்துறைத் தலைவர் எஸ்.

Homi Bhabha Chair on nuclear science set up

EXPRESS NEWS SERVICE

Chennai, Dec 10: The Department of Atomic Energy (DAE) today established a Homi Bhabha Chair for Nuclear Science and Rural Society at the M S Swaminathan Research Foundation (MSSRF) in the City.

AEC chairman R. Chidambaram, formally announcing the Chair, said MSSRF has been a pioneer in conducting coastal systems research designed to link the ecological security of coastal areas with the livelihood security of coastal communities.

The first holder of the Chair will be P.C. Kesavan, former Director of Biosciences Group at the Bhabha Atomic Research Centre, Mumbai. He has been involved in radiation gen-

etics, mutation breeding and radiation biology at the Indian Agricultural Research Institute, New Delhi, the Jawaharlal Nehru University, New Delhi and BARC, Mumbai.

Inaugurating a workshop on 'Sustainable livelihoods and environment management in the coastal ecosystems', Chidambaram called for a synergy of the scientific institutions of the country. With experts in every field of science, it is an efficient and cheap option for the nation's development, he said.

Pointing out that people entertained irrational fear about nuclear power, he said the nuclear ignorance extended to intellectuals too.

Stressing the need for food security, he said International

Property Rights must be protected and a multi-media database for tribal agriculturists should be created.

He said that the country is not making optimum use of its research in coastal systems and added that the department is trying to study the problem of the corrosion of pipes of nuclear reactors that led to the sea.

Dr. M.S. Swaminathan in his introductory address said that nearly 30 per cent of the country's population lived along the coastline and the money generated from the works undertaken along the coastal belt is a major source of income for the Government. He called for setting up a voluntary code of conduct to curb pollution of the oceans.

Fisheries Secretary Mohan Verghese Chunkath said Tamil Nadu has a 1,000 km coastline with 3.57 lakh tonne maritime fishing generation per year.

He said that 95 per cent of the fish produced come from the coasts adding that the Government is taking steps to prevent over-exploitation of the maritime resources in terms of fishing.

He stressed the importance of educating the coastal communities on sustainable ecological development.

P.C. Kesavan expressed thanks for being offered the Homi Bhabha Chair. Dr. Kee-Chai Chong, Food and Agriculture Organisation's Bay of Bengal Programme (BOBP) co-ordinator proposed a vote of thanks.

Swaminathan to head agriculture panel

From Our Special Correspondent

THIRUVANANTHAPURAM, Nov. 18.

The Kerala Government plans to appoint the renowned agriculture scientist, Dr. M. S. Swaminathan, as the chairman of the proposed Agriculture Development Council. The Council would advise the Government on the strategy to be adopted for agricultural development in the State. The Minister for Agriculture, Mr. V. K. Rajan, told a news conference here on Monday that the State should be raising its agricultural production in value terms by at least Rs. 600 crores in a short span, in order to achieve growth rates on par with other States.

The Minister announced that separate agencies for development of Kuttanad, Onattukara and Kole lands and Board for paddy development were coming into effect from tomorrow. These bodies, which would be constituted with governing committees, would be accorded statutory position later. A State level advisory council was proposed to be formed on cultivation of cut flowers.

Mr. Rajan said that the Government had set up a Co-ordination Committee headed by the Agriculture Minister to solve the difficulties faced by the farmers in getting power connections and irrigation facilities. The Irrigation Minister, Mr. Baby John, is the convener of the Committee which has the Electricity Minister, Mr. Pinarayi Vijayan, chairman of the State Electricity Board, Mr. V. Rajagopalan, and officials of the Agriculture and Irrigation Department as members. Similar committees had been formed at lower levels with MLAs, the Superintending Engineers of the Irrigation Department and officials of the KSEB Board as members.

He said that 21 Centres for refrigerated storage of vegetables were being set up in the State with assistance from the European Community. Buildings for regulated markets were nearing completion in six centres at a total cost of Rs. 50 crores. With the implementation of these schemes, the State Horticulture Corporation would have the highest financial strength among public sector corporations. Its paid up

capital was proposed to be raised from Rs. 12 crores to Rs. 200 crores.

Mr. Rajan said that construction of retail outlets under the Intensive Vegetable Development Programme inaugurated by the Prime Minister, Mr. Deve Gowda, on November 1 would be completed by December. These outlets would have modern facilities, including air conditioning and computers. The programme was being implemented in 141 select panchayats and 14 towns.

He said that the Government proposed to amend the Kerala Land Utilisation Order which bans conversion of paddy fields into garden lands. There were opinions that the farmers should be given freedom to choose the crop and also that they should not be allowed to shift from paddy cultivation. The Subject Committee of the legislature was studying the issue through public hearings. A decision on the amendments needed would be taken on the basis of the recommendations of the Committee.

He said that the Government was thinking of increasing the quantum of revolving fund formed by the Government to provide relief to farmers affected by natural calamities from Rs. 5 crores to Rs. 10 crores. New cashew plantations would be raised in 25,000 hectares of wastelands. The total area of wasteland in the State was estimated to be about 1.17 lakh hectares.

He said that the annual agriculture fair of his Department would be held here from November 24 to 28. There would be about 300 stalls at the fair.

The Minister said that prizes totalling Rs. 1.30 crores would be distributed to the farmers during the fair for cultivation of various crops. Ms. D. Shodhi, Thiruvananthapuram, had won the Udhyan Pandit Award (Rs. 25,000) for cultivation of vegetables this year. Mr. P. C. Madhavan, Palakkad, was selected for the second prize (Rs. 15,000). The first prize for best nursery went to Mr. J. Jayakumar, Kollam, and the second prize to Mr. P. Ramadas, Malappuram. The two first prizes for cultivation of bananas were shared by Mr. K. Sainudeen, Ernakulam, and Mr. C. M. Gopi of Idukki.

D. S. Shankar
24/11

Rise of the Rice Man

It was in 1988 that the **MS Swaminathan Research Foundation** was established in Chennai with the prize money (first World Food Prize) won by the path-breaking agricultural scientist who revolutionized Indian agriculture and set the green revolution in motion. This transformed the country to a full-fledged producer of food-grains. Several other recognitions followed - the Tyler Prize, Honda Prize, UNEP-Sasakawa Environment Prize. The Institute itself won the Blue Planet Prize in 1996 for its contributions to ecotechnology. He has recently set up a biotechnology park for women at Kelambakkam, Chennai, to provide opportunities for professionally qualified women to take to a career of remunerative self-employment through the organisation of environment friendly biotechnological enterprises. Dr M S Swaminathan speaks to **Narayani Ganesh** on some important environmental issues of today — from hunger and resource shortages to evolving a democratic population policy.

You have often spoken of 'hidden hunger'. What does this mean?

Silent or hidden hunger is a state of hunger that is not outwardly manifested. In the case of malnourishment and other deficiencies, you have external signs like emaciation and brown, thinning hair (lack of calories and protein). But when there is iron, iodine, manganese deficiency, (lack of micro-nutrients) they are not outwardly detectable until the later stages. FAO's statistics on world hunger published in 1996 after the World Food Summit at Rome stated that 800 million people in the world suffer from protein-calorie under-nutrition, one-fourth of whom are in India. Out of this, over 2 billion suffer from iron deficiency. Such micro nutrition deficiency in pregnant women result in birth of children who are underweight and mentally disadvantaged. If so many children are going to be disadvantaged at birth, in expressing their intellectual potential, what is the use of access to all this knowledge that we have generated? Therefore, this inequity at birth has to be tackled first.

How can this be done?

We developed a seven-point Action Plan which was submitted to the Tamil Nadu government in 1997 on the basis of Mr M Karunanidhi's request for such a plan in his budget speech of 1996. Nutrition and education are the two legs to place a human being on the path of development. A child cannot concentrate or absorb knowledge if he is hungry. The Plan involves identification of ultra poor families by the locals themselves (Gram Sabhas, Panchayats) to get a realistic and manageable figure. Then,

such families are given household entitlement cards for information empowerment. Third, ensure successful distribution through the targeted public distribution system. This will help eliminate hidden hunger. Provide safe drinking water. Provide micro-credit. Lastly, special emphasis on overcoming nutritional anaemia in pregnant women.

You hope to increase productivity without depleting the environmental capital stock of water, forest, land and other natural resources. How?

These resources have to be used in a sustainable manner. The main technique involved is 'precision agriculture', which is what our Centre here specialises in. Precision farming involves more of knowledge application rather than capital or chemicals and this is environmentally benign, drawing in strength from use of information technology. Agricultural professionals using information technologies will play an increasingly important role in crop production and natural resource management. Global positioning systems, remote sensing and meteorological data will be used in crop models and decision support systems as aids to farmers' decision making process.

What are your views about alternative sources of energy, especially atomic power?



“Paralysis by analysis is what we suffer from. We are not an action-oriented people. We keep crying about someone taking away patent for basmati and turmeric. Why will they not, when we are so lethargic in taking action?”

France is dependant on atomic energy because they have not much by way of other alternatives. One Chernobyl accident should not lead to dismissing the potential of tapping atomic energy. How safe is safe is something we have to sort out for ourselves. We have to evolve safety standards. Accidents can happen anywhere - whether nuclear power or genetically modified organisms - any technology has both risks and opportunities. It is up to us to minimise risks and maximise opportunities.

Don't you think we need better ways of promoting water management?

Three things are involved: conservation, effective use and equitable sharing. Anil Agarwal and Sunita Narain have published a book *Dying Wisdom* showing how in the past water was considered common property. Every village had a temple and a tank. Re-silting was done by the entire community. Gradually community co-operation has deteriorated. Water requirements for the next 25 years can be conserved through efficient use of available water and storage.

How do cropping patterns affect biodi-

versity and soil erosion?

When large areas are under same crop (monoculture), we have netic or soil erosion. Old varieties tend to disappear with popularisation of new high yielding varieties. That's why we have the National Bureau Plant Genetic Resources in Delhi where a gene bank is being maintained to save original varieties from extinction.

You speak of botanical pesticides. How do you see the use of chemical fertilizers and pesticides?

Ecotechnology has to blend traditional with frontier technology. Knowledge is a continuum. We should use synthetic pesticides along with botanical ones, substituting man purchased inputs with farm grown puts like neem, its seeds, fruit, leaf. We should not discard old technology just because it is old.

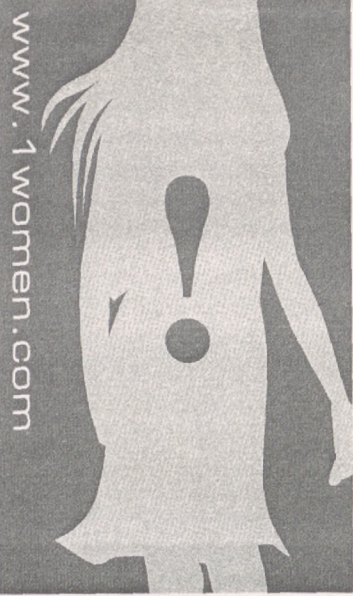
The Government's draft patent law is now under consideration of a select committee has a provision for forming a 'community gene fund.' Was this conceived by you?

I developed a draft in January 1997 for a community gene fund to honor traditional conservers as reward and recognition for their informal systems of innovation. The World Intellectual Property Rights Organisation (WIPO) has now accepted this concept of tribal contribution knowledge, say of medicinal plants. It now provides for exploration and recognition of the needs, rights and expectations of people who are holders of traditional knowledge. This has been achieved after we have struggled for many years for such recognition. Next year, WTO (World Trade Agreement) is reviewing TRIPS. Now we must press hard for the recognition of not only formal innovator

but also traditional innovators. I recognise the contribution of the entire community so that this community can make use of the proceeds to further their development project. Many drugs are based on traditional knowledge. We are discussing this methodology with WIPO - of identifying and providing patents to traditional communities. It should not be delayed further. IPR must have a section on traditional knowledge. Paralysis by analysis is what we suffer from. We are not an action oriented people. We keep crying about someone taking away patent for basmati and turmeric. Why will they not, when we are lethargic in taking action?

What do you think should be done to have a result oriented population policy?

Technology and target driven approach to combat demographic problems must be replaced by social development and human centered projects that are pro-nature, pro-woman, pro-poor and pro-democratic by choice. Unfortunately, men have opted out family planning and the entire burden has now fallen on women.



Tokyo Weekender

April 21, 2000

Vol. 31, No. 7



Tokyo Connection to E-volution of an Indian village

By Ravi Mehta

Every evening, one of the four women volunteers from the remote village of Embalam e-mails a report on the day's activities of her "Village Knowledge Center" to the M.S. Swaminathan Research Foundation in Chinnai (formerly Madras). This report, just like the whitewash of her mud hut, is not complete until it is decorated with a few flowers. Embalam is one of the five villages in a pilot project that is leading the way in networking more villages in the states of Tamilnadu and Pondicherry on the southern coast of India.

During a recent trip to India, I was able to witness first hand the impact that computers can have in this particular socio-economic situation. As part of a project by M.S. Swaminathan Research Foundation called "Knowledge System for Sustainable Food Security," hundreds of used computers sent by firms in Tokyo are being used to network distant villages. Selected as one of the 20 most influential Asians of the 20th century by *Time* magazine for his contributions to the "Green Revolution," Professor Swaminathan is known to believe that knowledge and connectivity are critical for promoting development and environmental preservation in rural areas today.

This "Knowledge System for Sustainable Food Security" project provides farmers with needed information that can make their work more economical and productive. At a Village Knowledge Center, farmers can find out the need, price and availability of things such as seeds, fertilizer or pesticides. The Centers also provide grain prices during the harvest season, which is especially



Women volunteers manage the information centers.

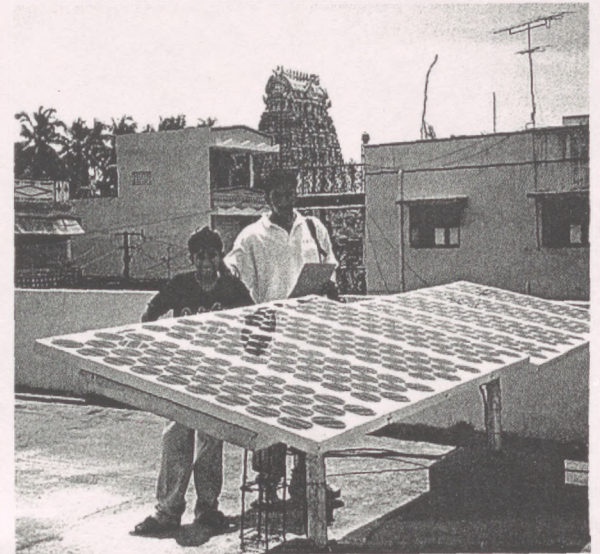
important because many farm laborers are paid their wages partly in grain.

Health-related information is also provided. Many families in this region live below the poverty line and have become aware of their entitlement to government welfare programs only through the Centers. More recently, the Centers have also been getting and posting information about non-farm employment opportunities for local people. Kids drop by the Centers after school to browse the educational information made available on the network and via CD ROMs.

In each village that is part of the experiment, the community has to provide a small building and 24 volunteers for the Center. A majority of these volunteers is made up of women, notable considering the gender inequity in this region. The volunteers are trained for two weeks by the Swaminathan Foundation where they learn to use Microsoft Exchange and Microsoft Word. Within six months of initial training, one village volunteer had taught himself to design Web pages, and has created a page in the local language providing information on effective ways to tackle problems in sugar cane crops. The motivation and expertise of the village volunteers is by far one of the greatest assets of this project.

Individual villages are connected to the Central Hub at Villanur. Here answers to questions asked by villagers are accumulated from the government databases or other sources, transformed into a user-friendly format and delivered in the local language, Tamil. Interestingly, the villages are connected to each other and the hub with a VHF radio rather than standard telephone lines. The reason for this is that getting a phone line installed in this area can take up to two years. The problem of unreliable power supply in these villages is solved by providing solar cell back up.

The positive impact of the project is economic as well as social. As information is available to everybody irrespective of economic status, caste or sex, the spread of information is expected to reduce some of



Computers are run on a hybrid solar-electric system. the social inequities in villages. If such computer centers can enhance non-farm-related income opportunities for villagers, it is possible that the rural-urban migration could begin to slow down and become a matter of choice rather than of necessity.

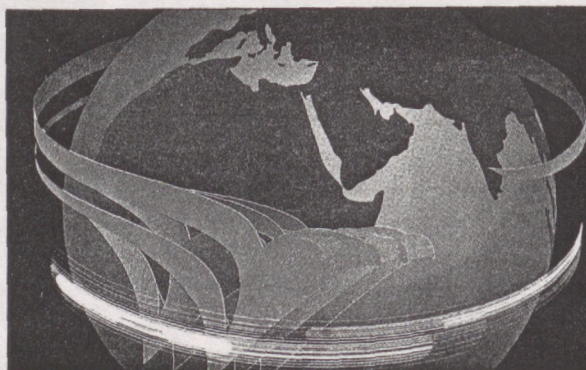
In this way, the far-flung villagers can also participate in the e-volution of the world economy, not just in India, but also in other Asian countries with similar socio-economic situations. The organizations that have helped send these computers from Tokyo include the American Chamber of Commerce in Japan, the Ford Motor Company, Allied Pickfords and UBS.

You may get more information on this project and other activities of the MSSRF by visiting <http://www.mssrf.org>. The founder of this project, Prof. M.S. Swaminathan, spoke at the Foreign Correspondents' Club of Japan Apr. 10 on the topic of "Global Trade and Poverty Eradication." He visits Japan from time to time to spread the word of successes enjoyed in rural India. In January, the Friends of the Swaminathan Foundation in Tokyo also launched a project to fund micro-credit banks to support the budding entrepreneurs in e-villages, and 23 community banks have already been funded. More information can be obtained via e-mail at mehta@gol.com.

The author, Ravi Mehta, is a long-term resident of Tokyo. A graduate of Nishimachi International School, he is currently a student at Emory University in Atlanta. He has been volunteering for the "Knowledge System for Sustainable Food Security" project for the past three years.



Local Centers networked to Villanaur Information Center; many computers were provided by Tokyo companies.



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World Food Programme



சென்னையில் நடந்த ஆசிய பசிபிக் கிராமப்புற வறுமை ஒழிப்புத் திட்டக் கருத்தரங்கை தொடங்கி வைத்த முதல்-அமைச்சர் ஜெயலலிதாவுக்கு, வேளாண் மேம்பாட்டுக்கான சர்வதேச நிதியத்தின் தலைவர் லெனர்ட் பேகே மலர் கொடுத்து வழங்கியபோது எடுத்த படம். அருகில் விவசாய விஞ்ஞானி எம்.எஸ். சாமிநாதன்.

தமிழ்நாட்டில் இரு மடங்காக

தனிநபர் வருமானத்தை உயர்த்துவதே லட்சியம்

ஜெயலலிதா பேசுக

சென்னை, டி.செ.2-
தமிழ்நாட்டில் 2010-ம் ஆண்டுக்குள் தனி நபர் வருமானத்தை இரு மடங்காக உயர்த்த வேண்டும் என்பதே என்னுடைய லட்சியம் என்று முதல்-அமைச்சர் ஜெயலலிதா கூறினார்.

கருத்தரங்கம்

ஆசியா மற்றும் பசிபிக் நாடுகளின், கிராமங்களில் வறுமை ஒழிப்பு தொடர்பான கருத்தரங்கம் சென்னை நங்கம்பாக்கத்தில் உள்ள தாஜ்கோர மண்டல் ஓட்டலில் நேற்று நடந்தது.

சர்வதேச வேளாண் மேம்பாட்டு நிதியகம் சார்பில் நடந்த இந்த கருத்தரங்கை முதல்-அமைச்சர் ஜெயலலிதா தொடங்கி வைத்தார். அப்போது அவர் பேசும்போது கூறிய தாவது:-

“பொருளாதார சீர்திருத்தங்கள் இன்றைய காலகட்டத்துக்கு அவசியமாக இருந்தாலும் ஏழை மக்களின் நிலையை கருத்தில் கொள்ள வேண்டியது அவசியமாக உள்ளது.

முதல் மாநிலமாக்க...

தமிழ்நாட்டை எல்லா துறைகளிலும் முதல் மாநிலமாக்க இந்த அரசு அனைத்து முயற்சிகளையும் மேற்கொண்டு வருகிறது. மனிதவள மேம்பாட்டை பொறுத்தவரையில் தமிழ்நாடு இந்தியாவில் மட்டுமல்ல, ஆசியாவிலும் முதல் வரிசையில் இருக்கிறது.

1991-ம் ஆண்டிலிருந்து 1996-ம் ஆண்டுவரை நான் முதல்-அமைச்சராக பொறுப்பு வகித்தபோது ஏழை மக்களை பாதுகாக்க பல்வேறு முயற்சிகளை மேற்கொண்டேன்.

முன்மாதிரி திட்டம்

1995-ம் ஆண்டில் மத்திய அரசு மேற்கொண்ட தேசிய சமூக நடவடிக்கை திட்டம் தமிழக அரசின் நடவடிக்கைகளை முன்மாதிரியாகக் கொண்டு இருந்தது. அதுபோல சுப்ரீம் கோர்ட்டு அனைத்து மாநில அரசுகளுக்கும் அந்த மாநிலங்களில் உள்ள அனைத்து பள்ளிக்கூடங்களிலும் மதிய உணவு வழங்க வேண்டும் என்று ஆணை பிறப்பித்தது. இந்த ஆணையும் என்னுடைய அரசியல் ஆசான் எம்.ஜி.ஆர். 20 ஆண்டுகளுக்கு முன்பு 1982-ம் ஆண்டில்

கொண்டு வந்த மதிய உணவு திட்டத்தை அடிப்படையாக கொண்டது.

பெண்களின் முன்னேற்றம்

1991-ம் ஆண்டிலிருந்து 1996-ம் ஆண்டுவரை சர்வதேச வேளாண் மேம்பாட்டு நிதியகம் (ஐ.எப்.ஏ.டி.) உதவியோடு தமிழக அரசு பெண்களின் முன்னேற்றத்துக்காக பல்வேறு திட்டங்களை செயல்படுத்தியது. வளர்ச்சி மட்டுமே வறுமையை நீக்குவதற்கான ஒரே ஆயுதம் என்று எடுத்துக் கொள்ள முடியாவிட்டாலும் வறுமையை நீக்குவதற்கான போராட்டத்தில் வளர்ச்சியும் ஒரு முக்கிய பங்கு வகிக்கிறது.

வேலை இல்லா திண்டாட்டம்
வேலை இல்லா திண்டாட்டத்தை பொறுத்தவரை தமிழகம் இந்தியாவில் 3-வது இடத்தில் இருக்கிறது. 15 சதவீதம் பேர் தமிழ்நாட்டில் வேலை இல்லாமல் இருக்கிறார்கள்.

5 ஆண்டுகளுக்கு பிறகு நான் மீண்டும் ஆட்சி பொறுப்பை ஏற்றபோது எனக்கு முன்னே ஒரு பெரிய கடமை இருப்பதை உணர்ந்தேன். தமிழ்நாட்டில் நிதி நிலைமை மிகவும் மோசமாக இருந்தது. இதற்கு காரணம் கடந்த அரசின் நிர்வாக திறமை இல்லாத காரணம் ஆகும். இதன் காரணமாக சமூக வளர்ச்சி, சுகாதாரம் மற்றும் அடிப்படை கல்வி ஆகிய துறைகளுக்கான மானியங்களைக் குறைக்க வேண்டிய சூழ்நிலைக்கு தள்ளப்பட்டோம்.

தனி நபர் வருமானம்

தமிழ்நாட்டை பொறுத்தவரை 2010-ம் ஆண்டுக்குள் தனி நபர் வருமானத்தை இரு மடங்காக உயர்த்த வேண்டும் என்பதே என்னுடைய லட்சியம். இதை கருத்தில் கொண்டு ஒரு பல்நோக்கு திட்டத்தை மேற்கொண்டு உள்ளோம்.

விவசாய வளர்ச்சி

2002-2007 ஆண்டுக்கான 10-வது ஐந்தாண்டு திட்டத்தின் படி இந்த அரசு விவசாய வளர்ச்சியை 4 சதவீதம் அதிகரிப்பதற்கான திட்டத்தை அறிவித்துள்ளது. இந்த திட்டத்தில் தரிசுநில மேம்பாடு, மழைநீர் சேகரிப்பு, விவசாய நிலப்பரப்பை அதிகப்படுத்துதல் அடங்கும்.

சிறிய விவசாயிகள் பல்வேறு காரணங்களுக்காக தங்கள் நிலங்களில் விவசாயத்தை மேற்கொள்

ளாமல் உள்ளனர். இவர்களை கண்டுபிடித்து ஊக்குவிப்பதும், இந்த திட்டத்தில் அடங்கும்.

காவிரி தண்ணீர்

சமீபத்தில் காவிரியில் தண்ணீர்விடக் கர்நாடகம் மறுத்ததால் தமிழக விவசாயிகளுக்கு ஏற்பட்ட பாதிப்பை போக்க ரூ.164 கோடியில் புதிய திட்டம் உருவாக்கப்பட்டு காவிரி டெல்டா விவசாயிகளுக்கு வருமான உத்தரவாதம் கொடுத்து இருக்கிறோம். இந்தத் திட்டம் வெற்றிகரமாக செயல்படுத்தப்பட்டது.

15 அம்ச திட்டம்

சமூக பொருளாதார வளர்ச்சியை மேம்படுத்த விஞ்ஞானி எம்.எஸ். சுவாமிநாதன் உதவியோடு ஒரு 15 அம்ச திட்டத்தையும் தொடங்கி இருக்கிறோம்.

புதிய தொடக்கத்தை மேற்கொள்வதும்

நான் சர்வதேச வேளாண் மேம்பாட்டு நிதியகத்தின் தலைவர் லெனர்ட் போகேவை கேட்டு கொள்வதெல்லாம் நீங்கள் தமிழ்நாட்டில் ஒரு புதிய தொடக்கத்தை மேற்கொள்ள வேண்டும். இது தரிசு நில

மேம்பாடு, சிறு விவசாயிகளின் உற்பத்தி திறனை அதிகரிப்பது, விவசாயம் சாராத கிராமப்புற திட்டங்களை ஊக்குவிப்பது ஆகியவற்றை அடிப்படையாக கொண்டதாக இருக்க வேண்டும்.

கண்ணீரை துடைப்பேன்

நல்ல நிர்வாகம் மூலம் தமிழக மக்களின் கனவுகள் நனவாக்கப்படும். ஏழைகளின் கண்ணீரை துடைத்து அவர்களின் முகத்தில் மகிழ்ச்சி புன்னகையை தவழ விட வேண்டும் என்பதில் நான் உறுதி பூண்டுள்ளேன். இவ்வாறு முதல்-அமைச்சர் ஜெயலலிதா பேசினார்.

எம்.எஸ். சுவாமிநாதன்

விழாவில் வேளாண்மை விஞ்ஞானி எம்.எஸ். சுவாமிநாதன், சர்வதேச வேளாண்மை மேம்பாட்டு நிதியகத்தின் தலைவர் லெனர்ட் போகே ஆகியோரும் பேசினார்கள்.

பூங்கொத்து

முன்னதாக விழாவுக்கு வந்த முதல்-அமைச்சர் ஜெயலலிதாவுக்கு சர்வதேச வேளாண்மை மேம்பாட்டு நிதியகத்தின் தலைவர் லெனர்ட் போகே பூங்கொத்து கொடுத்து வரவேற்றார்.

Millennium Lecture

'Investment in agriculture key to poverty eradication'

By Our Special Correspondent

CHENNAI, DEC. 1. Improving resources in rural areas, imparting modern agriculture technology to rural farmers and increasing investment in agriculture and other allied activities are essential for eradication of poverty in developing countries, the president of the International Fund for Agricultural Development (IFAD), Lennart Bage, said here today.

Addressing the millennium lecture on 'Eradicating Rural Poverty: Lessons Learnt and Way forward,' sponsored by the M.S. Swaminathan Research Foundation here, Mr. Bage said there was a high concentration of hungry and poverty in Asia and the Pacific. The international agencies and the developed countries had committed themselves to end poverty in the next 25 years and agreed to mobilise funds for poverty eradication programmes in the developing countries.

The IFAD had been extending assistance to rural poverty alleviation programmes in developing countries and its programmes had so far reached about 500 million poor people. In India, it was supporting such programmes in different States to the tune of about \$ 1.26 billion.

Regretting that there was a sharp fall in investment on agri-

culture, the IFAD chief said public investments on the farm front had come down from 35 to 25 per cent. International assistance for agriculture too was on the decline. Without increasing agriculture production, it would be difficult to eradicate poverty, he said.

Empowerment of rural women was necessary for poverty eradication in rural areas. In this connection, he lauded the success stories of women self-help groups, especially in Tamil Nadu and Andhra Pradesh. He was for replicating such success programmes in other States also. He was confident that given the necessary support, the rural poor would rise to the occasion to enhance their livelihood.

The MSSRF chairman, M.S. Swaminathan, said the contribution of agriculture to the GDP was on the decline. A majority of farmers in rural areas did not have proper access to marketing, resulting in poor returns for their investment.

The trade must be friendly to poor farmers in helping them get a fair price for their produce. There must be a shift from trade patronage to partnership of farmers, he said.

N. Ram, Editor, *Frontline*, said hunger could no longer be challenged by traditional and conventional approaches and new ways had to be found out.

The Hindu, Dec 2

புத்தம் புது அம்சங்கள்
புத்துக் குலுங்கும்
மாதம் இருமுறை சினிமா பத்திரிகை

சினிமா
எக்ஸ்பிரஸ்



தினமணி

திங்கள்கிழமை, 2 டிசம்பர், 2002

யாதகிமா
ஜுவல்லர்ஸ்

23, N.S.C. போஸ் ரோடு, சென்னை-79.
போன் : 5354404, 5351070
71/1, உஸ்மான் ரோடு, தி.நகர், சென்னை-17.
போன் : 4320189, 4332666, 4332444

தமிழகத்தின் தனிநபர் வருவாயை இருமடங்காக உயர்த்தத் திட்டம்

சென்னை டி.சு. 2: வறுமை ஒழிப்புத் திட்டங்களை நிறைவேற்றுவதுடன், மாநிலத்தின் தனிநபர் வருவாயை இரண்டு மடங்காக உயர்த்தவும் தமிழக அரசு திட்டமிட்டுள்ளது என முதல்வர் ஜெயலலிதா கூறினார்.

ஆசிய பசிபிக் நாடுகளில் கிராமப்புற வறுமை ஒழிப்பு குறித்த கருத்தரங்கினை சென்னையில் ஞாயிற்றுக்கிழமை தொடங்கி வைத்து அவர் பேசியதாவது:

தனிநபர் வருமானத்தை இரு மடங்காக உயர்த்தும் திட்டத்தை 2010-ம் ஆண்டுக்குள் நிறைவேற்ற வேண்டும் என்ற எண்ணத்தில் திட்டங்களை வகுத்து தமிழக அரசு செயல்படுத்தி வருகிறது.

இதில் விவசாய, தொழில் வளர்ச்சியை ஏற்படுத்துதல், அடிப்படை வசதிகளை மேம்படுத்துதல் ஆகியவையும் அடங்கும்.

குறிப்பாக, பத்தாண்டு திட்டக் காலத்தில் (2002-2007) விவசாய வளர்ச்சி விகிதத்தை 4 சதவீதம் உயர்த்த முக்கியத்துவம் அளிக்கப்பட்டுள்ளது.

பயிரிடும் பரப்பினை அதிகரிக்க தரிசு நில மேம்பாடு, நீர்ப் பிடிப்புப் பகுதி மேம்பாடு, மழைநீர் சேகரிப்புத் திட்டம் போன்ற திட்டங்கள்

வறுமை ஒழிப்புக்கு முக்கியத்துவம்

மேற்கொள்ளப்பட்டு வருகின்றன. இத்தகைய கிராமப்புற விவசாய மேம்பாட்டுப் பணிகள் மூலம் கிராமப்புற மக்களின் வருவாய் உயர்வதற்கும் வகை ஏற்பட்டுள்ளது.

பாசனத்துக்குத் தண்ணீர் திறந்து விடக் கர்நாடகம் மறுத்ததால் காவிரிப் பாசனப் பகுதியில் குறுவைச் சாகுபடி பாதிக்கப்பட்டது.

இதையடுத்து பாதிப்புக்குள்ளான கிராமப்புற விவசாய மக்களுக்கு உதவுவதற்காகத் தமிழக அரசு ரூ.164 கோடி மதிப்பீட்டில் ஒரு சிறப்புத் திட்டத்தை அமல்படுத்தி அதன்மூலம் அப்பகுதி மக்களுக்கு வருவாய் கிடைக்க வகை செய்யப்பட்டது.

இத்திட்டம் அப்பகுதி மக்களுக்கு ஓரளவு வேலை வாய்ப்பையும் தேவையையும் நிறைவு செய்தது.

மேலும், மாநில அரசு கடுமையான நிதி நெருக்கடியைச் சந்திப்பதால் மானியங்களைக் குறைப்பது



சென்னையில் ஞாயிற்றுக்கிழமை நடைபெற்ற ஆசிய பசிபிக் நாடுகளில் கிராமப்புற வறுமை ஒழிப்பு குறித்த கருத்தரங்கில் முதல்வர் ஜெயலலிதாவுக்கு பூங்கொத்து கொடுத்து வரவேற்கிறார் வேளாண் வளர்ச்சிக்கான பன்னாட்டு நிதியத்தின் தலைவர் லென்னர்ட் பேஃக். உடன் வேளாண் விஞ்ஞானி எம்.எஸ். சுவாமிநாதன்.

அவசியமாகியுள்ளது. இருந்தும் கூட, பொதுவிநியோக முறையில் ஏழைகளுக்கு வழங்கும் அரிசியில் ஒரு பகுதியை தேசிய அளவில் மிகவும் குறைந்த விலையில் வழங்கும் மாநிலமாக தமிழகம்

இருந்து வருகிறது. இதுவே ஏழை மக்கள் மீது அரசு காட்டும் ஆர்வத்தை எடுத்துக்காட்டுகிறது. உலகளாவிய பொருளாதாரச் சீர்திருத்த நடவடிக்கைகளால் பல மாற்றங்கள் உருவாகியுள்ளன. இத்

தருணத்தில் கிராமப்புற ஏழை மக்களைப் பாதுகாக்க வேண்டியதும் அவசியம். அந்த அடிப்படையில்தான், 1991-96-ம் ஆண்டில் அதிமுக அரசு ஆட்சியில் இருந்தபோது கிராமப்

தரிசு நில மேம்பாட்டுக்கு நிதி உதவி வேண்டும்: ஜெ

புற ஏழை மக்களுக்குச் சமூகப்பாதுகாப்பு வளையத்தை உருவாக்கும் வகையில் திட்டங்கள் உருவாக்கப்பட்டிருந்தன. மசுளிர் சுய உதவிக் குழுக்கள் அமைத்து கிராமப்புற பொருளாதார மேம்பாடு காணப்பட்டது.

ஆனால், கடந்த ஐந்து ஆண்டுகளில் கிராமப்புற மேம்பாட்டில் தேக்க நிலை ஏற்பட்டது.

வேலைவாய்ப்பின்மையில் தேசிய அளவில் தமிழகம் மூன்றாவது இடத்தில் உள்ளது. இது போன்ற சவால்களை எதிர்கொண்டு மாநிலத்தை மேம்பாடு அடைய முயற்சி மேற்கொள்ளப்பட்டுள்ளது.

மாநிலத்தின் சமூக, பொருளாதார மேம்பாட்டுக்காக 15 அம்சத் திட்டம் தொடங்கப்பட்டுள்ளது. தரிசு நில மேம்பாடு, பயிரிடும் பரப்பை அதிகரித்தல், ஊரகப் பகுதிகளில் விவசாயம் சாரா தொழில்களை ஊக்குவித்தல் போன்ற திட்டங்களை மேற்கொண்டுள்ளது. இத்திட்டங்களுக்கு வேளாண் வளர்ச்சிக்கான பன்னாட்டு நிதியுதவி வேண்டும் என்றார் ஜெயலலிதா.

நிதி உதவி: ஐ.எப்.ஏ.டி. இதுவரை இந்தியாவுக்கு ரூ.2000 கோடி மதிப்பிலான 17 திட்டங்களுக்கு உதவி செய்ய ஒப்புதல் அளித்தது. இதில் ஒன்பது திட்டங்கள் முடிவுற்றுள்ளன.

கடந்த டிசம்பர் மாதம் வரை பல்வேறு திட்டங்களுக்கு ரூ.1400 கோடி வழங்கப்பட்டுள்ளது என்று இக்கருத்தரங்கில் தெரிவிக்கப்பட்டது.

முன்னதாக உலக உணவுத் திட்ட ஐ.நா. ஒருங்கிணைப்பாளர் பெட்ரோ மெட்ராநோ வரவேற்றார். ஐ.எப்.ஏ.டி. மண்டலப் பொருளாதார நிபுணர் கணேஷ் தாபா திட்ட அறிக்கை சமர்ப்பித்தார்.

விவசாய விஞ்ஞானி எம்.எஸ். சுவாமிநாதன், ஐ.எப்.ஏ.டி. தலைவர் லென்னர்ட் பேஃக் ஆகியோர் கருத்தரங்கின் நோக்கங்களை விவரித்துப் பேசினர். ஐ.எப்.ஏ.டி. மேலாளர் ஷியாம் காட்கா நன்றி கூறினார்.

Business Line - IFAD Workshop

Monday, December 2, 2002

'Rural growth key to remove poverty'

Our Bureau
CHENNAI, Dec. 1

DEVELOPING countries will have to participate more actively in the WTO process to ensure market access for their rural produce and to strengthen rural economy, according to Mr Lennart Bage, President, International Fund for Agricultural Development (IFAD).

Addressing a symposium on IFAD's regional strategy for rural poverty reduction in Asia and the Pacific here on Sunday, he said that 900 million of the 1.2 billion chronically poor worldwide live in rural areas. Therefore, rural development is crucial to poverty alleviation programmes.

To realise the millennium development goal of WTO member countries to reduce poverty by half by 2015, industrial countries have committed to increasing development funds by 25 per cent in the next three years and to better serve developing countries. This commitment could hopefully reverse the reducing trend in resource allocation to Overseas

Development Assistance (ODA). The developing countries on their part have committed to policy reforms. They should take an active part in the trade discussions to ensure market access to agricultural produce and textiles, he said.

Mr Ganesh Thapa, Regional Economist, Asia and the Pacific Division, IFAD, said that assessment report by IFAD showed two-thirds of the world's poor lived in the Asia-Pacific region, with 70-80 per cent of them concentrated in rural areas. The gap between rural and urban poverty was widening, income inequality was on the increase and was adversely impacting the poverty reducing effect of growth. Globalisation and extraneous issues were also affecting efforts at poverty reduction.

The Tamil Nadu Chief Minister, Ms J. Jayalithaa, urged IFAD to include the transformation of wastelands, improving sub-optimal cultivation by small and marginal farmers and encouraging rural non-farm activities in a new project.

Indian Express - Dec 3.

munities while the rest of the world is doing inary, he said. The inaugural session of the seminar was presided over by Madras University vice-chancellor S J Ignacimuthu, who said the effort at discussing regional issues at the meet was quite contemporary and relevant.

The gathering was welcomed by Madras University Indian History Department head G Venkataraman and a vote of thanks was proposed by the department professor N K Narayanan. The three-day meet will discuss about 50 papers submitted by historians and social scientists.

Fifty p.c. of world's hungry live in India: M S Swaminathan

Express News Service

Chennai, Dec 2

OF the 840 million malnourished people in the world, nearly 50 per cent live in India, noted agricultural scientist M S Swaminathan said on Monday.

At an international consultation on 'Freedom from Hunger and Sustainable Development', held at the M S Swaminathan Research Founda-

tion, Swaminathan said that despite adequate food supplies in the country, 35 per cent of India's population lack the capacity to purchase food.

In 1996, at the Rome Summit, the international community had set a target of reducing the number of people suffering due to hunger by half by 2015. But at the rate of progress today it would not be possible to achieve this target, Swaminathan said. "Against a target of 22 million people every year, only six million people

are released from the hunger trap," he said.

In his keynote address, Martin Lees, Rector of UN University of Peace, said that solving issues of hunger and poverty paid off peace dividends. He said that food security was an antidote to violence and terrorism, as it was hunger which created political instability, social unrest and rebellions.

Lennart Bage, president of International Fund for Agricultural

Development, said that governments should focus on agriculture and rural development. "Of the 120 million poor in the world, 900 million live in rural areas," he said.

Countries which have focused on agriculture have managed to reduce the prevalence of hunger, he added.

Bage also released the book 'The Man Who Harvests Sunshine, The Modern Gandhi: M S Swaminathan' on the occasion.

ALSO IN YOUR CITY

Concluding Day

Drought predicted in 3 States

By Our Special Correspondent

CHENNAI, DEC. 4. An integrated hunger eradication programme to provide food security to the poor under the guidance of local action committees, consisting of an equal number of women and men was suggested by the M.S. Swaminathan Research Foundation here today.

Submitting a paper on the concluding day of the three-day conference on "A Consultation on peace, freedom from hunger and sustainable development: Ethical dimensions" here, the Foundation said such an integrated programme should be implemented immediately if the country was to achieve the goal of a hunger-free India before August 2007, the 60th year of the country's independence.

The plan, it said, should have seven major components, including identification of the poor and under-nourished children, special attention to pregnant and nursing mothers, infants, old and infirm persons, provision of clean drinking water, primary health care, and primary education.

Visualising severe drought Rajasthan, Orissa and Maha-

rastra during February to June next year, the Foundation demanded the introduction of community food, fodder, feed and water banks in these States at the earliest, possibly before the end of January. "No time should be wasted in setting up these banks in areas where a large number of food and water deprived children, women and men were likely to be affected."

Stressing the need for increasing investment in agriculture and rural development, the Foundation said this was necessary as agricultural progress was the best safety net against hunger and rural poverty.

Addressing the concluding session, Prof. Swaminathan said India, despite being rich in diversity and resources, continued to remain as a developing country. Perhaps the existing highly centralised system of administration might be responsible for this. He felt that proliferation of bureaucrats was the major impediment to progress of the country. "Gram Swaraj," he said was the need of the hour to unleash the creativity and initiatives of the rural populace.

Swami Agnivesh demanded a

national wage policy, as the minimum wage fixed by various State Governments was not all realistic. The minimum wage of a non-formal worker should be equivalent to the wage of a class four staff in government services and every worker should be given a job at least for 150 days in a year, he added.

IAS officer selected WEF Global Leader

By Our Staff Reporter

HYDERABAD, DEC. 4. Srivatsa Krishna, an IAS officer of the Andhra Pradesh cadre, has been selected as one of the 300 World Economic Forum Global Leaders For Tomorrow.

Mr. Krishna joined the IAS in 1994 and is now pursuing a post-graduate programme at the Harvard Business School, according to a press release. The WEF GLsFT are below 37, holding positions of considerable influence and have demonstrated their capacity to shape the future agendas in their communities.

State to double per capita income by 2010: Jaya

EXPRESS NEWS SERVICE

Chennai, Dec. 1: The State government is considering implementing schemes to double the per capita income of the state by 2010, apart from putting forth an effective poverty reduction strategy, Chief Minister J Jayalalithaa has said.

Delivering the key-note address at a symposium on 'Strategies for Rural Poverty Reduction in Asia and the Pacific' organised by the International Fund for Agricultural Development (IFAD) here today, Jayalalithaa said her government had evolved a multi-pronged strategy of promoting opportunities, facilitating empowerment, enhancing security and good governance to enable the poor to break free from a life of perpetual destitution.

Blaming the previous government for the state's present fiscal mess, the Chief Minister said though the present government had to face the "heart-wrenching" prospect of cutting back outlays for the social sector, health and primary education, it had determined not to allow this to happen.

Some of the development plans that the government

had lined up as part of its strategy were giving a pep to agricultural and industrial sectors, fostering comprehensive rural and urban infrastructure development, fiscal consolidation, good-governance practices and democratic decentralisation.

The state government had already declared its commitment to increasing the agricultural growth rate by four per cent in the Tenth Five Year Plan during 2002-07. Several schemes had been set in motion to optimize the land area under cultivation through wasteland reclamation, watershed development and rainwater harvesting, ensuring remunerative returns to the on-farm and non-farm workforce by improving production and land productivity and increasing the supplementary income of the people by encouraging them to take up additional vocations.

To offset the losses suffered by the delta farmers due to Karnataka's intransigence in releasing Cauvery water, the government had launched a special programme at an outlay of Rs 164 crore to provide income support to them. When the



Lennart Bage, president, International Fund for Agricultural Development (IFAD), presenting a bouquet to Chief Minister J Jayalalithaa during the inaugural session of the symposium on Strategy for Rural Poverty Reduction in Asia and the Pacific, held in Chennai on Sunday. Agriculture scientist Dr M S Swaminathan is also seen - Express

fiscal situation warranted the government to cut down subsidies, the poor were protected by enabling them to access to the public distribution for grain.

Even during the AIADMK's previous regime in 1991-1996, her government had created a comprehensive social safety net to protect the poor from the fallout of economic and fiscal policy reforms. The National Social Action programme of the Central government in 1995 was based

on the lead given by the Tamil Nadu government. The recent directive of the Supreme Court to all state governments to provide hot mid-day meals to school children was based on an earlier scheme launched by her political mentor M G Ramachandran in 1982 and during her tenure in 1991-96. Significant steps had been taken in empowering women, with assistance from IFAD, to set up self-help groups, Jayalalithaa noted.

Unemployment in the

state continued to be third highest in the country at 15 per cent, which pointed to widened income inequalities. To address such issues, the government had launched a 15-point programme for the all-round socio-economic development and prosperity of the people, in consultation with eminent scientists like Dr M S Swaminathan, Jayalalithaa said, and appealed to IFAD to participate in a joint-effort towards making a new beginning in TN.

Pedro Medrano, UN Resident Coordinator and World Food Programme country director, Ganesh Thapa, regional economist, Asia and the Pacific division, IFAD, agriculture scientist Dr M S Swaminathan and IFAD president Lennart Bage were among those who spoke.

New women's training centre

EXPRESS NEWS SERVICE

Chennai, Dec. 1: President of the International Fund for Agricultural Development (IFAD) Lennart Bage inaugurated the New Women's Training Centre of the Working Women's Forum (WWF), India, in the city on Sunday.

Bage also released a book, 'Coalescing the Unreached for Poverty Reduction', authored by Dr Nandini Azad, standing committee member of WWF, India. Later, he held an interactive programme with representatives of the Indian Cooperative Network who are involved in rural banking operations. Jaya Arunachalam, president, WWF, was also present.



ஆசிய மற்றும் பசிபிக் நாடுகளில் கிராமப்புறங்களில் நிலவும் வறுமை நிலையை கண்காணிக்கும் 'ஐ.எப்.ஏ.டி.'யின் கருத்தரங்கை சென்னையில் முதல்வர் ஜெயலலிதா நேற்று துவக்கி வைத்தார். விழாவுக்கு வந்த முதல்வருக்கு விவசாய வளர்ச்சிக்கான சர்வதேச நிதி அமைப்பின் தலைவர் லேனார்ட் பாகே பூச்செண்டு கொடுத்து வரவேற்றார்.

CM against budget cuts for social sector

By Our Special Correspondent

CHENNAI, DEC. 1. The Tamil Nadu Government is faced with the "heart-wrenching prospect" of cutting down allocations for the social sector, especially health and primary education, the Chief Minister, Jayalalithaa, said today. However, she was "determined not to allow this (budgetary cuts) to happen".

The Chief Minister's remarks came at the inaugural of a symposium here on the International Fund for Agricultural Development strategy for rural poverty reduction in Asia and the Pacific.

Conceding that unemployment in the State was the third highest in the country with 15 per cent of the people without jobs, Ms. Jayalalithaa said it only strengthened the perception that the growth process in the past did not involve the poor and had, in fact, widened income inequalities. Noting that the State's finances were in a complete disarray, she squarely blamed it on the "mismanagement of finances and wrong policies" pursued by her "predecessor" (DMK) Government.

The Chief Minister reiterated that her vision was to double the per capita income by 2010. As high and

unsustainable revenue deficits could imperil the Government's ability to provide security for the poor, fiscal consolidation was a "must", she added.

In the context of the Government's commitment to increasing the agricultural growth, Ms. Jayalalithaa appealed to the IFAD President, Lennart Bage, to support the State's new project on transformation of wasteland, improving sub-optimal cultivation by small and marginal farmers

and encouraging rural non-farm activities.

In his address, Mr. Bage said developed countries too had committed themselves to increasing their allocations for poverty alleviation by 25 per cent over the next few years. The developing countries, he said, should take active part in the WTO negotiations to ensure greater market access for the rural produce, which was central to rural poverty eradication.

2 extremists held

By Our Special Correspondent

CHENNAI, DEC. 1. Two members of a newly-formed outfit 'Muslim Defence Force', suspected to have links with those involved in a blast at a Sai Baba temple in Hyderabad have been arrested by the Chennai city police today.

Explosive materials, including detonators, gelatin sticks and other items for making bombs, have been seized from them, the police said.

The suspects — Zahir Hussain (28) of

Royapettah and Toufiq (27) of Korukkupet — were arrested by a special police team during a combing operation as part of a security exercise in view of the anniversary of the Babri Masjid demolition on December 6. The police suspect that the culprits have links with terrorist outfits and were planning to plant bombs in different parts of Tamil Nadu. "They were waiting for instructions and their arrest has averted a major disaster," a police officer said.

A third person, who was picked up in Vellore district, is being questioned.

The Hindu, 2 Dec 2002

Kamal Hasan is Free for Public Promotions.

The Film Celebrity, Padmashri. Kamal Hasan in the Media Workshop held in Dr.M.S.Swaminathan Research Foundation on 4th December, 2002, informed that he is physically and mentally free to act in the ad film which motivates the public interests and awareness programmes. The Versatile Actor said that he had never appeared in any of the Multinational companies' advertisement. If any public organization is interested

in making a public awareness programme with his screen appearance, he will be available at the free of cost.

In the media workshop, many questions raised against him. He answered all the film media questions of the delegates very humorously. Kamal Hasan also visited the Sense Garden of the research foundation made for the blind people who can explore the plants through the sense of smell and touch.

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CIRCULATED AT THIRUVANMIYUR, BESANTNAGAR, INDRANAGAR, ADAYAR, KOTTURPURAM, THARAMANI, VELACHERY, KANDANCHAVADI TO SHOLINGANALLUR, KOTTIVAKAM TO INJAMBAKAM

6 PAGES

Weekly

Sunday, 15th, Dec 2002

The Media Workshop at MSSRF, Taramani



Lees delivered his keynote interest of this workshop.

Mr. Lennart Bage released the book "The Man Who Harvests Sunshine, The Modern Gandhi M.S. Swaminathan", written by Andras Endelyi. The first copy of the book was given to Mr. Martin Lees. The President IFAD, Mr. Lennart Bage, delivered the inaugural address. The first day session was ended with vote of thanks of Prof. P.C. Kesavan, Executive Director of MSSRF.

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THIRUVANMIYUR TIMES



The Media Workshop....

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The Second day of the workshop was concentrated with the core objects like 'Public Policies and Action for sustainable Food Security in India: Significance of Indicators', 'Peace, Freedom from Hunger & Sustainable Development: Asia's Spiritual Legacy & Vision', 'Rights to Food: Ethical Dimensions', 'Human kind at the cross roads: Ethical Dimensions of sustainable Development and

Freedom from Hunger' and 'The new discourse for an Era of peace, harmony with nature and Freedom from hunger'.

The day ended with a cultural programme of Mr. Alarmel Valli, the phenomenal dancer of Bharathanatyam at Triple Helix Auditorium, Central Leather Research Institute, Adayar.

The final day on 4th December 2002 was concentrated on the Media Workshop "Beyond

Rome and Johannesburg. Toward a Better common present". The Executive Director of M.S. Swaminathan Research Foundation, Prof. P.C. Kesavan Welcomed all media representatives. The moderator of this media workshop was Mr. Sashi Kumar Menon chairman of Media Development Foundation, Chennai. The media panelists were Mr. Sivashankari, the writer, Ms. Asha Krishna Kumar, the special correspondent of Frontline, the Film personality Mr. Kamal Haasan, Mr. Sudhangan, Chief producer of JAYA TV, Swami Agni Vesh, Chairperson of Bandhua Mukti Morcha, New Delhi, the Hungarian writer of Budapest, Mr. Andrew Erdelyi, Ms. Jenifer Arul, Chief of Bureau of Star TV, Chennai, Mr. Atul C Deulgonkar, Freelance journalist and Mr. Peder Medrano, the Country Director of UN World Food Programme, New Delhi.

The Special Coverage of Media Workshop will be continued next week.

The dynamical performance of Padmasri. Alarmel Valli



The M.S. Swaminathan Research foundation organised a Dance performance of Smt. Alarmel valli by 6.30pm on Tuesday 3rd December at the Triplex Helix Auditorium in the CLRI compound, Chennai. The traditional artist danced with the

theme of International consultation on peace, freedom from Hungers and Sustainable Development the Ethical Dimensions.

M.S. Swaminathan introduced the legend dancer of the traditional art of Bharathanatyam in India. She is a recipient of numerous national and International awards like Presidents awards of Padmasri and the Grande Mediall de la villa de paris of France. She is a creative artist whose work revealed "an effortless synchronization of apparent contradictions - linearity and lyricism, symmetry and sinuosity, precision and poetry".

She is now involved in the indepth study and experimentation of Sangam Literature. She is confident to stage the great Tamil literature into the great art form of India. In the Triple Helix Auditorium, she staged the life cycle of "Nama Shivaya". She presented her performance in five different tales

of Lord Shiva. In the first tale, She explained the sincerity of Nagaraja, the snake of Lord Shiva. The beat from her feet perfectly mixed with the rhythm of the music. In the second tale, she poetically breathed for the love towards Mageshwara (Lord Shiva). Her worship with mudras described her emotional prayers to the Supreme beloved. She portrayed her performance as a sensual and spiritual woman who was longing for the God 'Neela Kanda' in the cold perfumed breeze of the rainy clouds at the scared home 'Thillai'.

C.K. Vasudevan accompanied her dance for Nattuvaangam, Smt. Latha for her elegant voice, Sakthivel Muruganandham for Miruthangam and Kalai Arasan for playing Violin. Her varnams' simplified the complex emotional values of the other takes of Shiva as described in the traditional dance. Her dance takes narrated like the colours, which brings the moral picture to life.

Move for national river grid may not materialise

EXPRESS NEWS SERVICE

Chennai, Dec 2: The scheme to develop a national river grid in India may run into troubled waters because rivers such as the Indus, the Ganges and the Brahmaputra are shared internationally, M S Swaminathan, Chairperson of the MSSRF, said on Monday.

At a public forum organised by The Hindu Media Resource Centre for Sustainable Development, MSSRF, Swaminathan said that although a national water network is a difficult project, a grid connecting all peninsular rivers is feasible.

If policy makers can lay a sound plan for the Dakshin water grid, then it would help increase agricultural production, he said.

The other experts at the forum were R Martin Lees, Rector of the UN University of Peace; Sartaj Azis, Former Director General of FAO; Guy Sorman, Advisor to the Government of France; Varsha Das, Director of National Book Trust and Ashgar Ali Engineer, Founder-Chairman of Centre for Study of Society and Secularism.

To a question on whether economic reform demands zero-subsidy from the government, Martin Lees said that "perverse subsidies" that have become redundant need to be removed.

However, zero-subsidy is uncalled for and government can decide which programmes to support, he said.

Swaminathan said that young people should take the initiative to start self-employment ventures.

Several government schemes can be availed of to help entrepreneurs, he said.

ஆண்டுதோறும் 100 கால்நடை பட்டதாரிகளுக்கு சுயவேலை வாய்ப்பு!

தமிழக கால்நடை பராமரிப்புதுறை அமைச்சர் தகவல்!!

சென்றமாதம் சென்னையில் உள்ள எம்.எஸ். சுமாயிநாதன் பவுண்டேஷனில் நடைபெற்ற பதப்படுத்தப்பட்ட பொருட்களுக்கான கருத்தரங்கில் தமிழ்நாடு கால்நடை பராமரிப்பு துறை அமைச்சர் அனிதா ராதாகிருஷ்ணன் அவர்கள் பேசியபோது.

படித்த வேலையற்ற கால்நடை மருத்துவ பட்டதாரிகளுக்கு வாழ்வு அளிக்கின்ற வகையில், நடந்து முடிந்த வரவு - செலவு கூட்டத் தொடரில் ஒரு திட்டத்தினை நடப்பாண்டில் செயல்படுத்த முடிவு செய்துள்ளது. அதன்படி ஆண்டுதோறும் 100 வேலை இல்லாத கால்நடை பட்டதாரிகளுக்கு, கால்நடை மருத்துவ சேவை பெறப்படாத ஊரகப் பகுதிகளில் உள்ளாட்சி நிறுவனங்கள் உதவியுடன் ஒரு கட்டிடம் வாடகைக்கு வழங்கப்படும்.

அதில் தேசிய பசு மற்றும் எருமையின வளர்ப்புத் திட்டத்தின் கீழ், கடனாக திரவ நைட்ரஜன் குடுவையும், மருத்துவ சேவை வழங்க கிட்டியும் (டிரவிஸ்) வழங்கப்படும். மருந்துகளும், உபகரணங்களும் கூட்டுறவு வங்கிகள் மற்றும் தேசியமயமாக்கப்பட்ட வங்கிகள் மூலம் கடனாகப் பெற ஊக்குவிக்கப்படும்.

மேலும் விருப்பத்திற்கேற்ப, இவர்களுக்கு அடிப்படை தேவையான தகவல் வசதி (தொலைபேசி), போக்குவரத்து வசதி (Vehicle for mobility) மற்றும் அன்றாட தேவைக்கு மருந்துகள் வாங்கி தேசிய வேளாண் அபிவிருத்தி வங்கி (NABARD) மூலம் கடன் வசதி செய்து தரப்படும்.

கால்நடை மருத்துவர்கள், தாங்கள் செய்யும் பணிகளுக்கு ஒரு குறிப்பிட்ட கட்டணம் வசூலிக்க அனுமதிக்கப்படுவார்கள். அவர்கள், அருகாமையில் உள்ள கால்நடை நிலையத்துடன் இணைந்து செயல்பட்டு அவர்களின் பணி விவரங்களை அந்தந்த பகுதி கால்நடை உதவி இயக்குநருக்கு மாதவாரியாக அறிக்கை அனுப்பவேண்டும்.

இத்திட்டத்தின் மூலம் வேலையில்லா கால்நடை மருத்துவ பட்டதாரிகளுக்கு சில சுய வேலை வாய்ப்பு அளிப்பதன் மூலம் கால்நடை வளர்ப்போரின் மருத்துவ தேவைகளை அவர்களின் வீடுகளிலேயே வழங்க இயலும்.



மத்திய வேளாண் அமைச்சருக்கு கை குலுக்கி வாழ்த்து தெரிவிக்கிறார் மாநில கால்நடைதுறை அமைச்சர் இராதா கிருஷ்ணன், அருகில் வேளாண் விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன்

கால்நடைகள் கோமாரி நோய், தொண்டை அடைப்பான், சப்பை நோய் போன்ற நோய்களினால் பாதிக்கப்படும் போது, அவற்றின் வேலைத்திறன் மற்றும் உற்பத்தி திறன் பாதிக்கப்பட்டு, சில சமயங்களில் கால்நடைகள் இறக்கவும் நேரிடுகிறது. கடந்த ஆண்டு 2.84 சதவீதம் கால்நடைகளுக்கு மட்டுமே கோமாரி நோய் தடுப்பூசி போடப்பட்டுள்ளது.

தடுப்பூசி போடப்பட வேண்டிய கால்நடைகளின் எண்ணிக்கை அதிகமாக உள்ளதால் இத்துறையில் உள்ள தொழில்நுட்ப பணியாளர்கள் மற்றும் பிற பணியாளர்களைக் கொண்டு குறிப்பிட்ட காலத்திற்குள் தடுப்பூசி பணியினை முற்றிலுமாக நிறைவேற்ற இயலாது. இதையறிந்த தமிழக முதல்வர் அவர்கள் அம்மா அவர்களின் சீரிய தலைமையிலான அரசு முத்தடுப்பூசி போடும் திட்டத்தை அறிமுகப்படுத்தியுள்ளது. இத்

திட்டத்தின் மூலம் வேலையற்ற கால்நடை மருத்துவ பட்டதாரிகள் 1000 பேரைக் கொண்டு இத்திட்டம் செயல்படுத்தப்பட உள்ளது. இவர்களுக்கு ஒரு கால்நடைக்கு தடுப்பூசி போடுவதற்கு ரூ.1/- வீதம் வழங்கப்படும்.

இத்திட்டங்களின் மூலமாக வேலையற்ற கால்நடை மருத்துவர்களுக்கு வேலை வாய்ப்பினை உருவாக்குவதுடன் கால்நடைகளின் நலமும் பேணி காக்கப்படும்.

தமிழகத்தில் மாண்புமிகு தமிழக முதல்வர் டாக்டர் புரட்சித்தலைவி அம்மா அவர்களின் அரசாஸ்தான் புதுக்கோட்டை, சிவகங்கை, இராமநாதபுரம், தூத்துக்குடி மற்றும் விருதுநகர் ஆகிய மாவட்டங்களில் முதன் முதலாக டேனிடா திட்டம் செயல்படுத்தப்பட்டது.

இதன் மறுபிரதிபலிப்பு திட்டம் சென்னை தவிர மீதமுள்ள 23 மாவட்டங்களில் படிப்படியாக செயல்படுத்தப்படும், சென்ற ஆண்டு தஞ்சாவூர், திருச்சி, மதுரை, தேனி, திருநெல்வேலி, கன்னியாகுமரி ஆகிய 6 மாவட்டங்களில் இத்திட்டம் நீட்டிக்கப்பட்டு செயல்படுத்தப்பட்டு வருகிறது.

இந்த ஆண்டில் திண்டுக்கல், பெரம்பலூர், கரூர், திருவாரூர், நாகப்பட்டினம், நாமக்கல், கோயம்புத்தூர், ஈரோடு, நீலகிரி ஆகிய 9 மாவட்டங்களில் செயல்படுத்தப்படவுள்ளது என்று பேசினார் கால்நடை பராமரிப்பு துறை அமைச்சர் அனிதா ராதாகிருஷ்ணன். ○

Carbon trading under Kyoto Protocol Vital to restoring forests

Swarna Sadasivam Vepa

INDIA'S forest cover has been decreasing steadily. Between 1972-75 and 1993-95, the dense forest area in India declined from 46.42 million hectares to 36.73 million hectares. Further, only 11.8 per cent of the geographical area is dense forest. The open forest area is 7.7 per cent, and the scrub forest area 1.58 per cent.

India can improve the dense forest cover by converting at least part of the 25.5 million hectares of open forest area into dense forest area. However, long-term finance is required.

Carbon sequestration and carbon trading

The role of forests in stabilising the atmospheric temperature is well known. The removal of atmospheric carbon is known as carbon sequestration. It has been estimated that carbon sequestration in Indian forests was 6.9 million tonnes in 1996 (Ravindranath 1996).

Despite the depleting forests, the estimation of net annual carbon sequestration from 1972-73 to 1999-2000 appears to be positive. This has been attributed to the plantation of secondary forests in the past two decades, as the carbon sequestration from the old forests has been taken as zero (Kanchan Chopra, *et al* 2002).

Thus, Indian forests can raise funds by carbon trading under the Kyoto Protocol. However, under the new provisions of the Kyoto Protocol, things are not easy.

Kyoto Protocol: Implications

In 1992, many nations — alarmed at the increase in greenhouse gases (GHGs) — signed the United Nations Framework Convention on Climate Change (UNFCCC), which had a legally non-binding, voluntary pledge stating that the major developed nations would reduce their GHG emissions to 1990 levels by 2000. Parties to the treaty decided, in 1995, to enter into negotiations on a protocol to establish legally binding limitations, or reductions in GHG emissions. The negotiations took place in 1997 at Kyoto in Japan. Eight Conferences of

the Parties (COPs) have been held since 1992. The Kyoto meeting was the fourth.

The Kyoto Protocol only recognises the land use and land use change in forestry activities (LULUCF), and the associated net carbon sequestration flows estimated for the purpose of emission trading in terms of net removal units. At the COP 7 in Marrakesh, naturally occurring carbon removal, and removals as a result of anthropogenic effects, were excluded. Also, any re-release of the GHGs through forest fires will have to be accounted for.

The forest has been defined. The trees have to be at least two-five metres tall in a forest. The value can be chosen by a country. However, they remain fixed and cannot be changed.

The parties should choose the land use activity to be used for emission targets in addition to afforestation, reforestation and deforestation. The carbon sink activities in addition to forest regeneration are forest management, cropland management, grazing land management and re-vegetation. Removal of GHGs is measured in removal units called RMUs. For the first commitment period there is a four-tier capping system. Only afforestation and reforestation projects are eligible for the clean development mechanism. Removal units cannot be carried forward to the next year.

Emissions and removals from crop land management, grazing land management and re-vegetation management can be accounted for on a net to net basis, meaning the levels of removal over and above the 1990 level are taken into account. If the carbon removals are the same as the 1990 level there will not be any credits. Issues such as emissions, from forest harvesting and wood products have been resolved.

There are still many issues to be settled before the methodologies of computations of removal units, and emission units are standardised and other issues, such as verification and compliance, are resolved.

As it appears now the emission trading for carbon sinks does not help the countries that have been using sustainable logging for some time, since the

cutting down of the forests and regeneration was a regular activity by 1990. Growing forests in a big way beyond the high levels achieved is not possible and difficult to compensate by other activities. Other activities, which also account for carbon removals may be small in the countries, where croplands are left fallow.

Further, there is a cap on the credits one can get from these activities. The land may not be available to substantially increase these activities beyond the 1990 levels. Thus, many South-East Asian countries with large forest areas may not benefit from the emission trading under the Kyoto Protocol.

The case of India is different. The net annual flows of carbon calculated for India have not changed much since 1990 (Kanchan Chopra 2002). In fact, there was a small decline between 1990 and 1996. Even if we presume that the methodologies adopted in the present estimation are acceptable to the Kyoto Protocol, which is doubtful considering the discrepancies that often occur between the Indian and UN estimates, the net carbon removal is not much. If we take into consideration forest fires, it may come down further. All the same, considering the large areas of open forest, India can still benefit from emission trading, provided a real effort is made to stop all illegal felling, and improve the forest cover. However, India has to closely follow the developments, and do the needful to collect more accurate statistics, and the net forest wealth index for various States. More has to go into choosing the tree height and the re-vegetation activities, which can include some horticultural activity, where the trees are perennial.

Another important point to note is that once the Kyoto Protocol is in place, the present system of private companies buying emission units from plantation companies will not hold. All the signatory countries will have to abide by the rules.

(The author, an economist, is with the M.S. Swaminathan Research Foundation, Chennai.)

Businessline

26th Dec.

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Paper from Banana Waste

വാഴത്തടയിൽ നിന്ന് കടലാസ് നി

കെ.എ. ജോണി

ചെന്നൈ: വാഴയിൽനിന്ന് പഴം മാത്രമല്ല കടലാസും കിട്ടും - നല്ല ഒന്നാംതരം കടലാസ്. സംശയമുണ്ടെങ്കിൽ തമിഴ്നാട്ടിലെ ഡിണ്ടിഗൽ ജില്ലയിലെ കണ്ണിവാടി ഗ്രാമത്തിലേക്ക് വരിക. വാഴയുടെ അവശിഷ്ടങ്ങളിൽ (വാഴത്തട, ഇല മുതലായവ) നിന്ന് പരപ്പുണ്ടാക്കി കടലാസും കടലാസുകൊണ്ടുള്ള വിവിധ ഉല്പന്നങ്ങളും നിർമ്മിക്കുന്ന വിദ്യ സരസ്വതിയും ജീവയുഗമടങ്ങുന്ന സ്ത്രീകളുടെ സ്വാശ്രയ സംഘം കാണിച്ചുതരുന്നു.

വാഴത്തടയിൽനിന്ന് കടലാസുണ്ടാക്കുന്ന ചെറിയൊരു പ്ലാന്റാണ് കണ്ണിവാടിയിൽ ത്യാൻസിറാണി സ്ത്രീ സ്വാശ്രയ സംഘത്തിന്റെ ആഭിമുഖ്യത്തിൽ പ്രവർത്തിക്കുന്നത്. സരസ്വതി (സെക്ര.)യും ജീവ (പ്ര

സി)യും ഉൾപ്പെടെ പത്തു ദളിത് സ്ത്രീകളാണ് ഈ സംഘടനയിലെ അംഗങ്ങൾ.

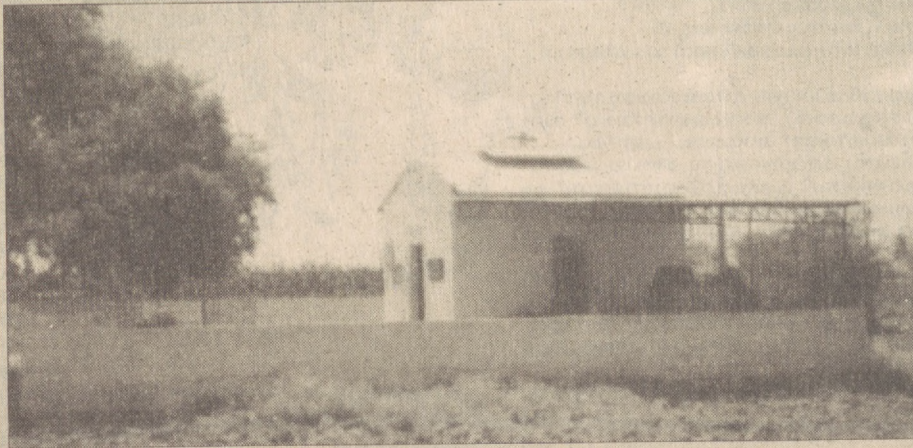
ചെന്നൈ ആസ്ഥാനമായി പ്രവർത്തിക്കുന്ന ഡോ. എം.എസ്. സ്വാമിനാഥൻ റിസർച്ച് ഫൗണ്ടേഷനാണ് ഈ ദളിത് സ്ത്രീകളുടെ സ്വാശ്രയ സംഘം രൂപീകരിക്കുന്നതിനും പ്ലാന്റ് തുടങ്ങുന്നതിനും മുൻകൈയടയ്ക്കുന്നത്.

ഏഴരലക്ഷം രൂപയാണ് പ്ലാന്റ് സ്ഥാപിക്കുന്നതിന് ചെലവായതെന്ന് പ്രോജക്ടിന്റെ കോ-ഓർഡിനേറ്ററായ എം.എസ്.എസ്. ആർ. ഫൗണ്ടേഷനിലെ ഡോ. തമിഴൊളി പറഞ്ഞു. ഇതിൽ മൂന്നു ലക്ഷം രൂപ ബാങ്ക് വായ്പയായി ലഭിച്ചു. സംസ്ഥാന സർക്കാർ ഒരു ലക്ഷം രൂപ സബ്സിഡിനല്ലി. ബാക്കിമൂന്നരലക്ഷം രൂപ എം.എസ്.എസ്.ആർ. കമ്മ്യൂണിറ്റി ബാങ്ക് പലിശയില്ലാ വായ്പയു

യും നൽകി.

പേപ്പർ നിർമ്മാണത്തിലും മറ്റും വിദഗ്ധ പരിശീലനം നല്ലലായിരുന്നു ആദ്യഘട്ടം. നാഗ്പുരിനടുത്ത്

വാർദ്ധയിലെ 'സെൻറർ ഓഫ് സയൻസ് ഫോർ വില്ലേജസ്' എന്ന സ്ഥാപനമാണ് സരസ്വതിക്കും ജീവയുഗമൊക്കെ പരിശീലനം നല്കിയത്. 30 ദിവസമായിരുന്നു പരിശീലനം. പ്ലാന്റ് നിർമ്മാണത്തിന്റെ സാങ്കേതിക വിദ്യയും വാർദ്ധയിലെ പരിശീലന കേന്ദ്രത്തിൽ



വാഴത്തടയിൽ നിന്ന് കടലാസുണ്ടാക്കുന്ന പ്ലാന്റ്

നിന്ന് ലഭിച്ചു.

ആരുമാസം മുൻകണ്ണിവാടിയിലെ പ്ലാന്റിൽ ഉല്പാദനം തയ്യാറാക്കി. ഡിണ്ടിഗൽ ജില്ലയിലുള്ള കേന്ദ്രമായി നിലനിൽക്കുന്ന വാഴത്തട സംസ്കൃത വിഭവമാണ് പ്ലാന്റിൽ മാത്രമായിരുന്നെങ്കിലും ഏകദേശം 30 ലക്ഷം രൂപയുടെ വാഴത്തട സംസ്കരണ പ്ലാന്റ് ഇപ്പോൾ സൗജന്യമായി സംഘടിപ്പിച്ചിട്ടുണ്ട്. വാഴത്തട സംസ്കരണ പ്ലാന്റ് നിന്ന് ഇവ നികുതി കിട്ടുമല്ലോ എന്ന അതിലാണ് വാഴക്കുളത്ത് പാദനം നന്നായിച്ചാൽ അസംസ്കൃതത്തിന് വിലകൊടുക്കുന്ന സംഘടിപ്പിച്ച പരിപാടിയെക്കുറിച്ചാണ്.

വാഴത്തടയും ഇലകളെയും കൂട്ടി കൈകൊടുക്കുന്നതിന് വേണ്ടി പ്ലാന്റിൽ നിന്ന്

ചേരുമ്പോഴേ നല്ല കടലാസ് പരയാറുണ്ട്. അബുദുദിന് അച്ചിരുന്നു.

വാക്കിനും വരയ്ക്കുമെല്ലെടുത്തപ്പോൾ അടിയന്തിരമായി വരയിലൂടെ നന്നെത്ത രാഷ്ട്രപതി ഫക്ടറിയിൽ കിടന്നു കിട്ടിയപ്പോൾ രാവസമയെ കുറിച്ചുണ്ടാക്കിയ ആലേഖനങ്ങളിൽ ഒന്നായിരുന്നു കാർട്ടൂണിന്റെയും വരയിലൂടെ അദ്ദേഹം മൂല്യങ്ങൾക്കും സ്വാതന്ത്ര്യം വേണ്ടി നിലകൊള്ളുന്ന ആ വരകൾക്കു പിന്നെ ഉള്ളതാണെന്ന് അദ്ദേഹത്തിനും ഏറെ പ്രശംസ നേടിയും സ്വാതന്ത്ര്യത്തിന്റെയും വെളിച്ചം ഒരിക്കലും ക്ഷയിക്കുന്ന സഹായനേതാവായിരുന്നു. അംഗീകാരം ഉന്നതകലാകാരനെ കൂട്ടിയതേയുള്ളൂ. സ്വജീവിതം യാത്രയായത്. കലാലോലനകളിലൂടെ അദ്ദേഹം

நாமக்கல் மாவட்டத்தில்

மக்கா சோளம் பயிரிட நல்ல வாய்ப்பு

எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனம் தகவல்

நாமக்கல், ஜூலை. 30 — நாமக்கல் மாவட்டத்தில் மக்கா சோளம் பயிரிட நல்ல வாய்ப்பு உள்ளதாக டாக்டர் எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனம் தெரிவித்து உள்ளது.

கோழிப்பண்ணை

இது தொடர்பாக அந்த நிறுவனத்தின் நாமக்கல் ஒருங்கிணைப்பாளர் டாக்டர். எஸ்.ஆர். கோபிநாத் வெளியிட்டு உள்ள ஒரு செய்திக்குறிப்பில் கூறி இருப்பதாவது:—

நாமக்கல் மாவட்டத்தில் உள்ள கோழிப்பண்ணைகளின்

இருந்து 20 பேர் கலந்து கொள்வது.

*சிறு குழந்தைகளின் உளவியல் தன்மைக்கு மாறாக முதல் வகுப்பிலேயே ஆங்கிலம் திணிக்கப்படுகிறது. அதை விடுத்து 6-ம் வகுப்பில் இருந்து ஆங்கிலம் கற்று தர நடவடிக்கை எடுக்க அரசை கேட்டுக்கொள்வது.

*தமிழ் தலைப்பு எழுத்துடன், தமிழில் கையெழுத்து இடும்படி, தமிழக மக்களை வலியுறுத்துவது.

மேற்கண்டவாறு தீர்மானங்கள் நிறைவேற்றப்பட்டன.

முன்னதாக பேரவை பொருளாளர் மீருத.கோபாலன் வரவேற்றார். மு.ராசா நன்றி கூறினார்.

ஒன்றியத்தில்

சி நிவாரணம் ஈயம் வில்லை

நிலைமை நாளடைவில் தரம் பின்தங்கி வரும் நிலை ஏற்பட்டு உள்ளது. தீவனப்பற்றாக்குறையால் சிறிய பண்ணைகள் அழிந்தும், பெரிய பண்ணைகள் திண்டாடும் நிலைமையிலும் உள்ளது.

இதற்கு முக்கிய காரணம் கோழித்தீவன விலை அதிகமாக உள்ளதுதான். பண்ணைகளுக்கு தேவையான தீவனத்தில் பெரும்பங்கு வகிக்கும் மக்காசோளத்தை 40சதவீதம் கர்நாடகா, ஆந்திரா போன்ற வெளி மாநிலங்களில் இருந்தே கொள்முதல் செய்ய வேண்டி உள்ளது.

நமது பண்ணைகளுக்கு தேவையான மக்கா சோளத்தை நாமக்கல் சுற்றுப்பகுதியில் விளைவிக்க நல்ல வாய்ப்பு உள்ளது.

தற்பொழுது பருவ மழை பெய்து வரும் நிலையில், நெல் பயிரிட இயலாத நிலை காணப்படுகிறது. எனவே, மானாவாரியாக கிடக்கும் நிலங்களில் தீவனத்திற்கு தேவையான மக்கா சோளத்தை பயிரிடலாம்.

இந்தபயிருக்கு 6 முதல் 7 முறை நீர்பாய்ச்சினால் போதுமானது. ஏக்கருக்கு 20 முதல் 25 மூட்டைகள் வரை கிடைக்கும். ஆடி, தை மற்றும் புரட்டாசி பட்டங்களில் இவற்றை பயிரிடலாம். மற்ற பயிர்களுடன் ஒப்பிடும் போது, பூச்சி மற்றும் நோய் தாக்குதல் மிகவும் குறைவு ஆகும்.

தேசிய முட்டை ஒருங்கிணைப்பாளர்கள் சங்கம் நாமக்கல்லின் கோழித்தீவனத்திற்கு தேவையான மக்காசோளத்தை இன்னும் 5 வருடங்களுக்கு உற்பத்தி செய்தாலும் தேவையை பூர்த்தி செய்வது கடினம் என தெரிவித்து உள்ளது.

செயல்முறை விளக்கம்

இந்த வறட்சியான சூழ்நிலையில் விவசாயிகளுக்கு லாபம் தரும் மக்காசோளத்தை பயிரிடவும். சிறிய கோழிப்பண்ணைகளை புதுப்பிக்கவும், வெவ்வேறு விதமான மண், நீர்வளம், பயிருக்கு தேவையான உரம், நோய்பராமரிப்பு ஆகியவை குறித்து எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனம் நாமக்கல் அருகே உள்ள கொண்டிசெட்டிப்பட்டியில் செயல் முறை விளக்கம் அளிக்கிறது.

எனவே, நாமக்கல் சுற்று வட்டாரத்தில் மக்காசோளத்தை பயிரிட விருப்பம் உள்ள விவசாயிகள் நாமக்கல் சந்தைபேட்டை புதூர் பெரியப்பட்டி ரோட்டில் உள்ள டாக்டர் எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனத்தை அணுக கேட்டுக்கொள்ளப்படுகிறார்கள்.

இவ்வாறு அந்த செய்திக்குறிப்பில் கூறப்பட்டு உள்ளது.

Thinkers return to N.S. to study world's threats

BY KEVIN COX, HALIFAX

A group of 200 international scientists, academics and ardent opponents of nuclear weapons is pondering the possibility of global destruction in Halifax this week — before heading to the scenic shores of the Nova Scotia village of Pugwash where the movement began in 1955.

"We're going to go back to our Pugwash roots to imbibe the air. It's an inspiring place," Senator Douglas Roche said before the Pugwash Conference on Science and World Affairs began yesterday. The meeting is the first annual conference in 55 years that the organization, credited with sparking a world-wide peace movement, has held in its hometown.

The delegates, who are examining in seminars at Dalhousie University issues such as the weaponization of space, terrorism and the prospects for nuclear disarmament, will go to Pugwash on Sunday. They will tour the Thinkers' Lodge that U.S. industrialist and humanitarian Cyrus Eaton built in the early 1950s to bring together U.S. and Soviet scientists to discuss the nuclear threat.

The delegates will look out over the ocean at the views that inspired the 1955 Pugwash declaration signed by a group that included Bertrand Russell and Albert Einstein, demanding a global ban on nuclear weapons.

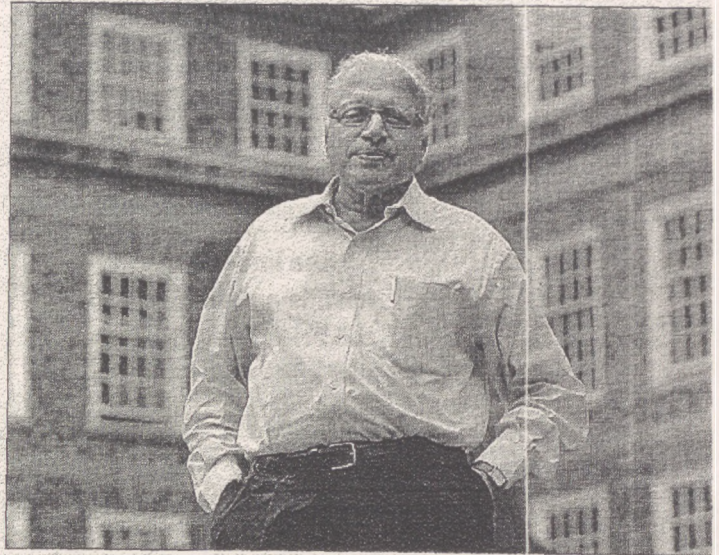
The ban never materialized and today it is easy to be cynical about the relevance of the present-day Pugwash proceedings in the midst of wars on terrorism and widespread military proliferation.

But Mr. Roche said the group has to continue to press governments over the dangers of the growing number of countries possessing nuclear weapons or the means of manufacturing them.

The first Pugwash talks were during a time of fear of nuclear war between the United States and Soviet Union. Now, however, the threat is greater because nations such as India, Pakistan, Israel and North Korea are developing nuclear weapons, Mr. Roche said.

"Now we have a free-flowing proliferation [of nuclear weapons] so that the risk of the use by design or by accident is greater than it has ever been, and people need to understand that," he said.

He acknowledged that after the



SANDOR FIZLI/THE GLOBE AND MAIL

Pugwash chairman M.S. Swaminathan says the conference has expanded its workshops to address threats beyond the nuclear issue

9/11 terrorist attacks and the wars in Afghanistan and Iraq, the U.S. military has not been eager to discuss reducing its nuclear arsenal.

"What we have now is a deliberate effort by the U.S. to convince their own leaders that nuclear weapons are needed for the security of that country. It is just a huge lie that we need nuclear weapons for our own security," he said.

Mr. Roche said federal politicians have been willing to listen to the demands of the Pugwash group but have not been forceful enough in demanding that the

United States reduce its nuclear weaponry and exert influence on other countries to do so.

The Pugwash thinkers admit it is difficult to focus attention on the nuclear build-up when news is full of details about the latest international conflict and fear of biochemical attacks that could include anthrax or smallpox.

The chairman of the Pugwash conference, Indian scientist M.S. Swaminathan, said the organization has expanded its workshops to deal with other threats to global security beyond the nuclear issue.

भारताला २००७ पर्यंत 'भूकमुक्त' करण्याची योजना!

चेन्नई, ता. २२ : देशाच्या स्वातंत्र्याला साठ वर्षे पूर्ण होत असल्याचे औचित्य साधून १५ ऑगस्ट २००७ पर्यंत भारताला भूकमुक्त करण्यासाठीची महत्वाकांक्षी योजना हरितक्रांतीचे प्रणेते डॉ. एम. एस. स्वामिनाथन यांच्या पुढाकारातून आकारास येत आहे.

भारताला भूकमुक्त करण्याचे उद्दिष्ट घेऊन काम करणाऱ्या चेन्नईतील एम. एस. स्वामिनाथन रिसर्च फाउंडेशनने संयुक्त राष्ट्रसंघाच्या जागतिक अन्न योजना (वर्ल्ड फूड प्रोग्राम)च्या सहकार्याने काम करण्याचे ठरविले आहे. त्यासाठीचा अंतिम आराखडाही तयार करण्यात आला आहे. भारतातील कुपोषणाची समस्या संपविण्यासाठी कोणत्या प्रकारच्या उपाययोजना हाती घेता येतील, त्यावर या आराखड्यामध्ये भर देण्यात आला आहे. देशातील विविध प्रांतांमध्ये कुपोषणाने बळी पडणाऱ्या समाजातील दारिद्र्य निर्मूलन, अन्नपुरवठा यांकडे लक्ष देण्यासाठीचे ठोस उपाय या आराखड्यात सुचविण्यात आले आहेत. याखेरीज दुष्काळ, पूर अथवा भूकंपासारख्या नैसर्गिक संकटांच्या वेळीदेखील लोकांवर



डॉ. एम. एस. स्वामिनाथन

उपाशी राहण्याची वेळ येऊ नये, यासाठी काय करता येईल, यावरही सदर आराखड्यात उपाय सुचविण्यात आला आहे.

स्वामिनाथन यांची संस्था आणि जागतिक अन्न योजना (डब्ल्यूएफपी) यांनी त्यासाठी एक धोरण निश्चित केले आहे. त्यामध्ये कुपोषण, भूकबळी या समस्या नेमक्या का उद्भवतात व त्यावर मात करण्याच्या पद्धती कोणत्या यावर संशोधन करण्यात आले. त्यामध्ये आलेल्या निष्कर्षांवर आधारित असा हा आराखडा असून त्यानुसार, हा कार्यक्रम राबविण्यासाठी सध्या अस्तित्वात असलेल्या अन्न सुरक्षेसंबंधी सर्व व्यवस्थांचे केंद्रीकरण करण्यात येणार आहे. 'भूकमुक्त भारत' योजनेच्या अंमलबजावणीसाठी तळागाळात काम करणाऱ्या विविध स्वयंसेवी संस्थांना सहभागी करून घेण्यात येणार असल्यांचेही डॉ. स्वामिनाथन यांनी सांगितले. 'अन्न माणसाची मूलभूत गरज आहे,' ही संकल्पना वास्तवात आणणे, हे या सर्व कार्यक्रमांमागील मुख्य सूत्र 'असेल,' असेही स्वामिनाथन यांनी नमूद केले.

'Talks failure has given us breathing space'

By Our Staff Reporter

COIMBATORE, SEPT. 26. The breakdown of negotiations at the Cancun talks has given India "breathing space" to improve its agricultural competitiveness, the Vice-Chairman of the State Planning Commission, M. S. Swaminathan, said today.

Inaugurating a programme on high-tech training for technocrats in the departments of agriculture, horticulture and agri-marketing, organised at the Tamil Nadu Agricultural University here, Dr. Swaminathan said the failure of the talks did not mean that decisions would not be taken; it only meant that the agreement had been postponed.

With agriculture being brought into negotiations regarding world trade, India would have to take steps to face the situation because substandard products would be unacceptable in the international market.

"The ultimate goal of agricultural extension is to increase the profitability per unit of water and land. Even the small farmers must have more marketable surplus. It is not enough to con-

sider merely the 'yield per hectare'; we must give im-



The Vice-Chairman of the State Planning Commission, M.S. Swaminathan (second from right), releasing a training manual at a hi-tech training programme for technocrats at the Tamil Nadu Agricultural University, Coimbatore, on Friday. Looking on (from left) are the Director of Research, TNAU, S. Ramanathan; the Commissioner of Agriculture, R. Kannan, and the TNAU Registrar, S.D. Sundar Singh. — Photo: K. Ananthan

portance to 'yield per unit of water'. Only then will farmers earn more income."

Emphasising the need for "quality literacy" apart from "productivity improvement," he said knowledge-intensive agricul-

ture could encourage farmers to confidently adopt alternative cropping systems. The attitudes towards farmers should change from "patronage to partnership" by acknowledging the practical knowledge the farmers had.

"We must move from the 'Green Revolution' to the 'Ever-green Revolution', without causing social harm, and aim at productivity improvement in perpetuation, without damaging the environment," he said.

Spencer's

OCT 31 2003



Students of Sanskrit Bharti High School, Haresinghpura, Karnal, receive citations from Chief Justice V.N. Khare at the ninth Justice Sunanda Bhandare memorial lecture on women's empowerment and building a food-and-water-secure India by Padma Vibhushan M.S. Swaminathan in New Delhi on Friday. — A Tribune photograph.

Women empowerment must for progress: CJI

TRIBUNE NEWS SERVICE

NEW DELHI, OCTOBER 31

Describing the successful crusade by five Haryana schoolgirls against attempted marriage of two minor girls in Karnal district earlier this year as the 'symbol' of women empowerment, eminent speakers here today said the nation could not progress without giving them their due share.

"We have entered into the 21st century, but the status of women has not changed much. They are deprived of their rights because of the attitude and mindset of our society," the Chief Justice of India, Mr V.N. Khare, said, presiding over a seminar on the ninth Justice Sunanda Bhandare memorial lecture, delivered by noted agriculture scientist M.S. Swaminathan.

Mr Justice Khare and the Swaminathan gave away awards and citations to five girls — Neelam Rani, Sarita Tyagi, Sunila Devi, Swati Tyagi and Sushma Rani — from Sanskrit Bharti High School, Haresinghpura in Karnal, for their courageous act of preventing the marriages of a 7-year-old and a 10-year-old girl on April 18 in their village.

Expressing anguish over the growing incidents of sexual assault of women, especially minor girls, the Chief Justice said, "Sexual violence against women is a crime of worst form and an assault on their persona and right to privacy."

The Chief Justice asked the law enforcing agencies to deal firmly with such criminals to ensure that the women live with dignity and without fear.

In his keynote address on — 'Women's empowerment and building of food and water security' — Swaminathan spoke on diverse aspects of women empowerment and their exploitation over centuries despite their having a major role in the nation building.

Expressing concern over the growing imbalance in the sex ratio and the crime of female foeticide, he said a six-point drop in the sex ratio between the 1991 and 2001 census needed a serious pondering upon the issue. He said the ratio of 933 females to 1000 males in 1991 was alarming, its drop to 927 in 2001, was a matter of grave concern.

Both Mr Justice Khare and Mr Swaminathan, also expressed concern over the

discrimination against girl child especially in rural areas in matter of providing the education and quality food as compared to the male child in a family.

Mr Swaminathan said without the contribution of women, Green Revolution in the country was not possible as they constituted a major agriculture work force, but at the same time they had no food security for themselves.

"Food and drinking water are the first among the hierarchical needs of humankind. Women play a pivotal role in both the food and water security...they are particularly affected by environment degradation," he said.

"Involvement of women at every stage in the design and implementation of food and water security system is the first step in our quest for an India where every citizen, man or women, has a space for making contributions to human security and happiness," the noted scientist said.

Delhi High Court Chief Justice B.C. Patel and a former Judge, Ms Leila Seth, also spoke on the occasion. A Supreme Court Judge, Mr Rajendra Babu's lecture was read in absentia.

The struggle for organisation

The last 15 years have seen the community's difficulty in coming to terms with the external organisation laid down by the Auroville Foundation Act and with the necessity of finding a solution for its internal functioning

Fifteen years ago, in September 1988, the Auroville Foundation Act came into force. It was the successor to the Auroville (Emergency Provisions) Act 1980, by which the Government of India under the then Prime Minister, Mrs. Indira Gandhi, had taken over the management of all assets related to Auroville for a limited period of time. Under this act a Government-appointed Administrator had ensured that Auroville was able to develop in accordance with its Charter, resulting in a period of security and growth. For Mrs. Indira Gandhi had decreed that "The government of India does not want to control Auroville", and a special provision had been incorporated in the Act guaranteeing the freedom of the Auroville residents to implement the ideals laid down in the Charter of Auroville.

When, in 1988, four years after her assassination, the date for the Act's expiry neared, a new arrangement was considered necessary and the Government of India promulgated the Auroville Foundation Act which incorporated Mrs. Gandhi's earlier directive. The Government acquired, in the public interest and without paying compensation, all the assets of all organizations related to Auroville, with the intention of transferring them at a later time to a statutory body called 'The Auroville Foundation' to be created under this Act. This Foundation would have three authorities: a Governing Board; an International Advisory Council; and a Residents' Assembly. The members of the Governing Board and the International Advisory Council are appointees of the Government of India; the Residents' Assembly consists of all the residents of Auroville of 18 years and older. An officer of the Government of India would be the Foundation's Secretary residing in Auroville.

It would take four years before the Foundation became fully operational. The Foundation was created in January 1991, when its first Governing Board, chaired by Dr. Karan Singh, was appointed. The community responded a few months later by electing its first Working Committee, the representative of the Residents' Assembly. In February 1992 the first Secretary took office and the Government then transferred to the Foundation the Auroville assets. The members of the International Advisory Council were appointed by the end of 1992.

The Governing Board

When details of the Act became known, there was concern about the extensive powers given to the Governing Board. But real problems only surfaced when the Secretary endeavoured to delegate the management of the various properties now vested in the Foundation to individual Aurovilians. He proposed to do so by means of an 'Office Order'. But the authoritarian wording of the Office Order was objected to, and the Secretary's attitude was seen as an attempt to impose his views. The outcries became louder when the Secretary made remarks about "The necessity to close units whose unit executives refuse to sign" and questioned the presence of certain Aurovilians in Auroville, referring to



Dr. Karan Singh

them as "guests of the Indian government." The conflict focused attention on the perceived danger of outside interference in community affairs and the role of the Foundation came under increasing scrutiny: Was it a springboard or a straightjacket? Working Committee members at the time talked about the "confrontation with the Foundation" as "the heaviest aspect of their work" and framed a proposal that the Governing Board would transfer certain of its powers to the Working Committee so that the community would be responsible for its own affairs. The Secretary stressed that there be no individual utilisation of the resources that belong to the collective and pointed out that the community had not evolved anything to regulate that. Though the office order imbroglio was ultimately solved, the Board's attempts to lay down Rules and Regulations and to create a Funds and Assets Management Committee were kept pending by three successive Working Committees.

Though many Aurovilians were grateful that the Indian Government had taken the trouble to pass a special Act for Auroville, community views after the Governing Board's first four years in office were not positive. The Board had been instrumental in securing a unique income tax exempt status for Auroville, obtaining a continuous power supply and bringing in a modern telephone exchange. But the Board had not been able to materialize any meaningful donations, in particular for acquiring the lands for Auroville. It also had not been successful in solving the persistent visa problem. The community became aware of just how feeble the protection of the Foundation was when in 1991 three Aurovilians – two of them had been living in Auroville for more than 20 years – received official notice to leave India without any reason being given. In the years that followed, more Aurovilians received Leave India notices (reasons were never given) and this has continued till May this year. Aurovilians

learned that the final judgement as to whether a foreigner has the right to remain in India or not lies with the Government of India, and that a Residential Permit issued on the guarantee of the Auroville Foundation does not offer protection. Though the Governing Board's efforts to request the Government to withdraw Leave India notices were successful in many but not all cases, successive Governing Boards have not been able to work out a permanent solution for Auroville with the Indian government. As this article is being written, three Aurovilians await permission to return to Auroville.

The slow acceptance of the Governing Board as an effective tool for the development of Auroville dates back to this difficult start. The Board, initially, was not looked upon as a partner to help Auroville, but as a power that had the potential to harm and should therefore be constrained. It was largely due to the personal qualities of the third Secretary, Mr. N. Bala Baskar, that the fears started to lessen. When he joined office in October 1996 the community was reeling from the impact of the expulsion and threatened expulsion of some of its residents, and there were strong apprehensions about the roles of the Governing Board and the Secretary in the life of Auroville. When he left five years later, the Auroville Foundation had become a widely respected part of Auroville's collective life and he himself was seen as a trusted friend and helpmate.

Looking back at the rather limited achievements of successive Governing Boards in the beginning of the Auroville Foundation, one cannot but conclude that Auroville's difficulty to come to terms with the Foundation has hampered the board members

from giving their full help towards Auroville's development. Under its first Chairman, Dr. Karan Singh, the Governing Board had mainly been trying to bridge the gaps of fear and mistrust. The Board under its second chairman, Dr. M.S. Swaminathan, was already able to do more, for example in initiating the Sri Aurobindo World Centre for Human Unity (SAWCHU) in an attempt to raise funds for Auroville; but many of Dr. Swaminathan's suggestions for fundraising went unattended by the community. The Board under its present chairman, Dr. Kireet Joshi, has met with a more open community and has become increasingly active and involved in the life of Auroville. Topics manifested with the active participation of the present Governing Board include the approval of a Master Plan for Auroville by the Ministry of Human Resource Development, Science and Technology (the ministry responsible for Auroville); a Rs 11.5 crore (US \$ 2.45 m) development grant from the Indian Government spread out over a period of five years;

and a public address to the Aurovilians by the Human Resource Development Minister Professor Murli Manohar Joshi, on New Year's Eve, 2002. But more than that, it is Dr. Joshi's personal push for the realisation of key objectives of Auroville in the areas of education, internal economy and internal organisation that characterises the work of the present Governing Board – even though, as could be expected, that push is not always being appreciated by all Aurovilians.



Dr. Kireet Joshi

The International Advisory Council

From December 1992 till December 2001, three successive International Advisory Councils have been functioning as an authority of the Auroville Foundation. From December 2001 onwards, this body has become defunct as the Government of India has not appointed new members.

"The International Advisory Council is intended to guard against outside forces interfering with the freedom of the Aurovilians to conduct their own affairs according to the ideals of Auroville. The Governing Board is basically an executive body, while Indira Gandhi and Rajiv Gandhi envisaged the International Advisory Council as representing the international community and therefore being in a position to advise the Governing Board," explained Dr. Kireet Joshi, the guiding hand in framing the Auroville Foundation Act, upon being chosen chairman of the Council in January 1999. In an interview in June 1999, when he was in addition appointed Chairman of the Governing Board, Dr. Joshi explained that the Council and the Board are conceived as a check and balance on each other, so that the freedom of Aurovilians to pursue the ideals would not in any way be hampered.

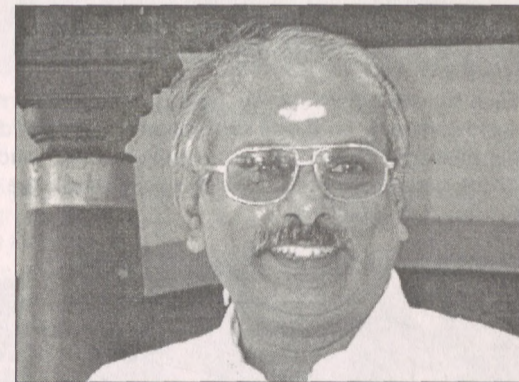
The question to what extent the successive Councils have been of help to Auroville's development is difficult to answer. Without exception, the members of the Council have come from the highest national and international echelons and Auroville cannot but be grateful that persons of such eminence have consented to be connected to Auroville. For it is a great support that such prominent outsiders are joining hands to help manifest what Aurovilians are working on. The International Advisory Council has had a constructive effect on a number of fairly important

The members of the last International Advisory Councils were: Mr. Kireet Joshi (chairman); Ms. Mary E. King, President Global Action, Inc., Washington; Dr. A.T. Aryaratne, President Sarvodaya Shramadana Movement, Sri Lanka; Prof. Norman Myers, CMG, environmentalist; Mr. Bernard F. de Montferrand, Ambassador, Embassy of France, New Delhi. Former members include: Mr. Maurice Strong, former Secretary-General UNCED; Dr. Ervin Laszlo, Director World Future; late Mr. J.R.D. Tata, foremost Indian industrialist; Snr. Federico Mayor, Director General of UNESCO; Mr. Bertrand Schneider, Secretary General of the Club of Rome; Mrs. Hanne Strong, President Manitou Foundation; late Mr. Nani Palkhivala, eminent Indian lawyer; and Prof. Amartya Sen, Indian Nobel laureate and economist.

issues, such as the Leave India notices, the need to acquire the lands for Auroville and to recommend that Auroville International be granted observer status at the United Nations. But, in the words of one them, "The community has made but little use of the goodwill of the members of the various Councils to further Auroville's cause. Meetings in Auroville, as a rule, were rather badly prepared so that the members' time was not optimally used. In between the yearly meetings, there was little or no contact with the Auroville Foundation nor with the Working Committee. The Aurovilians should try to capitalize on this potential more."

The internal organisation

The initial problems with the Governing Board and its Secretary highlighted the community's need to come up with a workable model for Auroville's internal organisation. Attempts to create an efficient inter-



Mr. N. Bala Baskar I.A.S.

nal organisation had been made since Auroville's early days. Under one name or another, a kind of a three-tier system always existed: the community came together in meetings called 'Pour Tous' or 'General Meeting'; there was an executive body alternatively called 'The Cooperative' (1980-1983), the 'Executive Council' (1984-1987), the Auroville Council (1987) or 'Core Group' (1988-1989) while sometimes specific problems were dealt with by a specially appointed Task Force, or by individuals on their own steam and initiative, who bypassed the community.

continued on page 7

The struggle for organisation

continued from page 6

In the third tier were the specialised working groups such as the Entry group, the Economy Group or the Development Group that were fulfilling their separate roles.

While the third tier has continued its work more or less uninterrupted, certain problems recurred with the second tier. The community had to come to terms with such issues as giving 'authority' and 'powers' to an executive body. The executive bodies, in turn, often struggled to have their decisions accepted, since none of them ever enjoyed the full support of the community.

The first tier too was having problems. General meetings are rarely functioning satisfactorily. They are reasonably good forums to

system of decision making. Neither was considered suitable for Auroville's needs. In these years more specialised groups developed such as the Funds and Assets Management Committee, the Auroville Board of Commerce, the Development Group and the Land Use Coordination Group. Later attempts to realise an internal organisation included 'Platform' meetings, which promoted the spirit of listening but were otherwise ineffective. And a host of workshops stimulated Aurovilians to search for models of harmonious decision making.

Governing Board interference

The lack of a proper organisation was not only a problem of the Aurovilians. "My concern in conceiving the Foundation Act was that the Aurovilians would use it to create a new form of social and political organisation in the light of Sri Aurobindo's writings," stated the third Chairman of the

Governing Board, Dr. Kireet Joshi, in May 1999. "This whole Act was so conceived that mature individuals would be able to devise a new form in which individual freedom and social fulfilment would be reconciled. My aspiration was that by now you would have been able to create an alternative form to what we call democracy. But this has not happened - and it is one of the pains in my heart." The Governing Board took action. In September 2000 it constituted the Unity Committee, a sub-committee of three of its mem-

who explicitly wanted to participate in decision-making on community issues, which would replace the Residents' Assembly. But in March 2002, after much general discussion and six revised drafts, the document failed to gain community approval.

In those months Auroville's executive bodies had come close to being dysfunctional: the Executive Committee had ceased to exist and the Working Committee had been reduced to one person. Dr. Kireet Joshi strongly objected and successfully pushed the community to form a Working Committee, so that the process to come to a revised organizational structure could continue unimpeded. The new Working Committee so constituted held office for 6 months. In September 2002 it was succeeded by the present Auroville Council of 15 people, of which the Working Committee is an integral part.

At that time, the Residents' Assembly also approved a one year trial of a proposal called 'The Experiment'. It envisaged an 'Auroville Resource Group' to facilitate the development of policies; and so-called 'Task-Oriented Residents Assemblies', ad-hoc groups that would be constituted to come to decisions if an issue could not be resolved by consensus after two Residents Assembly meetings. This Experiment failed to generate sufficient community interest.

Search for the Divine's Will

The latest attempt was made in

Organisation is a discipline of action, but for Auroville we aspire to go beyond arbitrary and artificial organisation. We want an organisation that is the expression of a higher consciousness working to manifest the truth of the future. An organisation is needed for the work to be done - but the organisation itself must remain flexible and plastic in order to progress continually and to modify itself according to the need.

The Mother
February 6, 1969, CWM XIII p. 204-206

air opinions, but a meaningful dialogue is not likely to happen when over 60 people are assembled in one room. Normally, between five and fifteen percent of the residents of Auroville attend such meetings but it is not always clear whether those five or fifteen percent carry the power to make decisions that affect all other residents. For those reasons, general meetings were often found to be unsuitable for decision-making.

After the Foundation came into force, these problems continued. Meetings of the residents became known as meetings of the Residents' Assembly or General meetings, in case matters needed to be discussed rather than be decided upon. The executive body became the Working Committee, but as it was closely interacting with the mistrusted Foundation, it was soon considered a body that could not deal with 'internal affairs'. Experiments with additional groups were made. In December 1993 there were four groups: a Representative Group to develop policies; a Management Group to implement the policies; a Working Committee for the external relations; and a Charter Council to identify the general direction of Auroville. In 1996 the organisation consisted of a Working Committee, an Executive Council, a Concept and Communication Committee and a Charter Council. Residents were supposed to discuss issues in Local Area meetings before they would become a topic in a General Meeting or a Meeting of the Residents' Assembly.

None of these elaborate organisational models worked. A review two years later showed that all groups had failed to attract sufficient members to do the work. Because of low interest in the community, only two groups continued: the Working Committee and the Executive Committee, both with an insufficient membership. Could lessons be learned from similar organisations? The Findhorn community model was studied, and, sponsored by the Dutch Stichting de Zaaier, four Aurovilians went to the Netherlands to study the sociocratic

bers to look into the internal organisation, and co-opted three Aurovilians to this committee a few months later. They drafted a document called "Towards a Divine Anarchy", a detailed proposal for making and implementing decisions in Auroville. One of the main changes proposed was the introduction of an Active Residents' Assembly consisting of Aurovilians

June this year. It proposed a partially democratic method. Under certain circumstances - which were fully defined - an issue would be decided by voting; depending on the type of proposal in question, a greater or lesser majority would be required for ratification. This proposal introduced a kind of direct democracy, which was considered necessary so that the community could have the

C'est bien.

Si personne ne peut être un chef exclusif - tout le monde doit apprendre à collaborer. C'est une très bonne discipline pour la vanité, l'amour-propre et l'importance des personnalités.

Here nobody can be the exclusive leader - everybody has to learn to collaborate. It is a very good discipline for the vanity, self-love, and the excessive sense of importance of personalities.

Blessings, Mother

final say in matters and to keep a system of checks and balances between the Residents' Assembly and the executive body. But then, in July, Dr. Kireet Joshi addressed the residents on the subject of 'Self-Governance in Auroville'. He emphasised that self-governance for Auroville means that Auroville is governed by the Divine's will and that the Divine is recognised as the sole authority. Auroville's search should be to create a system which doesn't blunt the life force by its rigidity but has a possibility of variation according to the needs, the circumstances and the people. He considered democracy unsuitable for Auroville, for then Auroville would have the kind of constricting machinery that is used by every Parliament in the world and there would be no experiment to reach higher levels of organisation. Dr. Joshi requested the community to deeply study Mother's indications how Auroville should be organised and suggested that the Residents' Assembly be a place for coming together in quietude, searching together for the Divine's Will, instead of a place to discuss agreement or disagreement with a proposal. "Auroville's procedure should not end in a decision or decision making. For then it will be a decision made by the people, not by the Divine. Decisions should not be made, but evolve at every step by the guidance of the Divine." Dr. Joshi elaborated on the role of the Auroville Council as trustees, upholders of the trust of the Aurovilians which should arrive at decisions by consensus. He also advised that, in case an issue is completely blocked, the Auroville Council request three Aurovilians dedicated to the Divine to be umpires and decide the issue. These people do exist, stressed Dr. Joshi.

A critical juncture

"We have extraordinary conditions here. No other group in the world has the possibility of experimentation that we have got here," said Dr. Kireet Joshi in an interview with AVToday in August 2002. "We often tend to say in Auroville 'Oh this is not possible, we've not reached that level, it will happen in due course'. This is entirely inadmissible. Our path is a steep path, but Mother will not propose something which is not implementable. It requires a higher level of consciousness, but that can be developed..."

"The connection between Auroville and India is very intimate. If we don't take up the work Mother calls us to do, the imperfections will invade us. Even the provisions of the Foundation Act will not save us from the various forces in India and the West which are bound to invade - which have begun to invade - this little place. Therefore we are at a critical juncture, and we have to suc-



In brief

Petition against violence

A petition against the increase of violence and theft in Auroville has been addressed to the presidents and members of the surrounding village Panchayats and Natamai, with copy to the Collector. This petition became necessary after two Aurovilians were assaulted in Udumbu. A few weeks later a young man from Kulapalayam was murdered, due to which the daily activities in Kulapalayam and Auroville were interrupted for two days.

New Matrimandir executives

At the behest of the Auroville Council and in the overall interest of a better and collective management of the Matrimandir affairs as well as its speedy completion, the Secretary of the Auroville Foundation appointed four new executives for Matrimandir, replacing the former executives. The Council invited the community to a Silent Gathering under the Banyan tree on Wednesday, October 15th to call for a peaceful transition and a renewed spirit of collaboration.

News and Notes

The Auroville News summary has got a new title: News and Notes. It contains the usual weekly reports, announcements and cultural programmes and there will be a creative part. Constructive criticism and legitimate enquiries, formulated in a civil manner, will be published. But the News and Notes will not carry comments on national or international policies, statements about someone's belief system or religion, anything that can harm or discredit an individual or the community, and false, incomplete and biased information. Due to the important role this news publication has for Auroville and the possible impact on the community and its relationship with the Indian government and international community, the News and Notes' editorial team is responsible to the Auroville Council.

Visit of Panchayat members

Twenty-two representative from Irbumbai Panchayat (representing Kottakarai and Edayanchavadi) Bommayapalayam Panchayat (representing Kulapalayam, Bommayapalayam and Pillaichavadi) and representatives from Mudaliarchavadi and Kottakuppam visited Auroville for a day and were shown the Matrimandir and the work done at Pitchandikulam, Discipline Farm and Isaiambalam school.

Security Service

The Auroville day guard and night guards have merged to form a single security service. This should be more efficient and cost-effective. Guards are recognisable by their yellow t-shirts.

Planning and Development Council

An Auroville Planning and Development Council has been constituted to replace the Interim Development Council. The APDC is following the membership model of the Funds and Assets Management Committee in that its members represent working groups. Additionally a number of members are selected for their personal qualities. The APDC's main task will be to draw up five-year development plans and secure the implementation of building permission guidelines and procedures. The first review of mandate and membership is scheduled for end of December 2003, after three months of functioning.

Copy to: The Chairman

To,
Mr Ramani

KASHMIR IMAGES
SRINAGAR
2nd Oct 2003

For kind person Sir

[Signature]
7/10/03

Hasila
Vice-Chancellor

PRO
[Signature]
D.L.W.

'King of Seeds' assures self reliance

IMAGES NEWS NETWORK
Srinagar, Oct 01

In year 2007 there won't be a single person living below poverty line in J&K which presently comprises of 3 per cent of the total population of the State, director general, International Rice Institute, and chairman Chennai Research Foundation Prof. M S Swaminathan said in a press conference on Wednesday.

Swaminathan said that in 2007 not a single person in India would starve for food. He said that the soil in the Valley is rich for production of rice and fruits while the soil in Udhampur and Ramban is ample for the production of mustard.

Prof Swaminathan said that a special scheme had been devised through which the production of the crops in both rural and urban areas would be taken care of according to the soil type.

Swaminathan said that with this scheme the production of crops in India would show an upward trend. He added that the scheme would also make the farmers financially more stable.

Swaminathan said that the aim of the Agriculture industry in India is not only better production of crops but also preservation of the environment and adjacent growth of India in other fields as well.

Prof Swaminathan said that the State chief minister, Mufti Mohammad Sayeed had told him that he wanted the State to turn self-reliant in the agriculture field, which according to Mufti should be the backbone of the State economy.

The vice chancellors of both the agricultural universities of the State were present in the press conference.

Earlier, Mufti stressed on the agricultural scientists to make the State self-reliant in

King on Page 8

King from Page 1...

this field for eradicating poverty from the State. A 15-point plan framed by 20 agricultural experts was also presented in the press conference.

It is pertinent to mention here that Prof Swaminathan has been awarded with numerous national and international awards. He is also known as the 'King of Seeds'.

For kind please Sir,

Hon'ble
Vice-Chancellor

PRO

9.10.03

12 THE HINDU, Wednesday, October 8, 2003

Poverty-free J&K can be achieved by 2007, says Swaminathan

By G. Venkataramani

CHENNAI, OCT. 7. "A food-secure and poverty-free Jammu and Kashmir can be achieved by 2007 following a road map developed by us. The State is in an excellent position to ensure that no one is below the poverty line by August 15, 2007, which marks the 60th anniversary of our Independence. J&K will be first State in the country to achieve this meaningful distinction," said M. S. Swaminathan, Chairman of the M.S. Swaminathan Research Foundation (MSSRF), Chennai.

A high-level national consultation on "Agenda 2007: A Food Secure and Poverty Free Jammu and Kashmir" was organised jointly early this month by the MSSRF, the Government of Jammu and Kashmir, the Sher-e-Kashmir University of Agricultural Sciences and Technology, the National Bioresources Development Board of the Department of Biotechnology, Government of India and the Sir Dorabji Tata Trust.

The consultation attended by about 60 experts, including the Chief Minister and a few of his cabinet colleagues, adopted the road map presented by Prof. Swaminathan.

"The ultimate goals of Agenda 2007 are the sustainable and profitable farming systems, happy rural and farming families, and balanced diets and safe drinking water for all. They can be achieved if there is synergy among technology, public policy and people's participation," said Prof. Swaminathan in an exclusive interview.

The State has a low incidence of poverty

with only 3.48 per cent of the population falling below the poverty line. Also, the average consumption of foodgrains is higher than the Indian Council of Medical Research norm of 420 g per capita per day. Agriculture constitutes the backbone of the States food, livelihood and ecological security systems. Since agriculture was the mainstay of the economy, this consultation was important for the future of J&K's economic development, Prof. Swaminathan said.

15-point action plan

Jammu and Kashmir's comparative advantage lies in its ability to grow a wide range of fruits and nuts including olive, apricot, apple and walnut. "This advantage must be capitalised," he said. The 15-point action plan proposed by Prof. Swaminathan emphasises on nutrition security for all, conservation and enhancement of environmental capital stocks, hydrological security, land-use planning, food security, institutional structures to confer the power of scale on small producers, livestock nutrition, community food banks, information and knowledge empowerment, mobilising the power of partnerships for financial resources, and a special programme for Ladakh.

"To ensure food security, an integrated package of measures including the productivity revolution in crops and farm animals, quality revolution, farming systems diversification, value-addition through better post harvest processing and management, and sustainability through attention to soil

health, water use, biodiversity conservation and prevention of water, soil and air pollution, has been recommended. High density orchards, greenhouse horticulture and hybrid seed production will have to be promoted to sustain the developmental process," Prof. Swaminathan said.

In order to confer the power of scale on small producers, a food park-cum-agribusiness centre and a women's biotechnology park for organic farming will have to be created. The mismatch between production and post-harvest technologies can be ended through setting up of agribusiness centres and agri-clinics. Kisan Credit cards linked to insurance should be introduced to every farming family owning land or other assets.

"As part of human resource development, high priority will go to filling rapidly critical gaps in expertise and skills. Simultaneously, women's technological and skill empowerment should receive particular attention. A special programme of training and education will be launched for the children, who have become orphans due to the activities of the militants. Every effort will be made to give a new life to such orphans," he said.

A special programme has been developed for the cold desert region of Ladakh to enhance the productivity, quality, profitability and sustainability of its farm enterprises. Eco-tourism will be further assisted through a "rare birds park". Human resource development in Ladakh will be accorded high priority, according to Prof. Swaminathan.

Greater Kashmir

SRINAGAR, THUESDAY OCTOBER 2, 2003

FOOD AGENDA 2007

The consultation on 'Agenda 2007 - A Food Secure Jammu & Kashmir', jointly organised by the M S Swaminathan Research Foundation, National Bioresources Development Board and the J&K Government in Srinagar on Tuesday has raised some important issues about the present agricultural and horticultural practices being adopted in the State. Although the title of the consultation 'a food secure Jammu & Kashmir' appears to be a misnomer from the context of this State, given the fact that food insecurity hardly exists here in sharp contrast to other States in India, some pertinent points have been made at the meeting. One of the critical issues concerning agricultural production and growth in this State have to be kept in sight while we discuss agricultural diversification and qualitative development. Although the chief minister, Mufti Muhammad Syed, emphasised the need for diversification with special reference to paddy crop, the socio-economic realities of rural Kashmir, in particular, do not support this kind of approach. However, when it comes to other crops, the need for diversification with focus on commercially profitable crops can hardly be understated. The fact remains that there has been quite little increase in the quantum of irrigated land under agriculture in the State since many decades now because of the constraints put by the Indus Water Treaty. When we talk of the Kashmir region its plains are mostly cultivated with a va-

riety of crops. However, the kandi highlands and the areas in the immediate vicinity of higher forest lands have a tremendous potential in the development of high-value cash crops. The problem is that such lands having remained under government control have not been exploited in a commercial way. In such backdrop, the government's recent decision for granting kandi wastelands and degraded forests to entrepreneurs for commercial farming of high value aromatic and medicinal plants is a step in the right direction. And when it comes to diversification in the plains, the agricultural scientists have really a responsibility in reaching out to potential progressive farmers. In case of the Jammu region, given the fact that its most of the area consists of mountains and highlands, there is a huge potential for developing them for crops which do not require enough irrigation. However, the political practice of replicating in one region what is conceived in the other is not the right one. Every region of the State is unique and every region has potential in its own climatic conditions. Although organisations like M S Swaminathan Research Foundation has experience in different climatic and socio-economic situations which may not necessarily be relevant to the conditions in this State, however, it could surely help in building the capacity of communities and grassroots organisations in developing agriculture, horticulture and floriculture in the State. ■

For kind favour Sir,

Hon'ble Vice-Chancellor

7/10/03

PRO
7/10/03

Greater Kashmir

SRINAGAR, THUESDAY OCTOBER 2, 2003

Swaminathan for re-organisation of State Land Use Board

Naseer A Ganai

Srinagar, Oct 1: Eminent scientist and chairman M S Swaminathan Research Foundation (MSSRF), Chennai, Prof. M S Swaminathan Wednesday asked unemployed agriculture graduates to set up agri-clinics to help farmers. He also stressed for re-organization of the state land use board so that it can give advice to farmers on crop planning in accordance with meteorological and marketing factors.

Prof. Swaminathan, who was here to attend a day long national consultation on Agenda 2007: A Food Secure and Poverty Free Jammu and Kashmir, under the National Consultation programme, jointly organised by the MSSRF, and government of Jammu and Kashmir, spoke of many issues concerning J&K.

Giving details about the road map adopted during the consultations, Prof. Swaminathan said the

Jammu & Kashmir state would be the first state in India, in which there would be no one below poverty line.

"The average consumption of food grains is higher here than Indian Council of Medical Research norm of 420 grams per capita per day", he added.

The road map, which comprises 15 points, said the state land use board will have to be reorganized to enable it to render proactive advice to farmers on crop planning in accordance with meteorological and marketing factors.

About the food security, the road map said it was necessary to implement integrated package measures like productivity revolution in crops and farm animals, farming system diversification.

Panchayats and NGOs will be encouraged to establish public-private sector partnerships in order to facilitate technology transfer and remunerative marketing, the road map

said.

He said community fodder and feed banks, operated by self-help groups will be promoted.

Prof. Swaminathan said land use board should be highly professional. The re-organisation of the board is necessary, he added.

Vice-chancellor of the SKUAST (K) Prof. Anwar Alam, who along with vice-chancellor SKUAST Prof. H.U.Khan (J), said the University was working hard in technology development. However, he added that the Development Department of the government was not cooperative to the University in taking these technologies to farmers.

Prof. HU Khan said, "present era is of competition and we have to work hard to compete with others".

If we want to remain in the market we have to improve post harvest management, he said. We have to use existing available resources efficiently, he added.

Hindustan Times

'State likely to become poverty-free by 2007'

Majid Jahangir
Srinagar, October 1

RENOWNED AGRICULTURE reformist and scientist M.S. Swaminathan has described Jammu and Kashmir as the only state in the country where there is a low incidence of poverty.

In a press conference at the Sheri Kashmir University of Agriculture Science and Technology (SKUAST), Swaminathan said it is an encouraging sign that JK has only 3.48 percent of the population living below the poverty line, despite the fact that the border state has a higher consumption of food grains compared to rest of the country.

"This state is in an excellent position to ensure that no one lives below the poverty line by August 15, 2007. Amazingly, if things are achieved properly, this will be the first state in the country where no one will be living below the poverty line, an encouraging sign for the other states," said Swaminathan.

Giving his suggestions to the state government, he said JK has a rich potential to make developments in the field of agriculture and the two agriculture universities in Srinagar and Jammu are working on projects which can be implemented in the three regions of the state. "In all the three regions, action plans based on climatic zones can maximize the benefits from the different agro-climatic endowments and minimise hazards and risks. The strategy will help promote job-led economic growth," he opined.

He said the national Bio-Resources Development Board will help chronicle and prepare digital inventories of the state's bio-resources covering plants, animals, fish and micro-organisms.

"It can assist in the sustainable use of the germ plasm of the medicinal plants, apricots, sea buck thorn, saffron, kalajera and Pashmina goats. Genome clubs will be organised in the schools to promote genetic

literacy among student," said Swaminathan, adding that, "special steps will have to be taken to rehabilitate hydrologic hot spots and water bodies like Dal, Wullar lakes. Low water parks will be established to demonstrate how to increase income per litre of the water."

He emphasised the need to reorganise the State Land Board for advising farmers on crop planning in accordance with meteorological and marketing factors.

He also informed that a food park-cum-agribusiness centre will be established in Leh to process apricots, Pashmina wool and other products on a cooperative basis which will give employment through self help schemes. Swaminathan said special programmes have been developed for the cold desert region of Ladakh to enhance the productivity, quality, profitability and sustainability of its farm enterprises. "In the region, ecotourism will be promoted through a rare birds park," he said.

جموں و کشمیر میں 2007 تک کوئی بھی شہری غریب نہیں رہے گا / پروفیسر سوہی ناگھن

سرینگر / ایم اے اکتوبر / جموں و کشمیر میں سال 2007 تک فریگی کی طرح سے بچے زندگی گزارنے والا (BPL) کوئی بھی شہری نہیں ہوگا تعداد 3 فیصد ہے۔ ان باتوں کا اظہار ڈائریکٹر جنرل انٹرجنٹل رائس



اسٹی چیف اور چیف ڈائریکٹر فوڈ اینڈ ایگریکچرل پروڈیوسرز ایسوسی ایشن کے چیئرمین پروفیسر ایم ایس سوہی ناگھن نے ایک پریس کانفرنس کے دوران کہا کہ سال 2007 تک پورے ملک میں کوئی بھی شخص بغیر خوراک کے نہیں ہوگا۔ پروفیسر نے کہا کہ جموں و کشمیر کی زمین پیداوار کے لحاظ سے بہت ہی تازہ ہے۔ جبکہ اڈم پور، رام بن، سرسوں کے فصل کے لئے اور کشمیر کی سر زمین دھان اور میوہ جات کے لئے کافی اہمیت کی حامل ہے۔ انہوں نے کہا کہ ہم نے شہروں اور دیہی علاقوں کے لئے الگ الگ منصوبہ بندی کی اور اسی اعتبار سے ہم خوراک سے متعلق پاسی وضع کریں گے پروفیسر نے کہا کہ ہم چاہتے ہیں کہ پورا بھارت نہ صرف خوراک کے لحاظ سے خود کفیل ہو بلکہ ہم اس قابل ہو کہ زمیندار زیادہ سے زیادہ مالی طور پر بھی خود کفیل ہو پروفیسر سوہی ناگھن نے کہا ہے کہ کوئی بھی عورت متوازی غذا سے محروم نہیں رہتی چاہے جسے سان پر برا اثر پڑ جائے۔ انہوں نے کہا کہ محکمہ زراعت کا مقصد صرف خوراک ہی نہیں ہے بلکہ انیس ماہولیات کا تحفظ کے علاوہ سانج کے دیگر شعبہ جات میں بھی ترقی کی راہ کو تلاش کرنا ہے۔ انہوں نے کہا کہ ریاست کے وزیر اعلیٰ مفتی محمد سعید نے انیس یقین دلایا کہ وہ ریاست کو خوراک اور دیگر معاملات میں خود کفیل بنانے کے لئے نہ صرف سفارشات پیش کریں گے۔ بلکہ اس کام کو سرعت سے جاری رکھیں کیونکہ زراعت اقتصادیات میں ریڈ کی ہڈی ہوتی ہے اس پریس کانفرنس میں ریاست کے دونوں ایگزیکٹو پرنسپلز یونیورسٹی کے وائس چانسلروں نے بھی شرکت کی ہے۔ اس سے قبل وزیر اعلیٰ مفتی محمد سعید نے اپنی تقریر میں زراعت کے نشادارات کے نمائندوں پر زور دیا کہ وہ ریاست کو زراعت میں خود کفیل بنانے میں اور غریب کو بھڑے ختم کرنے کے لئے اپنے تمام تر صلاحیتوں کو بھرنے کا ارادے۔ مشاورت میں 15 کانٹری بلٹن پلان پیش کیا گیا۔ جس میں 60 ماہرین زراعت نے حصہ لیا۔ یہ بات قابل ذکر ہے کہ پروفیسر سوہی ناگھن کو ڈاؤمی اور بین الاقوامی سطح پر سیکولوں کی تعداد میں انعامات اور اعزازات سے نوازا جا چکا ہے۔ انیس بیجوں کے شہنشاہ کے نام سے جانا جاتا ہے۔

"AFAQ"

Date: 2-10-2003

جموں و کشمیر میں 2007 تک غریبی کی سطح سے نیچے زندگی گزارنے والا کوئی نہیں ہوگا

ریاست کی زمین پیداوار کے لحاظ سے بہت زرخیز ہے، سوامی ناٹھن

کہ ہم نے شہروں اور دیہی علاقوں کے لئے الگ الگ منصوبہ بندی کی اور اسی اعتبار سے ہم خوراک سے متعلق پاسی وضع کریں گے پروفیسر نے کہا ہے کہ ہم چاہتے ہیں کہ پورا بھارت نہ صرف خوراک کے لحاظ سے خود کفیل ہو بلکہ ہم اس قابل ہو کہ زمیندار زیادہ سے زیادہ مالی طور پر بھی خود کفیل ہو پروفیسر سوامی ناٹھن نے کہا ہے کہ کوئی بھی عورت متوازی غذا سے محروم نہیں رہنی چاہئے جسے سماج پر برا اثر پڑ جائے۔ انہوں نے کہا کہ کھجور زراعت کا مقصد صرف خوراک ہی نہیں ہے بلکہ کھجور ماحولیات کا تحفظ کے علاوہ سماج کے دیگر شعبہ جات میں بھی ترقی کی راہ دکھلا سکتا ہے۔ انہوں نے کہا کہ ریاست کے وزیر اعلیٰ مفتی محمد سعید نے انہیں یقین دلایا کہ وہ ریاست کو خوراک اور دیگر معاملات میں خود کفیل بنانے کے لئے (۳۰) پر

سرینگرہ میں ایک ہیکٹیر (سی این بی این) جموں و کشمیر میں سال ۲۰۰۷ تک غریبی کی سطح سے نیچے زندگی گزارنے والا (BPL) کوئی بھی شہری نہیں ہوگا جبکہ ریاست میں غریبی کی سطح سے نیچے زندگی گزارنے والوں کی کل تعداد ۳۰ فیصد ہے۔ ان باتوں کا اظہار ڈائریکٹر جنرل انٹرنیشنل ماس انسٹیٹیوٹ لورڈز جی آر سرچ فونڈیشن کے چیئرمین پروفیسر ایم ایس سوی ناٹھن نے ایک پریس کانفرنس کے دوران کیا۔ انہوں نے کہا کہ سال ۲۰۰۷ تک پورے ملک میں کوئی بھی شخص بغیر خوراک کے نہیں ہوگا۔ پروفیسر نے کہا کہ جموں و کشمیر کی زمین پیداوار کے لحاظ سے بہت ہی زرخیز ہے۔ جبکہ ادھم پورہ رام بن سڑکوں کے فصل کے لئے اور کشمیر کی سر زمین دھان اور میوہ جات کے لئے کافی اہمیت کی حامل ہے۔ انہوں نے کہا

سوامی ناٹھن

۱ نہ صرف سفارشات پیش کرینگے بلکہ اس کام کو
۱ سرعت سے جاری رکھیں کیونکہ زراعت اقتصادیات
میں ریڈ کی ہڈی ہوتی ہے اس پریس کانفرنس میں
ریاست کے دونوں ایگزیکٹو یونیورسٹی کے وائس
چانسلروں نے بھی شرکت کی ہے۔ اس سے قبل وزیر
اعلیٰ مفتی محمد سعید نے اپنی تقریر میں زراعت کے
مشاورات کے نمائندوں پر زور دیا کہ وہ ریاست کو
زراعت میں خود کفیل بنانے میں اور خریب کو چڑھنے
حتم کرنے کے لئے اپنے تمام تر صلاحیتوں کو بروئے
کار لائے۔ مشاورت میں ۱۵ نکالی ایسٹن پلان پیش
کیا گیا۔ جس میں ۶۰ ماہرین زراعت نے حصہ لیا
- یہ بات قابل ذکر ہے کہ پروفیسر سوامی ناٹھن کو توامی
اور زمین الاقوامی سطح پر سٹیکولڈوں کی تعداد میں انعامات
اور اعزازات سے نوازا جا چکا ہے۔ انہیں بیجوں کے
شہنشاہ کے نام سے جانا جاتا ہے۔

سورق

۲ اکتوبر ۲۰۰۳ء ☆ جمعرات

آئیے بات کریں اپنی امیر وادی کی، اگلے پانچ برسوں میں کوئی غریب نہیں رہے گا، غربت کا مکمل خاتمہ ہوگا

یہ والدین کے چراغ کا کمال نہیں ہے بلکہ ریاست کے صرف ۲ فیصد لوگ خط انلاں کے بیچ زندگی گزار رہے ہیں، دعویٰ کر رہے ہیں پروفیسر سوامی ناتھن

سرینگور / یکم اکتوبر (شرق نیوز)

تیرہ برسوں سے جدی غیر یقینی صورتحال کی وجہ سے کشمیر کے عوام کو کافی مشکلات سے دوچار ہونا پڑا، یہاں کی معیشت بری طرح متاثر ہو کے رہ گئی پھر بھی اس ریاست کو یہ اعزاز حاصل ہے کہ ہندوستان کی دیگر ریاستوں کے بجائے یہاں بہت ہی کم لوگ خط انلاں سے نیچے اپنی زندگی بسر کر رہے ہیں۔ جس رفتار سے ریاست کے لوگ زراعت میں دلچسپی کا مظاہرہ کر رہے ہیں اس سے یہ بات واضح ہو جاتی ہے کہ آئندہ چار برسوں کے دوران اس شورش زدہ ریاست میں کوئی بھی فرد غربی کی سطح سے نیچے اپنی زندگی بسر نہیں کر رہا ہوگا اور ۲۰۰۸ء میں جنوں و کشمیر ہندوستان کی واحد ایسی ریاست ہوگی جہاں ایک بھی کنبہ غربی سے نیچے اپنی زندگی بسر نہیں کر رہا ہوگا۔

کشمیر کے دورے پر آئے ہوئے ڈائریکٹر جنرل انٹرنیشنل راس انٹرنیشنل ٹیوٹ پروفیسر ایم ایس سوامی ناتھن جو کہ برصغیر کے مایہ ناز ماہر زراعت ہیں نے یہ اگشٹ کیا آج یہاں ایک نیوز کانفرنس میں پروفیسر

سوامی ناتھن نے کہا کہ کشمیر کے لوگ زیادہ اناج استعمال کرنے کے باوجود بھی بھی فائدہ کشی کا شکار نہیں ہوئے اور ہندوستان کی دیگر ریاستوں کے مقابلے میں یہاں بھی فائدہ کشی کی شکایت موصول نہیں ہوئی ہے جو کہ ایک خوش آئند بات ہے۔ پروفیسر ناتھن جو کہ ہندوستان کے پلاننگ کمیشن کے ممبر ہیں اور جنہوں نے زراعت کی ترقی کیلئے ایک ہزار سے زیادہ تحقیقی مقالے اور کتابیں تحریر کی ہیں نے کہا کہ زراعت شعبہ کشمیر کا سب سے اہم شعبہ ہے اور اگر اس کو صحیح ڈھنگ سے استعمال میں لایا جائے تو یہاں کے لوگ نہ صرف دولت مند ہوں گے بلکہ زراعت میں ایسے لانعداد مواقع ہیں جن سے ریاست کے بے روزگار نوجوانوں کو روزگار فراہم ہوگا۔ پروفیسر ناتھن نے حکومتی پالیسی کی کئی چیزیں کہیں جنکی وجہ سے زراعتی زمین کو تیسرا اسی کاموں کے لئے استعمال کیا جا رہا ہے۔ ”حکومت پر ذمہ داری عائد ہوتی ہے کہ وہ زرعی زمینوں کو خاص زرعی مقاصد کیلئے استعمال میں لائیں۔ اگر یہ سلسلہ نہیں روکا تو اس زرعی وادی میں بھی مشکلات پیدا ہو سکتی ہیں۔“ پروفیسر سوامی ناتھن نے کہا۔ ریاست کے

زرعی شعبے کو ترقی دینے کی غرض سے پروفیسر ناتھن نے ایک تیرہ نکات پر مبنی لائحہ عمل ترتیب دیا جن میں ریاست کے تینوں خطوں کو لایا جائیگا۔ پروفیسر کے مطابق وادی کے اکثر علاقوں میں Water parks کو تیسرا کرنا ہوگا، جس سے یہاں کے آبی وسائل میں بہت اضافہ ہوگا اور ساتھ ہی جمیل ڈال اور لبر کا تحفظ یقینی بنانے کیلئے اقدامات کرنے کا گزیر ہونگے۔ انہوں نے کہا کہ زرعی شعبہ میں دلچسپی اور جدید طرز اپنانے سے ریاست میں خوشحالی کا انقلاب آسکتا ہے۔

”لدراخ اور سرینگور میں نو ڈپارک قائم کرنے سے روزگار کے مواقع کھل جائیں گے خاص کر بے روزگار تعلیم یافتہ لڑکوں کو کوہ پٹیو یا سیلف شیبے میں روزگار مل سکتا ہے۔ اپنے دورے کے دوران پروفیسر نے ریاست سرکار کو ایسے مشورے دئے جن کو استعمال میں لاکر لدراخ جیسے ریگستانی علاقے میں بھی زرعی پیداوار کو ممکن بنایا جاسکے گا۔ پروفیسر ناتھن نے کہا کہ ریاست کے کسانوں کو زرعی یونیورسٹیوں سے فیض یاب ہونا چاہئے اور اپنی پیداواری صلاحیتوں کو بڑھاوا دینا چاہئے۔“

روزنامہ نیو سٹیٹ ریپورٹر سرینگر

جلد نمبر 12 ☆ شماره نمبر 230 ☆ 2 اکتوبر 2003ء ☆ بمطابق 5 شعبان 1424ھ ☆ جمعرات

ریاست جموں و کشمیر میں ۴ سال بعد کوئی غریب نظر نہیں آئے گا

ریاستی عوام پہلے ہی طے شدہ ضوابط سے زیادہ کھانا کھاتے ہیں / ڈاکٹر سوامی ناتھن

سرینگر / ایک اکتوبر / ریاست جموں کشمیر میں ۱۵ اگست ۲۰۰۳ء تک فریبی کا عمل طور خاتمہ ہو جائے گا اور یہ بھارت کی ایسی پہلی ریاست ہوگی۔ ان باتوں کا اظہار بین الاقوامی ایوارڈ یافتہ بھارت کے سرکردہ سائنس دان ڈاکٹر ایم ایس سوامی ناتھن نے شیر کشمیر ایگریکلچر یونیورسٹی شالیمار کیمپس میں ایک پریس کانفرنس کے دوران کیا ہے۔ انہوں نے کہا کہ ریاست کے لوگ 3/ کی شرح سے نیچے زندگی گزار رہا ہے۔ انہوں نے کہا کہ ریاست کے لوگ 3/

شیر کشمیر انٹرنیشنل کنٹریکشن سینٹر میں منعقد تقریب کی تفصیلات بیان کی جس میں ریاست اور بیرون ریاست سے تعلق رکھنے والے ۶۰ ماہرین نے شرکت کی۔ ڈاکٹر سوامی ناتھن نے کہا کہ بھارت کی ریاستوں میں جموں کشمیر میں سب سے کم غریب لوگ رہتے ہیں جہاں کل آبادی کا صرف 3.48 فیصد حصہ غریب کی سطح سے نیچے زندگی گزار رہا ہے۔ انہوں نے کہا کہ ریاست کے لوگ 3/

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ایئر کنکشن آف میڈیکل ریسرچ کے طے شدہ ضوابط سے زیادہ خوراک استعمال کرتے ہیں۔ اس کا مطلب یہ ہے کہ ریاست جموں کشمیر اس حالت میں ہے کہ یہاں سے ۱۵ اگست ۲۰۰۳ء تک فریبی کا عمل طور خاتمہ کیا جاسکتا ہے اور جموں کشمیر بھارت کی ایسی پہلی ریاست ہوگی۔ انہوں نے SKICC میں منعقد تقریب کا ذکر کرتے ہوئے کہا کہ اس میں ریاست کی اقتصادی ترقی کے لئے ایک پندرہ نکاتی ایکشن پلان مرتب کیا گیا ہے۔ تقریب کا افتتاح وزیر اعلیٰ مفتی محمد سعید کے ہاتھوں ہوا جبکہ اختتام کے موقع پر ریاستی گورنر ایس کے سہا نے بھی خطاب کیا۔ تقریب میں کئی ریاستی وزراء موجود تھے جبکہ کئی سائنسی اداروں نے اس کے انعقاد میں تعاون دیا۔ تقریب میں وزیر اعلیٰ اور گورنر دونوں نے

ریاست میں زراعت کے شعبہ کو خوراک، روزگار اور ترقی کے لئے ریڈی کی بڑی قرارداد دی۔ انہوں نے کہا کہ ایکشن پلان کے تحت ریاست میں زراعت کے شعبہ کو وسعت دینے کے اقدامات اٹھائے جائیں گے جن میں خواتین کے سیلف ہیلمپ گروپ بھی کام کریں گے۔ اسکے علاوہ مختلف مقامات پر "فوڈ پارک" اور دیگر ادارے قائم کرنے کے علاوہ مستقبل میں ایسی تقاریب کا انعقاد ضروری ہے۔

روزنامہ خدمت

KHIDMAT

Dated: 2-10-2003

۱۰ اگست ۲۰۰۳ء کو ریاست دارالامرا

قرار پائے گی، سوامی ناٹھن

سوریشور ایک عورت کا کہنا ہے کہ ریاست میں شہر میں ایک عورت
غریب کا دل بھرا ہے جو بچے کو بھری بھرت کی لگی ہوئی ریاست میں لگاتار
کاظمی کے لئے اور ایسا ہیانت بھرت کے کمر کھانے کے لئے لگاتار لگاتار لگاتار لگاتار
نے شہر میں لگاتار لگاتار لگاتار لگاتار لگاتار لگاتار لگاتار لگاتار
کیا ہے۔ ریاست کی اقتصادی ترقی سے متعلق ۲۰۰۳ء میں شہر میں
کوٹن سیشن میں منعقد تقریب کی تفصیلات بیان کی جس میں ریاست میں
ریاست سے متعلق گفتگو کے دوران نے شرکت کی۔ ڈاکٹر سوامی ناٹھن نے کہا
کہ بھرت کی ریاستوں میں جموں شہر میں سب سے کمزیر لوگ رہتے ہیں
جہاں کل آبادی کا صرف 348 فیصد حصہ غریبوں کی سطح سے نیچے نہیں گذر رہا ہے
انہوں نے کہا کہ ریاست کے لوگ تدریس کو ملتا ہے مگر سیکرٹری کے طے
شدہ ضابطہ سے زیادہ حاکم شامل کرتے ہیں اس کا مطلب یہ ہے کہ ریاست
جموں شہر میں ہے کہ یہاں سے ۲۰۰۳ء تک غریبوں کا دل بھرا
خاتمہ کیا جاسکتا ہے۔ جموں شہر بھرت کی لگی ہوئی ریاست ہوگی۔

"TAMEEL-I-IRSHAD"

Dated 2-10-2003

ریاست میں محض ۲۰ تک غربت کا مکمل طور خاتمہ کیا جائے گا

جموں و کشمیر کی سر زمین پیداوار کے لحاظ سے بہت ہی زرخیز ہے/ پروفیسر سومی ناٹھن سرینگرام، اکتوبر ۲۰۰۳ء تک فریگی کی سطح سے نیچے زندگی گزارنے والا (BPL) کوئی بھی شہری نہیں ہوگا جبکہ ریاست میں فریگی کی سطح سے نیچے زندگی گزارنے والوں کی کل تعداد ۳ فیصد ہے۔ ان باتوں کا اظہار ڈائریکٹر جنرل انٹرنیشنل ریسرچ انسٹیٹیوٹ اور جی ڈی ایچ ڈی کے ڈائریکٹر جنرل نے کیا ہے۔ ان کا کہنا ہے کہ ریاست میں ۲۰۰۳ء تک پورے ملک میں کوئی بھی محض بغیر خوراک کے نہیں ہوگا۔ پروفیسر نے کہا کہ جموں و کشمیر کی زمین پیداوار کے لحاظ سے بہت ہی زرخیز ہے۔ جیسا کہ پورا ہر ماہ بن سڑکوں کے فصل کے لئے اور کشمیر کی سر زمین دھان اور سیوہ جات کے لئے کافی اہمیت کی حامل ہے۔ انہوں نے کہا کہ ہم نے شہر اور دیہی علاقوں کے لئے الگ الگ منصوبہ بندی کی اور اسی اعتبار سے ہم خوراک سے متعلق 118

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پاسی دس کریں گے پروفیسر نے کہا ہے کہ ہم چاہتے ہیں کہ پورا بھارت نہ صرف خوراک کے لحاظ سے خود کفیل ہو بلکہ ہم اس قابل ہو کہ زمیندار زیادہ سے زیادہ مالی طور بھی خود کفیل ہو پروفیسر سومی ناٹھن نے کہا ہے کہ کوئی بھی عورت متوازی غذا سے محروم نہیں رہتی چاہئے جسے ساج پر برا اثر پڑ جائے۔ انہوں نے کہا کہ نکلے زراعت کا مقصد صرف خوراک ہی نہیں ہے بلکہ آسٹریس ماحولیات کا تحفظ کے علاوہ ساج کے دیگر شعبہ جات میں بھی ترقی کی راہ کو تلاش کرنا ہے۔ انہوں نے کہا کہ ریاست کے وزیر اعلیٰ مشتق محمد سعید نے انہیں یقین دلایا کہ وہ ریاست کو خوراک اور دیگر معاملات میں خود کفیل بنانے کے لئے نہ صرف سفارشات پیش کرے گا۔ بلکہ اس کام کو سرعت سے جاری رکھے گا کیونکہ زراعت اقتصادیات میں ریڈ کی ہڈی ہوتی ہے اس پر ریس کانفرنس میں ریاست کے دونوں انیکریٹیکل پریزیڈنٹ کے وائس چانسلروں نے بھی شرکت کی ہے۔ اس سے قبل وزیر اعلیٰ مشتق محمد سعید نے اپنی تقریر میں زراعت کے مشاورات کے نمائندوں پر زور دیا کہ وہ ریاست کو زراعت میں خود کفیل بنانے میں اور غریب کو چھوڑنے سے تم کرنے کے لئے اپنے تمام تر صلاحیتوں کو بروئے کار لائے۔ مشاورت میں ۱۵ نکاتی ایجنڈا پیش کیا گیا۔ جس میں ۶۰ ماہرین زراعت نے حصہ لیا۔ یہ بات تاہم ذکر ہے کہ پروفیسر سومی ناٹھن کو تواری اور بین الاقوامی سطح پر سینکڑوں کی

تعداد میں انعامات اور اعزازات سے نوازا جا چکا ہے۔ انہیں بیجوں کے شہنشاہ کے نام سے جانا جاتا ہے۔

۲۰۰۷ء تک کوئی بھی شخص بغیر خوراک کے نہیں ہوگا

سرینگر: الصفا نیوز سروسز ایجنسیوں کی پیش گوئی کے تحت ۲۰۰۷ء تک غریبی کی سطح سے نیچے زندگی گزارنے والی بی ایل کوئی بھی شہری نہیں ہوگا جبکہ آجکل ریاست میں غریبی کی سطح سے نیچے زندگی گزارنے والوں کی کل تعداد ۳ فیصد ہے۔ ان باتوں کا اظہار ڈائریکٹر جنرل انٹرنیشنل رائس انہیٹی چیونٹ اور جینی ریسرچ ٹوڈے میں کے چیرمین پروفیسر ایم ایس سوی تاقھن نے ایک پریس کانفرنس کے دوران کیا۔

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سے متعلق پالیسی وضع کریں گے پروفیسر نے کہا ہے کہ ہم چاہتے ہیں کہ پورا بھارت بھروسہ

خوراک کے لحاظ سے خود کفیل ہو بلکہ ہم اس قابل ہو کہ زمیندار زیادہ سے زیادہ مالی طور پر خود کفیل ہو پروفیسر سوای تاقھن نے کہا ہے کہ کوئی بھی عورت متوازی غذا سے محروم نہیں رہنی چاہئے جسے سماج پر برا اثر پڑ جائے۔ انہوں نے کہا کہ ٹھکڑے زراعت کا مقصد صرف خوراک ہی نہیں ہے بلکہ انہیں ماحولیاتی تحفظ کے علاوہ سماج کے دیگر شعبہ جات میں بھی ترقی کی راہ کو تلاش کرنا ہے۔ انہوں نے کہا کہ ریاست کے وزیر اعلیٰ مفتی محمد سعید نے انہیں یقین دلایا ہے کہ وہ ریاست کو خوراک اور دیگر معاملات میں خود کفیل بنانے کے لئے نہ صرف سفارشات پیش کریں گے بلکہ اس کام کو سرعت سے جاری رکھیں گے، کیونکہ زراعت اقتصادیات میں ریڈ کی ہڈی ہوتی ہے اس پریس کانفرنس میں ریاست کے دو ڈپٹی ایگزیکٹو ڈائریکٹرز کے وائس چانسلروں نے بھی شرکت کی ہے۔ اس سے قبل وزیر اعلیٰ مفتی محمد سعید نے اپنی تقریر میں زراعت کے مشاورت کے نمائندوں پر زور دیا کہ وہ ریاست کو زراعت میں خود کفیل بنانے میں اور غربت کو جڑ سے ختم کرنے کیلئے اپنی تمام تر صلاحیتوں کو بروئے کار لائے۔ مشاورت میں ۱۵ نکاتی ایکشن پلان پیش کیا گیا۔ جس میں ۶۰ ماہرین زراعت نے حصہ لیا۔ یہ بات قابل ذکر ہے کہ پروفیسر سوی تاقھن کو نومی اور بین الاقوامی سطح پر ٹیکنیکلوں کی تعداد میں انعامات اور اعزازات سے نوازا جا چکا ہے۔ انہیں بیجوں کے شہنشاہ کے نام سے جانا جاتا ہے۔



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Revolutionising food processing

Food Ingredients, particularly food additives, are revolutionizing the food processing sector with newer methods of preservation and in extending the shelf life of foods & processed foods. They have been providing aesthetic value, and creating right blend of taste and smell apart from providing desired mouth feel, while stabilizing the product consistency. The food additives are important in creating convenient and instant foods apart from producing more nutritious and better balanced designer foods.

Many people tend to think about additives added to foods, as complex chemical compounds and are extraneous undesirable foreign matter to food. They miss to understand that these are very important ingredients in food preservation, food product formulations, in creating visual appeal, mouth feel, taste and ultimately health to the consumers. They also miss to understand that all food additives - are carefully regulated, and their safety data has been re-established several times by international organizations like FAO / WHO groups. One should understand that enormous amount of safety factor has been built-in additive usage in foods. The dosages at which "no observable effects" were seen in animal experiments were reduced by 100 or even more number of times to arrive at Acceptable Daily Intake (ADI) limits. With such built-in safety confirmation, these additives are being used in creating excellent innovative food products, including novel foods. The FDA of the USA in their brochures meant for public information confirms that "additives help to assure the availability of wholesome, appetizing and affordable foods from season to season". It further states - "artificial additives can be produced more economically, with greater purity and more consistent quality than some of their natural counterparts. Whether an additive is natural or artificial has no bearing on its safety". This is the type of information the FDA of the USA provide in their bulletins meant for public information to give confidence to their public about the safety of additives that are used in foods.

faction in eating foods. Apart from enhancing the desired taste, odour and mouthfeel of food products, flavouring substances also have a psychological role of stimulating the secretion of saliva and other digestive juices. "Mouth watering" illustrates this pleasant experience. In this global competition, food industry is working in new product opportunity areas with adoption and integration of new process and use of more functional and innovative flavours, to bring about the best taste attributes. In one of the seminars recently organized by Food Industry and Trade in the U.S.A it was concluded that taste would continue to be the driving force, in the food processing industry. If the product does not taste good it will not sell well in to-day's highly competitive food market. Thus, the success of a new food product can be positively influenced by the right selection of flavour. With the advent of instrumentation techniques in flavour isolation and systematic identification of constituents in natural flavours, several components have been identified and this combined with organoleptic perceptions have sparked a vast growth in many exciting and satisfying new food flavourings.

The next group is sweet compounds and more particularly the artificial sweeteners. To counter metabolic and digestive irregularities like Diabetes mellitus, obesity and for health conscious people, the substitutes for sugar with no caloric value came into existence. A variety of sweeteners are used world over including Acesulfame, Aspartame, cyclamate, Saccharine, Thaumative Neohesperidic and Polyols. Polyols have been used for many years with a number of functional benefits in rest of the world to replace sugars in a variety of products such as chewing gums, candies, ice-creams, baked goods and fruit spreads. A good range of low caloric foods can be manufactured even in our country, provided we harmonize our regulations with codex list of approved artificial sweeteners and their usage levels apart from harmonizing total list of additives and their usage levels.

Developing Rural Agro Industrial Complexes

The Economic Survey presented by the Union Finance Minister to Parliament in February 2003, contained the following alarming statistics in relation to the decline in job opportunities -

Rate of Growth of employment on current daily status basis declined from 2.7% per annum during 1983-94 to 1.07% per annum during 1994-2000.

Rural Areas : Declined from 2.4% in the 1983-94 period to less than 0.67% during 1994-2000.

Employment elasticity of output growth in agriculture declined from 0.7% in 1983-94 to 0.01% in 1994-2000. Aggregate employment elasticity of output growth declined from 0.7% in 1983-94 to only 0.01% in 1994-2000.

Both rural poverty and proliferation of urban slums can be arrested only if we are able to move nearly a third of the landless labour population in rural India from unskilled on-farm to skilled non-farm jobs. This will be possible if we give concurrent attention to production, processing and marketing. It is well known that although we are the second largest producer in the world of fruits and vegetables, we process hardly 7% of the produce. Our success in climbing to the first position in the world in milk production is only because of the integrated attention given to production, processing, packaging and marketing. We need a similar revolution in other perishable commodities, particularly fruits and vegetables. This is why food technology holds the key to achieving the national goal of a poverty and hunger free India.

In addition to Food Parks, Agri-business Centres and Agri-clinics, we should establish Rural Agro-industrial Complexes based on science and technology. Such a Complex covering a block, should be based on integrated attention to the following components of the production-processing-marketing-consumption chain. Experience has shown that if all links in this chain are not attended to concurrently, the anticipated income gains will not be forthcoming. The essential components of this programme are the following:



Dr. M. S. Swaminathan

An integrated nutrient and soil fertility enhancement program.

Integrated pest management program

Water harvesting and efficient and economic use through micro-irrigation and fustigation systems of delivery of water and nutrients.

Biotechnological applications like improved genetic strains, bio-fertilizers, and bio-pesticides and where appropriate, the cultivation of tissue culture propagated banana and fruit trees.

Use of improved farm implements and appropriate mechanization for improving labour productivity, reducing drudgery and ensuring timely farm operations.

Introduction of appropriate post-harvest processing, storage and marketing techniques, with priority attention to perishable farm commodities like fruits, vegetables, fish, milk, eggs, meat and their animal products.

Promotion of off-farm employment through the introduction of technologies for adding economic value to primary products and through agri-business enterprises based on micro-credit.

An information and communication programme to provide location-specific information relating to meteorological, management and marketing factors and to

promote genetic, quality and trade literacy among rural farm families.

Establishment of farmer's field schools for integrated pest, disease and weed management, integrated nutrient supply, scientific animal husbandry, aquaculture and the other aspects of production and post-harvest technologies.

Promotion of institutions, structures like cooperatives and self-help groups, which can confer the power of scale to small producers at the production and post harvest phases of farm operations and make marketing producer and consumer oriented.

Promotion of contract cultivation by private industry in order to ensure market and income security.

I suggest that Interdisciplinary Spearhead Teams may be constituted to prepare Business Plans for the proposed pilot Agro-industrial Complexes.

Nothing succeeds like success and hence the sites for the initial projects should have the substrate scientific, political, social and ecological conditions essential for achieving the goals of this programme.

Such Technical Teams may be guided by local Farmers' Advisory

Groups, consisting of both men and women farmers. The local Farmers' Advisory Council may also undertake monitoring and evaluation of the programme. Local farm families should have a sense of participation and ownership of this programme at all phases, ranging from design to implementation.

In the demonstration areas, every effort should be made to bring about convergence and synergy among the various programs designed to achieve the following UN Millennium Development Goals.

Eradicate extreme poverty and hunger through a paradigm shift from unskilled to skilled work and through farming systems intensification, diversification and value-addition.

Achieve universal primary education

Promote gender equality through technological and skill empowerment of women

Improve maternal health and nutrition, so as to avoid the birth of babies characterized by low birth weight (LBW) children suffer handicaps in brain develop-

ment) Combat HIV/AIDS, malaria and other diseases Ensure conservation and enhancement of basic life support systems, i.e., land, water forests, biodiversity and the atmosphere.

To mobilize the necessary technological, financial, managerial and institutional resources essential for the successful implementation of this programme designed to harness the best in frontier science and traditional wisdom for enhancing the productivity, profitability and sustainability of major farming systems, it is necessary to organize local level consortia or coalitions of government, non government, private sector industry, community, research and educational and mass media and donor institutions.

Food Parks and similar infrastructure facilities for launching a Food Technology Revolution in Ru-

ral India will be successful only if even at the design stage forward linkages with markets, and backward linkages with raw material sources and technological institutions are established.

Sourcing of good quality raw material will be possible only if production technologies are based on codex alimentarius standards of food safety.

Establishing a National Grid of Rural Agro Industrial Complexes in all community developed blocks will be the best way to ensuring both freedom from hunger and slum free cities.

Prof M S Swaminathan is a renowned agriculture scientist, currently holds the UNESCO Cousteau Chair in Ecotechnology. He is also the Chairman, M S Swaminathan Research Foundation, Chennai

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Swaminathan using IT for rural development

M S Swaminathan, the father of the Green Revolution has now started using IT to spur rural development. **G SANKARANARAYANAN** takes a peek at the continuing legacy of a living legend

IF used intelligently and innovatively, information technology can form an integral part of development projects, say S Senthilkumar, associate director, Honda Informatics Centre, and Subbiah Arunachalam, fellow of the M S Swaminathan Research Foundation (MSSRF). They are talking about the Info Village project, which started in 1998 in Pondicherry. It connects 10 villages through a hybrid wired-and-wireless network consisting of PCs, very high frequency (VHF) duplex radio devices, and related equipment to facilitate both voice and data transfer. The project creates content for villagers to obtain the information they could use to make improvements in their living conditions.

The Info Village concept, which is funded by organisations like the International Development Research Centre and the Canadian International Development Agency, is the brainchild of M S Swaminathan, chairman, MSSRF. In his words, "The entire project is based on a pro-poor, pro-women and pro-nature orientation to development, and community ownership of technological tools, as

distinct from personal or family ownership."

The project, which has won two international awards, the Motorola Dispatch Solution Gold Award 1999 and the Stockholm Challenge Award 2001 under the Global Village Category, works with a bottom-up approach. It involves local volunteers who gather the information, feed it into an intranet in the local language (Tamil), and provide access through nodes in villages. With help from Honda Informatics Division of MSSRF, value addition to raw information is done, and the data is presented in a multimedia form for the benefit of unlettered users.

Says Senthilkumar, "Most of the operators and volunteers providing primary information are women, which gives them status and also influence in the project. All the centres have evolved to meet the increasing information demands of the community."

Hub-and-spokes model

Info Villages use two technologies, VHF and Spread Spectrum, to establish connection between the knowledge centres, which are the village houses where the wireless-set-

fitted computer hardware is kept. The knowledge centres are operated at the houses of the volunteers, who provide access to users—people of all castes and ages—without any discrimination, and guide them in using the systems.

The project follows a hub-and-spokes model for information management and co-ordination of voluntary activities



that take place across the centres. Villianur, a strategically-located village, functions as the hub centre, and is being run by the MSSRF staff. Other Info Villages were set up on the basis of the community's willingness. In some villages the info centres were established on demand from the local people.

There were some initial hiccups, recalls Senthilkumar. These pertained to discriminating practices in local society. "We had to close the centres functioning in private houses at three villages because volunteers did not allow socially underprivileged people in, did not maintain

regular hours of operation, and were not keen to share the information with the entire community."

After the initial failures, MSSRF realised that community ownership is



The Info Village project has won two international awards, the Motorola Dispatch Solution Gold Award 1999 and the Stockholm Challenge Award 2001 under the Global Village Category. It involves local volunteers who gather information, feed it into an intranet in the local language (Tamil), and provide access through nodes in villages

very important to start village knowledge centres. "We under-

MSSRF pays no money to them, but provides the necessary equipment, training and helps in collecting data.

Ready-to-use information

stood that the community as a whole must endorse it. For this to happen, the usefulness of the project is more important than the use of the latest technology," says Senthilkumar, who emphasises that the centres are not associated with one group or caste, but allow everyone to take part.

MSSRF carried out participatory rural appraisals prior to setting up the village knowledge centres. In each case the community provided an accessible rent-free building, electricity and volunteers. The community chooses the volunteers, men and women, and manages the centres on a voluntary basis.

The Info Villages provide locale-specific information to villagers related to prices of agricultural input (seeds, fertilisers, pesticides), agricultural output (rice, vegetables), markets (potential for export), entitlement (the different schemes of central and state governments, and banks), health care (availability of doctors and paramedics in nearby hospitals, women's diseases), cattle disease; transport (road conditions, cancellation of bus trips), weather (appropriate time for sowing, areas of abundant fish catch, wave heights in the sea), etc. Unique to the project is the

fact that most information is collected and fed in by the local community itself.

"Based on the requirement of the local community, we developed about a hundred databases under the categories of current information, long-term information, citizen's charter, cattle and feeds, health information, agricultural information, educational information, and general information to fulfil the villagers' requirements," says Arunachalam.

The villagers use these databases. Many people take the addresses of doctors, especially specialists and ambulance services, for their family, and addresses of veterinarians for their livestock. Young people access the education database to know about the various courses available in nearby schools and colleges, and also those in neighbouring states; cost information is also given in the database.

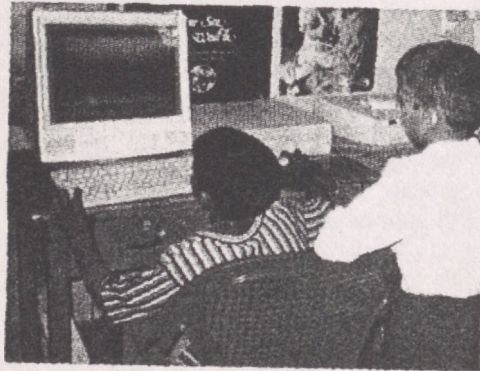
An online daily news bulletin, Farmers' Diary, was recently launched. It provides information on technologies relevant to agriculture and animal husbandry. A print-out of this daily is taken and put up on the notice boards of each centre. "The aim of the diary is to alert farmers by giving them information on agriculture, farming practices, integrated pest management, integrated crop management and integrated nutrient management relevant to the main crops like

paddy, sugarcane, cotton, pulses and cereals, and also horticulture crops," explains Senthilkumaran.

In addition, the project has created rural yellow pages for two villages on an experimental basis. The yellow pages provide a ready reckoner for the people in and around the village to locate the right person for the right work. Farmers can now find out things like who rents agricultural equipment in a particular village, the names of cattle agents and brick sellers, and the location of cattle feed centres and pesticide shops.

IT Training

The latest initiative of the project is the introduction of short-term IT training courses for village students. Training is



offered in Windows 95/98, MS Office, HTML coding, recording voice, zip/unzip and wireless data transmission. Advanced training in Adobe PageMaker, Visual Basic, VC++ and Photoshop is also conducted for free to increase self-employment opportunities. MSSRF has provided three computers to each

The technology behind the project

THE Info Village project is using both traditional and modern technologies for information dissemination. It even runs a public address system with loudspeakers to announce information like wave height and weather reports to fishermen.

However, the project always keeps an eye open for cutting-edge communication systems it can use. From the beginning, the knowledge centres have been using Motorola VHF business radios for instant communication and data transmission between the villages and the hub. The design is based on two major components.

The intelligent controller of the two-channel network is capable of interfacing with a telephone line in full duplex operation. The controller does the primary switching with EPABX/PSDN and diverts the call to the selective subscriber unit.

The controller with two Motorola GM 300 base radios functions as a full duplex single

channel controller with the capability to connect two telephone inputs. It can store up to 4,000 subscribers' ID for selective calling. The subscriber unit is based on Motorola GM 300 and GP 300. With the combination of two numbers of GM 300 with the suitable interface board of ST 869 in full duplex mode, it is possible to add the intelligent controller to the subscriber in full duplex mode. With the help of the interface board, both Rx & Tx GM 300 radio are combined and converted as a loop line interface. This loop line can be connected to the exchange or to a simple telephone. The interface is capable of generating ring voltage needed by the telephone instruments to generate the ring tone. The interface also has an intelligent system to scan 15 channels.

The project has also introduced video conferencing by Web camera through Spread Spectrum technology in three villages.

centre for training purposes.

Online Community Banking System

MSSRF conducted project feasibility studies in the late nineties prior to the implementation of the project, and found out that these villages had just one phone per 500 people. More than a third of the households were below-poverty households, meaning that their total income was less than one US dollar a day.

To increase the earning potential of the villagers, MSSRF facilitates the formation of self help groups (SHGs) for micro-credit, helps villagers in the identification of income-generating activities, and provides the necessary logistic and management support to start

such micro-enterprises. There are now a large number of SHGs involved in micro-enterprises like mushroom cultivation.

As part of the Info Village project, MSSRF developed a pilot Online Community Banking System (OCBS). Senthilkumaran elaborates: "The OCBS input form contains details about groups, group members, monthly subscription, member loans, member accounts, group loans from banks, member closing and group closing. The system automatically maintains records of money transactions between the member and the group, group history, individual history, group credit, group personnel, and bank loans. It also generates weekly, monthly and yearly reports. Now five SHGs and the

District Rural Development Agency are testing the system."

Prior to the project—according to MSSRF studies covering 10 percent of the resident families—the predominant sources of commercial information were the local shopkeepers, the market place and the input suppliers. Now close to 90 percent of the information needs of the villagers have been met by the knowledge centres.

Today, all the village knowledge centres take care of the cost of furniture and electricity. Around five villages have become self-sustainable, so they pay the telephone bill and Internet cost themselves. Two villages have moved beyond this: they raised money and built a new building for knowledge centres.



The New Indian Express

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Scientists come up with new method to breed mangrove

EXPRESS NEWS SERVICE

Kendrapara, Oct. 29: Receding coastline and devastation of cyclone could be a thing of the past if a new method of propagating mangrove forest developed by the scientists is adopted. This would prove a boon for the people of coastal areas of the state as the mangroves work as natural barrier against cyclonic storm which has been hitting these areas almost every year.

The novel method, developed by Chennai-based MS Swaminathan Research Foundation, does not involve the normal process of seed formation. Instead, plants are grown directly from leaves,

stems or roots. The new method, called cutting and air layering, has been successfully tested in Tamil Nadu.

According to a senior scientist and Associate Director of Kendrapara branch of the Foundation, Dr T Ravishankar, at first, suitable stems that can develop into individual plants are selected. The plants are then put into indigenous hardening chambers designed by the Foundation, where they are conditioned to cope in adverse environmental conditions.

Each hardening chamber costs Rs 700 and can hold about 500 plants. Plants grown through grafting and budding are also put in the chambers. Since

BREAKING GROUND



successful vegetative propagation has now been achieved in about 13 species, according to the Foundation scientists.

A nursery was first set up in Jamboo village in Mahakalpada block by the Foundation to develop methods of vegetative propagation. Research in this area began in 1998 with financial support from India Canada Facility Environment, New Delhi.

The Foundation tried to first save the mangroves in Mahakalpada area. Initially, micro-propagation or tissue culture was tried out.

This procedure involved growing parts of the plant (stems, leaves, roots) in a chemical medium to produce four

to five individual plants through chemical manipulation, said Dr Ravishankar. The Foundation, however, turned to vegetative propagation as tissue culture proved costly.

Apart from protecting the mainland from coastal storms mangroves also offer a continuous supply of fish and forest produce, and are the few species of plants with a high salt tolerance level, said the scientist. Several tropical countries had vast stretches of mangroves, until they were destroyed by nature or by man. One such striking instance of mangrove destruction was witnessed in coastal areas of Orissa during the severe storms of 1967, 1971 and 1999.

Brave Karnal girls stop child marriages in their village

BY OUR CORRESPONDENT

New Delhi, Oct. 31: Fifteen-year-old Sarita Tyagi was too shy to come up on the dais before all the legal luminaries present and narrate the incident which brought this girl from Karnal, Haryana to the lime-light. But she was not at all shy or even afraid when with her friends, she intervened and stopped not just one but two child marriages

from taking place in her village.

The girls were awarded for preventing the child marriages at the ninth Justice Sunanda Bhandare Memorial Lecture on Friday at the India Habitat Centre by Chief Justice of India V.N. Khare, who lauded the girls' efforts in preventing social injustice.

Recollecting the daring incident away from all those glaring eyes, she

seemed much more like a "metropolitan girl." Oozing confidence she said, "It was April 17 this year when Sheela, one of our classmates told us how two small girls were being married off."

"Not just this, they were being married off after their father took around Rs 40,000 from the groom's party. Actually *woh bech*

raha tha (he was selling them off)," she said.

Coming from the same district as Kalpana Chawla, these five girls — Sarita, her cousin Swati, their

classmates Sush-

ma and Sunita and their young friend Neelam, a student of Class 3 even share the same hopes and aspirations as that of Chawla.

Sunita, who otherwise

wants to join the police force, sees Chawla as her icon. All of them together with their teacher and former sarpanch of the village took up the mission of saving the two minor girls from getting married off to men old enough to be their fathers.

Facing stiff resistance from the parents of the girls who were being married off, they proved that women can save other women. "It is

the society which does not let women come out of their homes and enjoy equal rights," said Neelam.

Sarita nurtures the hope of becoming a pilot. "I love travelling, so once I become pilot I would go everywhere," she said.

Talking about the non-availability of any high school or a hospital in their village in Karnal, Sunita ■ Photograph on Page 11 ■ Turn to Page 11

the bottomline



BRAVERY REWARDED: Chief Justice of India V.N. Khare presents awards to the girls from Karnal, who stopped two child marriages in their village, at the ninth Justice Sunanda Bhandare Memorial Lecture at the India Habitat Centre in New Delhi on Friday. AN ASIAN AGE photograph

Brave Karnal girls

■ Continued from Page 9

wishes she had lots of money. "I wish mere pass bahut sare paise ho, so that I can help my village and all the poor people."

Feeling sorry about the thinking of the people in villages Swati said, "When girls in cities can wear jeans and trousers, why not girls in villages? *Hum jab pehente hain to log kehte hain, zyada fancy ho gayi hain.*" Talking about how easy it is for men to beat up women in their village, little did they realise these incidents of their villages are not in isolation. In fact, they happen everywhere, but we don't find girls like them everywhere.

'Traditional wisdom can fight hunger'

EXPRESS NEWS SERVICE
NEW DELHI, OCTOBER 31

THE countdown for hunger-free India has begun, said noted agriculture scientist M.S. Swaminathan, referring to the target year of 2007 for ensuring that every citizen in India has food to eat.

He was delivering the ninth Justice Sunanda Bhandare Memorial lecture at the India Habitat Centre today on Women's Empowerment and Building a Food and Water Secure India. Justice Bhandare, a high court judge, had worked

tirelessly for an egalitarian society and specially for women's rights. A Foundation has been set up in her memory that works towards uphold the same ideals.

Swaminathan pointed to the latest census figures of 2001 revealing a warped sex ratio in the country, largely in the more prosperous states of Haryana and Punjab. He pointed out that while women excel in academics, less than 10% are in professional jobs and less than five per cent are in the scientific field. He said this is because support systems

like flexible working hours and crèches are lacking.

But the problem of hunger, he said, begins when the child is conceived. He called for a "Life cycle approach". While the country already has a number of schemes like Mid Day Meals and Food for Work, they need to look at the problem in an integrated way and make policies aimed at every age — from pregnant women to old age.

"Schemes like Self Help Group and micro-credit for women will only work when there are horizontal linkages to

the markets," he pointed out. The food basket has to be expanded to include not just rice and wheat but many traditional wisdoms.

He also talked of the growing number of women working in agriculture. The belief is that while men hunted, it was the women who began agriculture. He pointed to numerous instances, isolated but endearing, in Orissa, Kerala where women have stored seeds which are no longer in use — like medicinal rice and drought-resistant varieties of grains.

'Involve women in the food security system'

BY STUTI OBEROI

New Delhi, Oct. 31: Renowned agricultural scientist Prof. M.S. Swaminathan warned that there was no time to relax on the food production front and called for a "Grain for green" movement. Delivering a lecture on "Women's Empowerment and Building a Food and Water Secure India" at the ninth Justice Sunanda Bhandare Memorial Lecture which was held on Friday at the India Habitat Centre in the capital Prof. Swaminathan added that genetic modification had the power to "do immense good to agriculture and food security." He underlined the importance of a food programme which would correct gender imbalances in the areas of food and water security. He also laid out a holistic action plan to achieve sustainable nutrition security at the individual level.

Laying stress on the pivotal role that women play in both food and water security, Prof. Swaminathan said that their involvement at every stage in the design and implementation of these security systems is a must. "It is the first step in our quest for an India where every citizen, man or woman, has space for making contributions to human security and happiness," he said.

■ Turn to Page 11

'Involve women...'

■ Continued from Page 9

Earlier, Justice Leila Seth, a trustee of the Justice Sunanda Bhandare Foundation, recounted the foundation's activities of the previous year and said that six legal awareness programmes had been arranged by the foundation in rural and urban areas, as well as special legal awareness programmes for Muslim women.

The function was also attended by Attorney-General Soli Sorabjee, Congress leader Manmohan Singh and several other well-known dignitaries. Other speakers in the past at the Justice Sunanda Bhandare Memorial lecture, which is an annual feature, include Prof. Amartya Sen and former President K.R. Narayanan. The Justice Sunanda Bhandare Foundation, set up in 1994, is committed to the cause of gender justice and works towards the uplift of the weaker sections of the society through its legal literacy programmes in rural and urban areas.

CJ on rising crimes against women

Statesman News Service

NEW DELHI, Oct. 31. — Crimes against women should be severely dealt with, the Chief Justice of India, Mr Justice V N Khare, said here today.

Speaking at the 9th Justice Sunanda Bhandare Memorial Lecture, Mr Justice Khare, who was the chief guest on the occasion, said that women were given the highest pedestal in the Indian mythology with most important things like education, wealth and power controlled by Goddesses. "Despite that crimes against women have witnessed a boom in the recent past," he

pointed out.

The Chief Justice of India stated that though the country had entered the 21st century, the state of women has not improved. "We need to change the prevailing attitudes of society if we want to see any improvement," he added.

Delivering the Ninth Justice Sunanda Bhandare Memorial Lecture, Prof M S Swaminathan said the country needs to foster in gender equality at the earliest. He pointed towards the Census 2001 findings and said that the alarming nature of this report is the drastic decline of the sex ratio in Punjab, Haryana, Himachal Pradesh, Gujarat, Chandigarh

and Delhi. "Most of these states are considered to be prosperous but have less than 900 females for every 1,000 male children. The advancement of these states means easy availability of sex determination testing facilities," Prof Swaminathan added. He pointed out that the sharpest decline in the number of female children per 1,000 male children had been witnessed over the past decade.

Meanwhile, five girls of Harsighpura in district Karnal in Haryana were also honoured on the occasion for preventing child marriages of two girls aged seven and 10 years.

Saturday, November 1, 2003
Hindustan Times, New Delhi

Talk on women's empowerment by M.S. Swaminathan

HT Correspondent
New Delhi, October 31

"WOMEN'S EMPOWERMENT and building a food and water secure India," was the theme of the ninth annual Justice Sunanda Bhandare memorial lecture delivered by Prof M.S. Swaminathan on Friday.

Speaking about the need for empowering women, Prof Swaminathan said, "Women play a pivotal role in both food and water security. They are particularly affected by environmental degradation.

Thus, the involvement of women at every stage in the design and implementation of food and water security systems is the first step in our quest for a nation where every citizen has space for contributing to human security and happiness."

On the occasion the foundation also honoured five girls from Sanskar Bharti High School, Haryana, who prevented the child-marriages of two minor girls aged 7 and 10 years.

Present at the lecture were Chief Justice of India, Justice V.N. Khare, Chief Justice, Delhi High Court, Justice B.C. Patel, and former Chief Justice of Himachal Pradesh, Justice Leila Seth.

Focus on growing gender divide

By Our Staff Reporter

NEW DELHI, NOV. 1. Highlighting the need to address the growing gender divide, the UNESCO Chair in Ecotechnology, M.S. Swaminathan, has said gender audits should be carried out at the village-level to constantly monitor gender equity indicators like enrolment of girls in schools to check the adverse sex-ratio.

Delivering the Ninth Justice Sunanda Bhandare Memorial Lecture here on Friday, Professor Swaminathan said: "The sharpest decline has been in the past decade, having come down to 927 in 2001. The imbalance that has set in at this early stage is difficult to remove and would remain to haunt the population for a long time to come. The sharp decline in the affluent States must be the consequence of female foeticide on a massive scale, if not female infanticide and higher female child mortality rates."

Accusing India of the cruellest form of inequity, Prof. Swaminathan said: "Almost every fourth child born in India suffers from low birth weight. It is denying a baby at birth opportunities for a healthy mental and physical development. Such children suffer from many handicaps in later life, including impaired brain development."



Students viewing an exhibition on 'organic diversity', organised as part of the 13th National Swadeshi Science Congress, in Kalpetta on Saturday:: (right) Prof K S Manilal being draped with a ponnada by Prof M S Swaminathan at the valedictory function of the 13th National Swadeshi Science Congress. Also seen are (extreme left) Dr G M Nair and (extreme right) Dr K Ravindran: NIE

'Green revolution helped achieve food security'

Kalpetta, Nov 8: You can't run down the merits of green revolution which has been instrumental in maintaining the sovereignty of our nation by achieving food security, said M S Swaminathan, Chairman of the M S Swaminathan Research Foundation (MSSRF), at Puthoorvayal near here today.

Talking to newsmen, he said through green revolution farmers became confident of their productive efficiency. Now, what we need is an integrated farming method of sustainable agriculture. Precision farming is the new concept of farming which is aimed at improving productivity as well as quality in agriculture without harming the environment, he said.

"This method provides precisely what a plant

needs by managing water, health of the soil and nutrients without wasting any input. Small farmers can reduce their cost of production while increasing the quality through this method," he added.

"Central Government had already sanctioned Rs 50 crore for research and implementation of this method. With the assistance of NABARD a research and training centre would be established in Wayanad which would cater to the needs of farmers who prefer to experiment with this new method," he said.

The WTO proposals had called upon the Government to constitute an advisory body of expert farmers in every State. Such practical wisdom should be recognised, Swaminathan added. •ENS

Swadeshi Science Congress concludes

EXPRESS NEWS SERVICE

Kalpetta, Nov 8: Swadeshi Science Congress, the three-day event organised under the auspices of the Swadeshi Science Movement and M S Swaminathan Research Foundation (MSSRF), concluded here today.

Well known Botanist Prof. K S Manilal, who translated the *Horthus Malabaricus* into English, bagged the Swadeshi Sasthra Puraskar of this year.

Manoj R (Cochin University of Science and Technology) bagged the award for 'outstanding young scientist' for his paper on 'cost-effective solar drier for

small-scale farmers'.

Two consolation prizes were awarded to M K Ratheesh Narayanan of MSSRF for 'Ethnobotany and gender dimensions of wild food management in Wayanad' and C K Vishnudas (RASTA) for his paper on 'Environment degradation and the population decline of bird species in Wayanad.'

Total 16 research papers were presented during the Congress for the Young Scientists' Award.

Three eminent farmers of the district, Joseph Nellikkunne, Karunakaran and Achappan Palukapp, were awarded the Swadeshi Karshaka Puras-

kar for outstanding farmers.

Prof. M S Swaminathan, Chairman of the MSSRF, presided over the valedictory function.

Prof. G M Nair, Director of the Tropical Botanical Garden and Research Institute (TBGRI), was the guest of honor.

Dr. Anilkumar, MSSRF, Dr. Balakrishna Panikkar, Jayakumar, State organising secretary of the Swadeshi Science Congress Prof. A Rathnam and Dr. Sudha Nair also spoke.

Dr. K Raveendran, president of the Swadeshi Science Movement, welcomed the gathering while Dr. Madhusoodanan proposed a vote of thanks.

Dr. Bharanally
Mr. Kumar

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2 தினமணி கோவை 2/12/2003

தீவனத் தானிய வங்கி தொடக்கம்

நாமக்கல், டி.செ. 2: வரசூர் கிராமத் தில் எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி நிறுவன உதவியுடன் பதி தாக அமைக்கப்பட்டுள்ள தீவனத் தானிய வங்கியை வேளாண் விஞ்ஞானியும் நிறுவனத் தலைவருமான எம்.எஸ். சுவாமிநாதன் திங்கள்கிழமை திறந்து வைத்தார். நாமக்கல் மாவட்டம் எனும் பட்டினம் ஊராட்சி ஒன்றியத்திக்குட்பட்டது வரசூர். இந்த கிராமத்தில் எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி நிறுவனத்தின் உதவியுடன், வரசூர் உழவர் மன்றத்தின் சார்பில் தீவனத் தானிய வங்கி அமைக்கப்பட்டுள்ளது.



விவசாயிகளுக்கு மக்கா சோள விதை வழங்குகிறார் வேளாண் விஞ்ஞானி எம்.எஸ். சுவாமிநாதன் (இடமிருந்து 2-வது). உடன (இடமிருந்து) வேளாண் இணை இயக்குநர் ந. நடராசன், முன்னோடி வங்கி மேலாளர் ஜி. உத்தமலிங்கம், எம்.எஸ். சுவாமிநாதன் ஆராய்ச்சி நிறுவனக்கிளை ஒருங்கிணைப்பாளர் எஸ்.ஆர். கோபிநாத்.

நாமக்கல் மன்றத்தில் உள்ள ஆயிரக்கணக்கான கோழிப் பண்ணைகளுக்கு உதவிடும் வகையில் சுவாமிநாதன் ஆராய்ச்சி நிறுவனத்தின் மூலம் ஆய்வு நடத்தியது. இதில், கோழிப் பண்ணைகளுக்குத் தேவையான தீவன மூலப் பொருட்கள் தட்டுப்பாடு இருப்பதும் பெருமளவிலான மூலப் பொருட்கள் வெளிமாநிலங்களிலிருந்து கொண்டுவர வேண்டிய குழுவும் இருப்பது கண்டுபிடிக்கப்பட்டது.

இதைத் தவிர்க்கவும் தமிழகத்திலேயே தேவையான மூலப் பொருட்களை உற்பத்தி செய்வதற்கான வழிமுறைகளையும் இந் நிறுவனம் ஆராய்ந்தது. இதன்படி, நாமக்கல் மன்றத்தில் மக்காசோள சாகுபடியை அதிகரிக்க விவசாயிகளிடையே பிரசாரமும் செய்யப்பட்டு வருகிறது.

கோழிப் பண்ணை தீவனத்துக்கு

உதவிடும் இம் மக்கா சோளத்தை நாமக்கல் சுற்றுப்புறங்களில் அதிகளவில் பயிரிட விவசாயிகளை ஊக்குவித்து வருகின்றனர். இதன் பயனாக வரசூர் கிராமப் பகுதிகளில் அதிகளவில் மக்கா சோளம் பயிரிடப்பட்டுள்ளது. இவற்றை குழுக்களாகச் சேர்ந்து விற்பனை செய்ய இக் கிராமத்தில் உழவர் மன்றம் ஏற்படுத்தப்பட்டுள்ளது.

இம் மன்றத்தின் மூலம் தீவன தானிய வங்கி தொடங்கி ஆராய்ச்சி நிறுவனம் உதவி செய்தது. இந்த வங்கியில் கோழிப் பண்ணைகளுக்குத்

தேவையான மக்கா சோளத்தை பண்ணையாளர்கள் விருப்பிய வகையில் பெற்றுக் கொள்ளலாம். இந்த வங்கியை வேளாண் விஞ்ஞானி எம்.எஸ். சுவாமிநாதன் திங்கள்கிழமை பிற்பகல் திறந்து வைத்தார். இந் நிகழ்ச்சியில், இந்தியன் வங்கி வட்டாரத் தலைவர் ஆர். வெங்கட் ரமணன், வேளாண் இணை இயக்குநர் ந. நடராசன், முன்னோடி வங்கி மேலாளர் ஜி. உத்தமலிங்கம், ஆராய்ச்சி நிறுவனக்கிளை மேலாளர் எஸ்.ஆர். கோபிநாத் கலந்து கொண்டனர்.

நாமக்கல் வரகூரில் தீவன தானிய வங்கி துவக்கம்

நாமக்கல்:

நாமக்கல் மாவட்டத்தில் தீவன தானிய வங்கி, மரபணு மன்றம் ஆகியவற்றை பிரபல் வேளாண் விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன் நேற்று திறந்து வைத்தார்.

நாமக்கல் பெரியப்பட்டி ரோட்டில் எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனத்தின் கள அலுவலகம் மூலம் நாமக்கல், கொல்லிமலை பகுதிகளில் ஆராய்ச்சி பணிகள் மேற்கொள்ளப்பட்டுள்ளன.

இங்குள்ள கோழிப்பண்ணைகளுக்கு தீவன மூலப்பொருட்கள், அனைத்தும் வெளி மாநிலங்களில் இருந்து வாங்கப்படுகின்றன. இதனால் கோழிப்பண்ணையாளர்கள் பெருமளவு நஷ்டம் அடைகின்றனர். இதை கருத்தில் கொண்டு எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனம் நாமக்கல் சுற்று வட்டார பகுதியில்

மக்காச்சோள் பயிரை அதிகளவில் பயிரிட முயற்சிகள் மேற்கொண்டுள்ளது.

அதில் ஒரு பகுதியாக, வரகூர் கிராமத்தில் பயிரிடப்பட்ட மக்காச்சோளத்தை குழுவாக சேர்ந்து விற்பனை செய்வதற்காக தீவன தானிய வங்கி ஒன்று, வரகூர் உழவர் மன்றம் மூலம் ஏற்படுத்தப்பட்டுள்ளது. இந்த வங்கியை வேளாண் விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன் நேற்று திறந்து வைத்தார். ஏராளமான விவசாயிகள் நிகழ்ச்சியில் பங்கேற்றனர். நாமக்கல் தெற்கு அரசு ஆண்கள் மேல்நிலைப்பள்ளியில் மரபணு மன்றம் ஒன்றையும் விஞ்ஞானி சுவாமிநாதன் நேற்று துவக்கி வைத்தார். மோகனூர் ரோட்டில் இருக்கும் வணிக வளாகத்தில் கொல்லிமலை, நாமக்கல் பகுதியில் இருக்கும் சுய உதவிக்குழுவினர் மூலம் நடத்தப்படும் கடைகளையும், கம்ப்யூட்டர் தகவல் தொடர்பு மையத்

தையும் அவர் பார்வையிட்டார்.

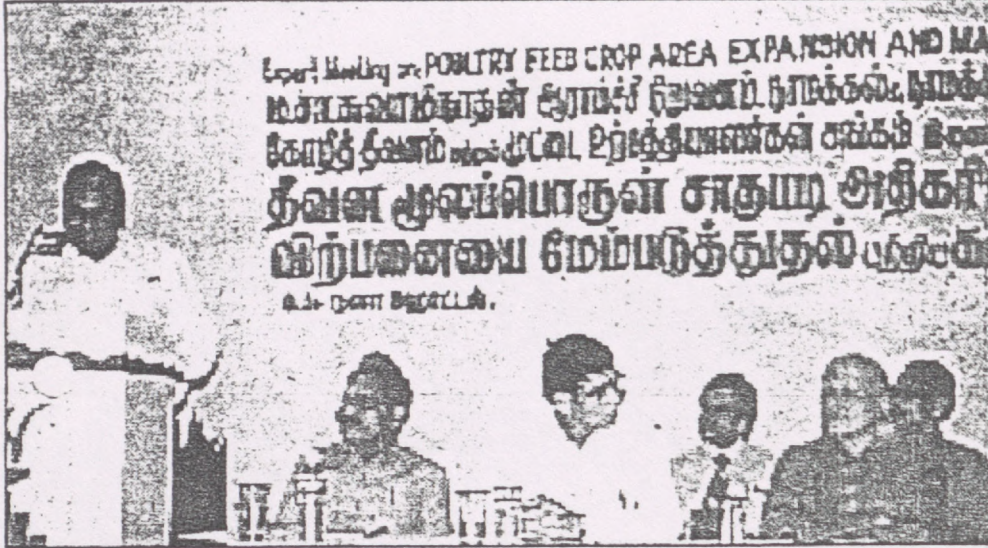
பெரியப்பட்டி ரோட்டில் இருக்கும் எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனத்தின் கிளை அலுவலகத்தில் மூலிகை தோட்டம், மாணவ, மாணவியர், சுய உதவிக்குழுக்களின் பயிற்சி வசதிக்காக துவக்கி வைக்கப்பட்டது. உயிரின பன்மை குறித்த விழிப்புணர்வு மக்களிடையே ஏற்படுவதற்காக மரபணு மன்றங்கள் துவங்குவதற்கு எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனம் வலியுறுத்தி வருகிறது. அனைத்து பகுதிகளிலும் பஞ்சு, தலைவர்கள், பள்ளி மாணவர்கள் மூலம் மரபணு மன்றம் துவங்குவதற்கு முன்னோடியாக நாமக்கல் அரசு ஆண்கள் மேல்நிலைப்பள்ளியில் மாணவர் குழுக்கள் மரபணு மன்றம் நேற்று துவக்கி வைக்கப்பட்டது. இதை விஞ்ஞானி சுவாமிநாதன் பார்வையிட்டார்.



நாமக்கல்லில் வேளாண் துறை சார்பில் அமைக்கப்பட்டிருந்த கண்காட்சியை, வேளாண் விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன் திறந்து வைத்தார். அருகில் வேளாண்மை இணை இயக்குநர் நடராஜன் மற்றும் துறை அலுவலர்கள்.

செய்திகள்

உயர் மட்டில் POBTRY FEEB CROP AREA EXPANSION AND MA
 மாகாணம் தான் ஆராய்ச்சி மேலும் நாமக்கல், மாமக்
 கோழி தோண்டி மட்டை உற்பத்தியை மேம்படுத்தி உண
 தீவன மூலப்பொருள் சாகுபடி அதிகரி
 விற்பனையை மேம்படுத்துதல் முடிப
 உ.எ. ருணா கீழாட்டி.



நாமக்கல்லில் நடந்த கோழித்தீவன மூலப்பொருட்கள் உற்பத்தி அதிகரிப்பு மற்றும் விற்பனை குறித்த கலந்துரையாடல் கூட்டத்தில், நாமக்கல் மண்டல முட்டை ஒருங்கிணைப்பு குழு தலைவர் டாக்டர் செல்வராஜ் பேசியபோது எடுத்த படம். அருகில் (வலம் இருந்து இடமாக) வேளாண் விஞ்ஞானி, டாக்டர் எம்.எஸ்.சுவாமிநாதன், வெங்கடேஸ்வரா ஹேச்சர்சீஸ் மக்தூம், கால்நடை மருத்துவக்கல்லூரி முதல்வர் டாக்டர் ஆர் மாணிக்கம் உள்ளனர்.

கொல்லிமலையில்

இயற்கை வழி

விவசாய பண்ணைகள்

விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன்

யோசனை

நாமக்கல், டி.ச. 4—
 கொல்லிமலையில் இயற்கை வழி வேளாண் பண்ணைகள் அமைக்க வேண்டும் என்று விஞ்ஞானி டாக்டர் எம்.எஸ்.சுவாமிநாதன் கூறினார்.

கருத்தரங்கம்

நாமக்கல் மாவட்டத்தில் உள்ள கொல்லிமலையின் வளர்ச்சி பற்றிய நிபுணர்களின் கலந்துரையாடல் கருத்தரங்கம் நாமக்கல் கோட்டை பேரவல் ஒட்டலில் நடைபெற்றது. இந்த கருத்தரங்கத்துக்கு இந்திய வேளாண் விஞ்ஞானி டாக்டர் எம்.எஸ்.சுவாமிநாதன் தலைமை தாங்கினார். அப்போது அவர் கூறியதாவது—

இந்த நூற்றாண்டின் முன் நேற்றிருக்கோளாக ஐந்து நாட்களில் இந்தியா உள்பட 119 நாடுகள் 8 அம்சங்களை நிறைவேற்ற ஒப்புத்தம் செய்து உள்ளன. வறுமை மற்றும் பசியை ஒழிப்பது, எல்லோருக்கும் கல்வி, பாலை சமத்துவம் மற்றும் பெண்கள் முன்னேற்றம், குழந்தை மரணங்களை குறைப்பது, தாய்-சேய் நலம், எய்ட்ஸ், மலேரியா மற்றும் இதர நோய்களை எதிர் கொள்வது, சுற்றுச்சூழல் பாதுகாப்பு மற்றும் வளர்ச்சி, கூட்டு முயற்சி மூலம் அகில உலக முன் நேற்றம் ஆகியவையே அந்த 8 குறிக்கோள்கள் ஆகும். இவற்றை அடைய நாம் அனைத்து முயற்சிகளையும் மேற்கொள்ள வேண்டும்.

வெள்ளம் பண்ணை

நாமக்கல் மாவட்டம் கொல்லிமலை கிழக்கு தொடர்ச்சி மலைகளின் சிறந்த பகுதியாகவும் உணவு தானியங்கள் மற்றும் மூலிகைகள் நிறைந்த பகுதியாகவும் விளங்குகிறது. இங்கு இயற்கைவழிவேளாண் பண்ணைகள் அமைப்பதன் மூலம் திணை, சாமை, வரகு போன்ற பழமை வாய்ந்த சத்து மிகுந்த பண்ப்பவிகள் அதிக அளவில் விளைவிக்க முடியும். அவ்வாறு விளைவிப்பதன் மூலம் அவற்றை சர்வதேச தரத்தில் ஏற்றுமதி செய்ய இயலும். இதன் மூலம் உணவுப் பொருள் உற்பத்தியில் நல்ல வருமானம் ஈட்டமுடியும். மலை வாழ் மக்களின் வாழ்க்கைத்தரமும் மேம்படும். வறுமை, பசி—பட்டினி போக்கப்படும். 50 ரூபாய்க்கு கிழகவி பெறும் நிலைமையும் மாறும். மாதிரியாக... இதற்கு மாவட்ட நிர்வாகம் கொல்லிமலையில் 2 கிராமங்களை தேர்வுசெய்து அவற்றில் "மாதிரி இயற்கை வழி வேளாண்மை பண்ணை"கள் அமைத்து செயல்படுத்த முன்வர வேண்டும். அதன் மூலம் மலை வாழ் மக்களின் வாழ்க்கைத்தரத்தை மேம்படுத்த முடியும்.

அது போல், கொல்லிமலையில் உயர் கல்வி கற்பது மாணவர்களுக்கு சிரமமாக உள்ளது. இதை நான் நேரில் இன்று பார்த்தேன். உயர்நிலைப்பள்ளிகள் மிகவும் தூரப்பகுதியில் அமைந்து இருப்பதால் மாணவ—மாணவிகள் நீண்ட தூரம் நடந்து செல்ல வேண்டிய நிலை உள்ளது. எனவே, அங்கு கூடுதல் உயர்நிலைப்பள்ளிகள் தொடங்க வேண்டும். இதன் மூலம் திறமையான மாணவர்களின் உயர்கல்வியை பெருக்க முடியும்.

உட்கட்சித்து

5 வயதுக்கு உட்பட்ட குழந்தைகள் மரணம், கர்ப்பினி தாய்மார்கள் மரணம் குறைக்கப்பட வேண்டும். இதற்கு உட்கட்சித்து மிக்க உணவுகள் கொடுக்க நடவடிக்கை மேற்கொள்ளப்பட வேண்டும். எச்.ஐ.வி. மற்றும் எய்ட்ஸ் நோயை தடுக்க 14 வயது முதல் 17 வயது வரையானவர்களுக்கு பாலியல் கல்வி வழங்கப்பட வேண்டும். மற்றும் தாய் குடிநீர், குடிசை பகுதி மேம்பாடு போன்றவற்றை செயல்படுத்த வேண்டும். இவற்றை நாம் செய்தாலே ஐ.நா. சபை ஒப்புத்தத்தில் குறிப்பிட்டுள்ள 8 வகை இலக்கையும் நாம் அடைய முடியும். இவ்வாறு விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன் கூறினார்.

கலெக்டர்

கருத்தரங்கில் மாவட்ட கலெக்டர் டி.ராஜேந்திரன், மாவட்ட ஊரக வளர்ச்சி முகமை திட்ட அதிகாரி ஆர்.ராஜாஜி, மாவட்ட வேளாண்மை இணை இயக்குனர் நடராஜன், இந்தியன் வங்கி மண்டல தலைவர் வெங்கட்டிரமணன், மகளிர் திட்ட அலுவலர் நாகராஜன், டாக்டர் எம்.எஸ்.சுவாமிநாதன், ஆராய்ச்சி நிறுவன ஆலோசகர் டாக்டர் பாலரவி, ஒருங்கிணைப்பாளர் டாக்டர் கோபிநாத், சுகாதார பணிகள் இணை இயக்குனர் டாக்டர் அருணகிரி, மாவட்ட கல்வி அலுவலர் சுப்பிரமணியம், கொல்லிமலை ஊராட்சி ஒன்றிய தலைவரும் முன்னாள் எம்.எல்.ஏ. வுமான சந்திரசேகரன் மற்றும் தன்னார்வ தொண்டு நிறுவனத்தினர் பலர் கலந்து கொண்டனர்.

தீன மலர்



நிறுவனர்: டி.வி. ராமசுப்பையர்

சேலம் ■ செவ்வாய் ■ டிசம்பர் 2 2003 ■ சுபாஸ்திரி காந்தி கை 16 ■ சென்னை, வேலூர், பாண்டிச்சேரி, ஈரோடு, சேலம்

நாமக்கல் மண்டலத்தில் முட்டை ஏற்றுமதி மையம்

தமிழக அரசுக்கு பரிந்துரை செய்யப்படும்

நாமக்கல், டிச.2— நாமக்கல் மண்டலத்தில் உற்பத்தியாகும் முட்டைகளை வெளி நாடுகளுக்கு ஏற்றுமதி செய்யும் பொருட்டு நாமக்கல் மண்டலத்தில் முட்டை ஏற்றுமதி மையம் ஒன்றை ஏற்படுத்த தமிழக அரசுக்கு பரிந்துரை செய்யப்படும் என கோழித்தீவன மூலப்பொருள் அதிகாரிப்பு குறித்த கருத்தரங்கில் கலந்து கொண்ட பேரா. எம். எஸ். சுவாமிநாதன் தெரிவித்தார்.

நாமக்கல் எம். எஸ். சுவாமிநாதன் ஆராய்ச்சி நிறுவனமும், நாமக்கல் மண்டல கோழித்தீவனம் மற்றும் முட்டை உற்பத்தியாளர்கள் சங்கமும் இணைந்து மக்காசோளம் சாகுபடியை அதிகரிப்பது மற்றும் விற்பனையை மேம்படுத்துவது குறித்த ஆலோசனைக் கூட்டம் நாமக்கல் நளா ஹோட்டலில் நேற்று நடந்தது.

இக் கூட்டத்திற்கு தேசிய முட்டை ஒருங்கிணைப்புக் குழு தலைவர் டாக்டர். செல்வராஜ் வரவேற்றார். நாமக்கல் சுவாமிநாதன் ஆராய்ச்சி நிறுவன ஒருங்கிணைப்பாளர் டாக்டர். கோபிநாத் வரவேற்றார்.

கூட்டத்தில் வெங்கடேஷ்வரா ஹேர்சர்ஸ் பொதுமேலாளர் மாத்தும், இந்தியன் வங்கிமண்டல தலைவர் வெங்கட்டரமணன், வேளாண் இணை இயக்குநர் நடராஜன், உழவர் மன்ற நிர்வாகி ரஜினி காந்த் உள்ளிட்ட பலர் கலந்து கொண்டு பேசினர்.

புதிய உத்தி அவசியம்
கூட்டத்தில் சிறப்பு விருந்தினராக கலந்து கொண்ட எம். எஸ். சுவாமிநாதன்



ஆராய்ச்சி நிறுவன தலைவர் பேரா. எம். எஸ். சுவாமிநாதன் கலந்து கொண்டு பேசுகையில், தமிழக கோழிப் பண்ணைகளுக்கு தேவையான மக்காசோளத்தில் 25 சதவீதம் மட்டுமே நமது மாநிலத்தில் உற்பத்தி செய்யப்பட்டு வருகிறது.

எஞ்சிய தேவைகளுக்கு வெளிமாநிலங்களில் இருந்து இறக்குமதி செய்ய வேண்டிய சூழ்நிலை உள்ளது. இந்தியாவில் மக்காசோளம் உற்பத்தி செய்வதில் புதிய தொழில் நுட்ப உத்திகளை புகுத்தி விதை விதைப்பு, சந்தையிடுதல், விலை ஆகிய எல்லாவற்றையும் இணைத்து செயல்படுத்த வேண்டும்.

மக்காசோள பயிர் ஆய்வகம்
வட இந்தியாவில் மக்காசோளத்தில் பல்வேறு வகைகளை கண்டறிந்து செயல்படுத்தி வருகின்றனர். சமீபத்தில் கங்கை நதிக்கரையோரம் 'தியாரா' என்ற 60 நாள்

கொண்ட மக்காசோளத்தை பயிர் செய்து வருகின்றனர்.

இதே போல் தமிழகத்தில் மக்காசோளம் பயிரிடுவதில் உள்ள பிரச்சனைகளை குறித்து மாநில திட்டக்குழு கூட்டத்தில் பேசி மாநில அளவில் மக்காசோள உற்பத்தியில் புதிய உத்திகளை கையாளுவதற்கான ஆய்வு நடத்துவதற்கு தனி அமைப்பு ஒன்றை ஏற்படுத்த நடவடிக்கை எடுக்கப்படும்.

ஏற்றுமதி மையம்
நாமக்கல் மண்டலத்தில் உற்பத்தியாகும் முட்டைகளை வெளி நாடுகளுக்கு ஏற்றுமதி செய்வதற்கான ஏற்றுமதி மையம் ஒன்றை ஏற்படுத்த நடவடிக்கை மேற்கொள்ளப்படும். தமிழகத்தில் வேளாண்மை பொருட்களை ஏற்றுமதி செய்யும் பொருட்டு 3 இடங்களில் சர்வதேச ஏற்றுமதி மையம் அமைக்க தமிழக அரசு முடிவு செய்துள்ளது.

இந்த 3 மூன்று ஏற்றுமதி மையங்களில் ஒரு சர்வதேச மையத்தை நாமக்கல்வில் ஏற்படுத்துவதற்கு தமிழக அரசிற்கு பரிந்துரை செய்யப்படும்.

சர்வதேச ஆய்வகம்
நாமக்கல் கால்நடை மருத்துவக்கல் ஓரிரியில் தேசிய அளவில் பல்வேறு ஆய்வுகள் மேற்கொள்ளப்பட்டு வருகின்றன. ஆனால் சர்வதேச அளவில் தொழில் போட்டி ஏற்பட்டுள்ளதால் பொருட்களின் தரம், உற்பத்தி போன்றவற்றில் அதிக கவனம் செலுத்த வேண்டியுள்ளது. எனவே நாமக்கல் கால்நடை

4 ம் பக்கம் பார்க்க

கொல்லிமலை: இயற்கை வழி வேளாண் பண்ணை ஏற்படுத்தக் கோரிக்கை

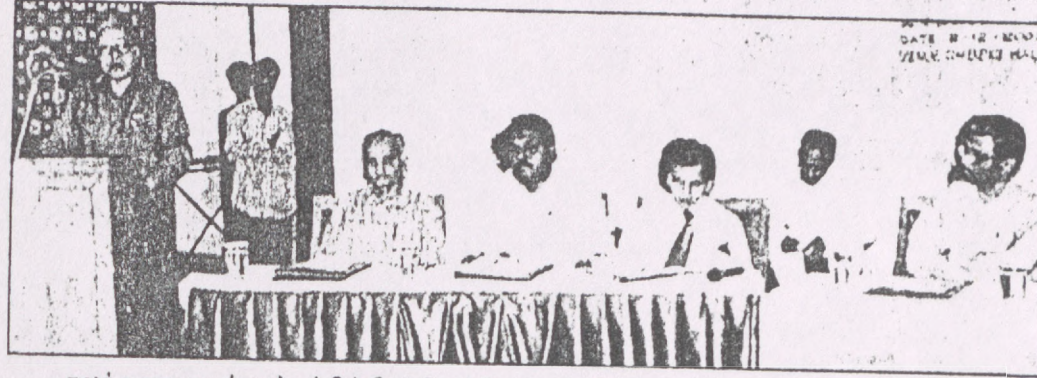
நாமக்கல், டி.ச. 3: கொல்லிமலையில் 2 கிராமங்களில் முன்மாதிரியாக இயற்கை வழி வேளாண் பண்ணையை ஏற்படுத்திட வேண்டும் என வேளாண் விஞ்ஞானி எம்.எஸ். சுவாமிநாதன் வேண்டுகோள் விடுத்துள்ளார்.

நாமக்கல்லில் செவ்வாய்க்கிழமை நடந்த கொல்லிமலை வளர்ச்சி குறித்த கலந்துரையாடல் கூட்டத்தில் அவர் பேசியது:

உலக நாடுகளைச் சேர்ந்த 119 நாடுகள் பங்கேற்ற ஐக்கிய நாடுகள் சபை கூட்டத்தில், 8 இலக்குகளை குறிக்கோளாகக் கொண்டு நாட்டில் வளர்ச்சியை ஏற்படுத்த இந்தியாவும் ஒப்பந்தம் செய்துள்ளது.

இதே 8 இலக்குகளை முன்மாதிரியாக கொண்டு நாமக்கல் மாவட்டத்தில் உள்ள கொல்லிமலை வளர்ச்சியை அதிகரிக்க வேண்டும். ரூ. 50-க்கும் குறைவான தின வருமானம் பெறுவோரின் நிலையை உயர்த்துதல், பசிக் கொடுமையைப் போக்குதல் முதல் இலக்காக உள்ளது.

கொல்லிமலையில் உள்ள மக்கள் உணவுக்காக மட்டுமே தங்களது வருவாயில் பெரும்பகுதி செலவிட வேண்டியுள்ளது. 80 சத வருவாயை உணவுக்கு செலவிடுகின்றனர்.



கலந்துரையாடல் கூட்டத்தில் பேசுகிறார் வேளாண் விஞ்ஞானி எம்.எஸ். சுவாமிநாதன். உடன் (வலமிருந்து) ஆட்சியர் து. இராசேந்திரன், இந்தியன் வங்கி மண்டல மேலாளர் ஆர். வெங்கட் ரமணன், மகளிர் திட்ட அலுவலர் ஆர். நாகராஜன், வேளாண் இணை இயக்குநர் ந. நடராசன்.

இந்த நிலை மாறிட வருவாயைப் பெருக்கிடும் சாமை, தினை, வரகு உள்ளிட்ட பண்ப்பயிர்களை பயிரிட்டு வறுமையைப் போக்கிடுவதோடு, உணவுக்கும் வழி செய்து கொள்ளலாம். இதற்கு அனைத்துத்தரப்பினரும் ஒத்துழைக்க வேண்டும் என்றார் சுவாமிநாதன்.

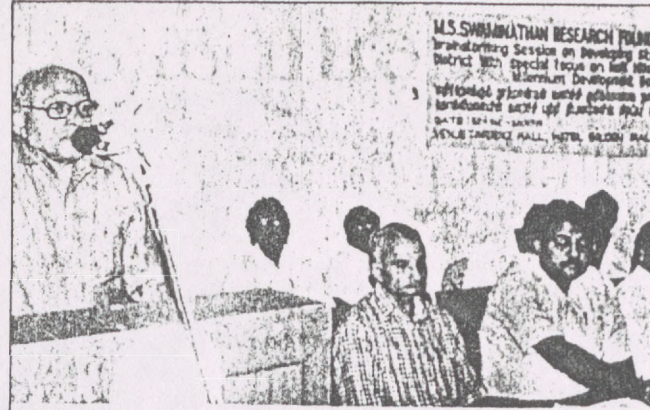
வறுமை ஒழிப்பு, பசியால் வாடுவோர் எண்ணிக்கையை குறைத்தல், அனைத்து குழந்தைகளுக்கும் ஆரம்பக் கல்வி, ஆண்-பெண் இன பாகுபாட்டை அகற்றுதல், குழந்தை,

தாய் மரண விகிதத்தை குறைத்த தூய குடிநீர் வழங்கல், சுற்றுச் சூழல் பாதிப்பை தவிர்த்தல் உள்ளிட்ட 8 குறிக்கோள்களும் ஏற்கெனவே மாவட்ட நிர்வாகத்தின் மூலமாக பரவலாகக் கொல்லிமலையில் செயல்படுத்தப்பட்டு வருவதாகவும், கூடுதல் கவனம் எடுத்து செயல்படுத்த ஆலோசனைகள் வழங்குமாறும் ஆட்சியர் து. இராசேந்திரன் வேண்டுகோள் விடுத்தார்.

மாவட்ட ஊரக வளர்ச்சி முகமை திட்ட அலுவலர் ஆர். ராஜமூர்,

வேளாண் இணை இயக்குநர் ந. நடராஜன், இந்தியன் வங்கி மண்டல மேலாளர் ஆர். வெங்கட் ரமணன், மகளிர் திட்ட அலுவலர் ஆர். நாகராஜன், கொல்லிமலை ஊராட்சி ஒன்றியக் குழுத் தலைவர் சி. சந்திரசேகரன் உள்ளிட்ட பலர் கலந்து கொண்டு ஆலோசனைகளை வழங்கினர்.

கொல்லிமலை கிழக்குத் தொடர்ச்சி மலைகளின் கிரீடமாக உள்ளது என வேளாண் விஞ்ஞானி புகழாரம் சூட்டினார்.



கொல்லிமலை வளர்ச்சி குறித்து நாமக்கல்லில் நடந்த கருத்தரங்கில் வேளாண் விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன் பேசினார். அருகில் வேளாண்மை இணை இயக்குநர் நடராஜன், மகளிர் திட்ட அலுவலர் நாகராஜன்.

நாமக்கல் செய்திகள்

தனி விவசாய மண்டலமாக கொல்லிமலை அறிவிப்பு!

நாமக்கல்:

“கொல்லிமலையை தனி விவசாய மண்டலமாக அறிவித்து, அங்கு விளைவிக்கப்படும் பொருட்களுக்கு தனி பிராண்ட் பெயர் கொடுத்து விற்பனை செய்ய வேண்டும்” என்று பிரபல வேளாண் விஞ்ஞானி எம்.எஸ்.சுவாமிநாதன் பேசினார்.

நாமக்கல் மாவட்டம் கொல்லிமலையில் எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவனம் சார்பில் பழங்குடியின மக்கள் விளைவித்த தானியங்கள் குறித்த ஆராய்ச்சி திட்டம் செயல்படுத்தப்பட்டுள்ளது.

இதற்கென அமைக்கப்பட்டுள்ள ஆராய்ச்சித்திட்டலை பார்வையிட்ட வேளாண் விஞ்ஞானி சுவாமிநாதன், அங்குள்ள மகளிர் கய உதவிக்குழுவினரை சந்தித்து பேசினார்.

நாமக்கல் கோல்டன் பேலஸ் ஹோட்டலில், “எதிர்நோக்கும் நூற்றாண்டில் கொல்லிமலையின் வளர்ச்சி குறிக்கோள்கள்” என்ற தலைப்பில் நடந்த கருத்தரங்கிலும் பேசினார்.

கருத்தரங்கில் டாக்டர் கோபிநாத்

வேளாண் விஞ்ஞானி சுவாமிநாதன் வலியுறுத்தல்

வரவேற்றார். அறிவுடை நம்பி திட்டம் பற்றி விளக்கிப்பேசினார். நாமக்கல் கலெக்டர் ராஜேந்திரன் பேசினார். பேராசிரியர் எம்.எஸ்.சுவாமிநாதன் கருத்தரங்கில் பேசியதாவது:

இந்தியாவில் மேற்கு தொடர்ச்சி மலையை பற்றி பலரும் கவனம் செலுத்துகின்றனர். ஆனால், கிழக்கு தொடர்ச்சி மலை குறித்து அறிவியல், பொருளாதார, சுற்றுச்சூழல் ரீதியாக யாரும் கவனம் செலுத்துவதில்லை. கிழக்கு தொடர்ச்சி மலையின் அணிகலனாக அமைந்திருப்பது கொல்லிமலை.

பல்வேறு சிறப்புகள் கொண்ட கொல்லிமலை முழுவதையும் ‘ஆர்கானிக் பார்பிங் ஜோன்’ என்ற தனி விவசாய மண்டலமாக அறிவித்து, அதற்கேற்ப திட்டங்களை செயல்படுத்த வேண்டும்.

அடுத்த மாதம் பல்வேறு நாடுகளை சேர்ந்த வேளாண்மை நிபுணர்கள் இந்தியா வருகின்றனர். அவர்

களை கொல்லிமலைக்கு அழைத்து வந்து காண்பிக்க முடிவு செய்யப்பட்டுள்ளது.

உத்தராஞ்சல் மாநில அரசு, அம்மாநிலம் முழுவதையும் தனி விவசாய மண்டலமாக அறிவிக்க முடிவு செய்துள்ளது. எனவே, தமிழகத்தில் கொல்லிமலை போன்ற சிறிய பகுதியையாவது நாம் தனி விவசாய மண்டலமாக அறிவிக்க வேண்டும்.

இங்கு விளைவிக்கப்படும் பொருட்கள் அனைத்தையும், ஒரே பிராண்ட் பெயரில் விற்பனை செய்ய வேண்டும். அப்போது தான் வெளிநாடுகளுக்கு ஏற்றுமதி செய்யும்போது நல்ல மதிப்பு இருக்கும். பிராண்ட் பெயரில் விற்பனை செய்யும்போது, அதன் தரம் எளிதில் விளங்கும்.

கொல்லிமலையின் வளர்ச்சி பற்றி விவாதித்து முடிவு செய்ய, மாவட்ட கலெக்டர் தலைமையில் அமைப்பு ஒன்றை ஏற்படுத்தலாம். இதில் பஞ்சாயத்து, உள்ளாட்சி பிரதிநிதிகள், தன்

னார்வ தொண்டு நிறுவனங்களை உறுப்பினராக நியமிக்கலாம். இந்த அமைப்பு ஆறு மாதங்களுக்கு ஒரு முறை கூடி, கொல்லிமலையின் வளர்ச்சி பற்றி விவாதிக்க வேண்டும்.

கொல்லிமலையில் ஒரே ஒரு மேல் நிலைப்பள்ளி மட்டுமே செயல்பட்டு வருகிறது. இன்னும் அங்கு குறைந்தது இரு மேல்நிலைப்பள்ளிகள் செயல்பட வேண்டும்.

இவ்வாறு எம்.எஸ்.சுவாமிநாதன் பேசினார்.

நிகழ்ச்சியில் பேசிய மாவட்ட கலெக்டர் ராஜேந்திரன், “கொல்லிமலை விவசாயிகள், தாங்கள் காலம் காலமாக பயிரிட்ட சிறு தானியங்களை கைவிட்டு, குச்சிக்கிழங்கிற்கு மாறி விட்டனர். இதனால், தங்களுக்கு தேவையான உணவுப்பொருட்களை கூட சமவெளிப்பகுதியில் இருந்து கொண்டு வரும் நிலைக்கு சென்று விட்டனர்.

“சாமை, தினை, வரகு போன்ற வற்றை அவர்கள் உற்பத்தி செய்த போது கிலோ ரூ.5 என்ற அளவுக்கு தான் அவர்களுக்கு பலன் கிடைத்தது. ஆனால், அவற்றை பதப்படுத்தி, உருமாற்றம் செய்து விற்பனை செய்யும்போது கூடுதல் லாபம் கிடைக்கிறது.

“அவர்களுக்கு நல்ல லாபம் கிடைக்கும் பட்சத்தில் பணப்பயிரில் இருந்து, மனித இனத்துக்கு ஊக்கம் அளிக்கும் வரகு, சாமை, தினைக்கு மாறுவர். எனவே, கொல்லிமலை விவசாயிகள் சிறு தானிய பயிர் விளைவிக்கும் சூழ்நிலையை ஏற்படுத்த வேண்டும்” என்றார்.

நிகழ்ச்சியில் நாமக்கல் மாவட்ட ஊரக வளர்ச்சி முகமை திட்ட அலுவலர் ராஜஸ்ரீ, கொல்லிமலை ஒன்றிய தலைவர் சந்திரசேகரன், ஹீல்ட்ஸ் நிறுவன செயலாளர் சதீஷ் பாபு, வேளாண்மை இணை இயக்குநர் நடராஜன், பல்வேறு அரசுத்துறை அலுவலர்கள், எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி நிறுவன அலுவலர்கள் பங்கேற்றனர்.

கொல்லிமலையை தனி விவசாய மண்டலமாக அறிவிக்க நடவடிக்கை

நாமக்கல், டி.ச.3— நாமக்கல் மாவட்டம், கொல்லிமலை பகுதியை தனி விவசாய மண்டலமாக அறிவிக்க தமிழக அரசுக்கு கோரிக்கை விடுக்கப்படும் என கொல்லிமலை வளர்ச்சி குறித்த நிபுணர்கள் கூட்டத்தில் பேரா.சுவாமிநாதன் தெரிவித்தார்.

நாமக்கல், எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி மையத்தின் சார்பில் எதிர் வரும் நூற்றாண்டில் கொல்லிமலையின் வளர்ச்சி குறித்த நிபுணர்களின் கலந்துரையாடல் குறித்த கூட்டம் நாமக்கல் கோவிலுள் பேலஸ் ஹோட்டலில் நேற்று நடந்தது. கலந்துரையாடல் நிகழ்ச்சிக்கு மாவட்ட கலெக்டர் ராஜேந்திரன் தலைமை வகித்தார். மாவட்ட திட்ட அலுவலர் ராஜபு முன்னிலை வகித்தார். நாமக்கல் எம்.எஸ்.சுவாமிநாதன் ஆராய்ச்சி மைய ஒருங்கிணைப்பாளர் டாக்டர்.கோபிநாத் வரவேற்றார். மகவிர் திட்ட அலுவலர் நாகராஜன், சுகாதாரப் பணிகள் இணை இயக்குநர் டாக்டர் அருணகிரி, கொல்லிமலை ஊராட்சி ஒன்றிய குழு தலைவர் சந்திரசேகரன், இந்தியன் வங்கி மண்டல தலைவர் வெங்கட்டரமணன், நாமக்கல் வேளாண் இணை இயக்குநர் நடராஜன் உள்ளிட்ட பலர் கலந்துகொண்டு பேசினர்.

கிழக்கு தொடர்ச்சி மலையின் வளர்ச்சி புறக்கணிப்பு

இக் கூட்டத்தில் சிறப்பு விருந்தினராக கலந்துகொண்ட வேளாண் விஞ்ஞானி

★சுவாமிநாதன் தகவல்

னியும், பேராசிரியருமான எம்.எஸ்.சுவாமிநாதன் பேசுகையில், நாமக்கல் மாவட்டம், கொல்லிமலை கிழக்கு தொடர்ச்சி மலை பகுதியின் ஒரு அங்கமாக திகழ்ந்து வருகிறது. ஆனால் மத்திய அரசு மேற்கு தொடர்ச்சி மலையின் வளர்ச்சிக்கு தான் அதிக முக்கியத்துவம் கொடுத்து வருகிறது. மாறாக கிழக்கு தொடர்ச்சி மலையின் வளர்ச்சியை அரசு தொடர்ந்து புறக்கணித்து வருகிறது.

கிழக்கு தொடர்ச்சி மலையின் ஒரு அங்கமாக விளங்கும் கொல்லிமலை பகுதியை தனி விவசாய மண்டலமாக (ஆர்கானிக் பார்டிங் சோன்) மாற்றி வேளாண் விலை பொருட்கள் உற்பத்தி செய்யப்பட வேண்டும். அதற்கு மத்திய அரசு உதவி புரிய முன் வரவேண்டும்.

விவசாய மண்டலம்

தற்போது உத்தராஞ்சல் மாநிலம் முழுவதும் தனி விவசாய மண்டலமாக அந்த மாநில அரசு அறிவித்ததால், அங்கு தரமான வேளாண் பொருட்கள் உற்பத்தி செய்யப்பட்டு வருகிறது.

இதே போல் தமிழகத்தில் நாமக்கல் மாவட்டம், கொல்லிமலையை தனி விவசாய மண்டலமாக மாற்ற தமிழக அரசிற்கு கோரிக்கை விடுக்கப்படும். அடுத்த மாதம் வேளாண் விஞ்ஞானி

களை கொல்லிமலை பகுதிக்கு அழைத்து வந்து தனி விவசாய முறையை பின்பற்றுவது குறித்து ஆலோசிக்கப்படும்.

தனி விவசாய வேளாண்மை முறையில் தரமான பொருட்களை உற்பத்தி செய்து, அவற்றிற்கு எந்தவிட வணிக பெயர் (பிராண்ட் நேம்) கொடுத்து, அவற்றை விற்பனை செய்தால் தனி விவசாய முறையின் மதிப்பு மேலும் உயரவாய்ப்புள்ளது.

தனி அமைப்பு அவசியம்

கொல்லிமலை பகுதி வளர்ச்சி அடைவதற்கு மாவட்ட கலெக்டரை தலைவராக கொண்டு விவசாயிகள், அரசுத் துறை அதிகாரிகள், தொண்டு நிறுவன அதிகாரிகள், நுகர்வோர் அமைப்பை சேர்ந்த நிர்வாகிகள் ஆகியோரை உறுப்பினராக கொண்டு ஒரு அமைப்பை ஏற்படுத்தி கொல்லிமலை வளர்ச்சி குறித்து குறிப்பிட்ட கால இடைவெளியில் ஆலோசனை நடத்தும் பட்சத்தில் கொல்லிமலை பகுதி சர்வதேச அளவில் வளர்ச்சி அடைவதற்கான வாய்ப்புள்ளது. இவ்வாறு அவர் பேசினார்.

இக் கலந்துரையாடல் நிகழ்ச்சியில் நாமக்கல் மாவட்டத்தை சேர்ந்த பிடி ஒக்கன், அரசுத் துறை அதிகாரிகள், தன்னார்வ தொண்டு நிறுவனங்களின் நிர்வாகிகள் உள்ளிட்ட பலர் கலந்து கொண்டனர்.

பாரம்பரிய விவசாய முறைகளை மறுபரிசீலனை செய்யவேண்டும்!

சொல்கிறார் பன்னாட்டு விவசாய வளர்ச்சி நிதியத்தின் தலைவர் !

சென்னையில் உள்ள எம். எஸ். சுவாமி நாதன் பவுண்டேஷனில் சென்ற மாதம் 2-ம் தேதி “அமைதி, பசியினின்று விடுதலை, தொடர்ந்த வளர்ச்சி: பண்பாட்டு வடிவங்கள்” (Peace, Freedom from Hunger and sustainable Development: The Ethical dimensions) பற்றி பன்னாட்டு விவாதத் தொடக்க விழா நடைபெற்றது.

இந்த விழாவில் சிறப்பு விருந்தினராக கலந்து கொண்டு பேசினார் பன்னாட்டு விவசாய நிதியம் மேம்பாட்டு தலைவர் (International fund for agricultural Development) லேர்னாட் பாகே அவர்கள் பேசியபோது:

‘தற்போது 120 கோடி மக்கள் இன்னும் மிகக் கடுமையான வறுமையிலும், உணவுக்கிடைக்காநிலையிலும், தினமும் இழப்புகளை சந்தித்துக் கொண்டுவாழ் நிர்பந்தப் பட்டுள்ளார்கள் இதில் 49 கோடி தெற்காசிய விலும் 30 கோடி பேர். ஆப்பிரிக்க சகரா கண்டத்திலும் வாழ்கிறார்கள்.

இந்த ஏழைகளின் மூன்றில் இரண்டு பேர் விவசாயத்தையும் அதுச் சார்ந்த தொழில்களையும் தங்கள் உணவுக்காக ஊரகப்பகுதியில் வாழ்ந்துக் கொண்டுள்ளார்கள்.

இந்தியாவை பொறுத்தவரை உள்ளாட்சி அமைப்புகளில் பெண்களின் பங்கேற்பினை அதிகப்படுத்தி நல்லதுவக்கத்தை ஏற்படுத்தியுள்ளார்கள். ஆனால் மற்ற வளரும் நாடுகளில் உள்ளது போலவே இந்தியாவும் எதிர் நோக்க வேண்டியவை, துவக்க கல்வி பெறுவதற்கு பெண்குழந்தைகளுக்கு வசதிகள் அளிக்கப்படவேண்டும். அடிப்படி



பன்னாட்டு விவாதத்தில் பங்குகொண்ட அறிஞர்களுடன் பேராசிரியர் எம்.எஸ். சுவாமிநாதன் உள்ளார்

மருத்துவச்சேவைகள் தரப்பட வேண்டும். பெண்கள் பொருளாதார நிதிச் சேவைகளில் சம்பங்கு அடைய வேண்டும்.

கிராமப்புற பெண்களின் பொருளாதார பங்கேற்பில், பொதுவாக சிறு விவசாயிகள் நிலைமை அவர்களுடைய சுற்றுச் சூழலினால் பாதிக்கப்படுவதுடன் அதனால் ஒரு “அழியாத முத்திரை” குத்தப்படுகிறது வாழ்வதற்கான போராட்டத்தில் ஏழை விவசாயிகளும் ஆடு, மாடுவளர்ப்போரும் வாய்ப்புகள் குறைவாக இருப்பதனால், வணக்கம் நீர்வள ஆதாரங்கள் ஆகியவற்றை அதிகப்படியாக உபயோகப்படுத்த வேண்டியுள்ளது.

இச்சிரழிவின் விளைவாக உற்பத்தி மற்றும் விளைபொருள் குறைந்தும் வறுமை சுற்றுப்புற சூழல் குறைபாட்டுக்குமியிடையே ஒரு மோச

மான வளையத்திற்கு ஒரு புது வடிவம் கிடைக்கிறது.

பத்து ஆண்டுகளுக்கு முன்பு ரியோ உச்சிமாநாட்டில் குறிப்பிடப்பட்டது போல அண்மையில் நடைபெற்ற உலக உச்சி மாநாட்டிலும் தொடர்ந்த வளர்ச்சி ஏற்படும் இந்த சூழற்சியை உடைத்தெறிந்து தொடர்ந்து ஏழ்மையினை குறைக்கும் வழி வகைகளை அடைய முடியும்.

விவசாய வளர்ச்சிகான பன்னாட்டு விவசாய நிதியம் மேம்பாட்டு அமைப்பு பெற்ற அனுபவத்தின் மூலம் அறிந்தது என்ன வென்றால் குறுவிவசாயிகள் தொடர்ந்த தொழில் நுட்பத்தையும், விவசாய வழி முறைகளையும் ஏற்றுக் கொள்ள ஆர்வமாக உள்ளார்கள் என்பது அறியப்படுகிறது.

ஏனெனில் இயற்கை ஆதார அடிப்படையில் சீரழிவில் முதலில்

நாமக்கல்லில்

முட்டை ஏற்றுமதி மையம் அமைக்கப்படும்

டாக்டர் எம்.எஸ்.சுவாமிநாதன் தகவல்

நாமக்கல், டி.ச. 3—
நாமக்கல் மண்டலத்தில்
உற்பத்தியாகும் முட்டை
களை வெளிநாடுகளுக்கு
ஏற்றுமதி செய்ய ஏற்றுமதி
மையம் அமைக்கப்படும்
என்று டாக்டர்
எம்.எஸ்.சுவாமிநாதன் கூறி
னார்.

சுற்றுப்பயணம்

விவசாய விஞ்ஞானி டாக்டர்
எம்.எஸ்.சுவாமிநாதன் கடந்த 2
நாட்களாக நாமக்கல் பகுதியில்
சுற்றுப்பயணம் மேற்கொண்
டார்.

இந்த சுற்றுப்பயணத்தில், எரு
மப்பட்டி ஊராட்சி
ஒன்றியத்தில் உள்ள வரகூர்
கிராமத்தில், தனது ஆராய்ச்சி
நிறுவனத்தின் உதவி புடன்,
வரகூர் உழவர் மன்றத்தின்
சார்பில் தீவன தானிய வங்கி
ஒன்றை டாக்டர் எம்.எஸ்.
சுவாமிநாதன் தொடங்கி வைத்
தார்.

இந்த தீவன தானிய வங்கியில்
கோழிப்பண்ணைகளுக்கு தேவை
யான, மக்காசோளத்தை பண்
னையாளர்கள் விரும்பிய வகை
யில் பெற்றுக்கொள்ளலாம்.

மரபணு மன்றம்

மேலும், நாமக்கல் தெற்கு அர
சினர் ஆண்கள் மேல் நிலைப்
பள்ளியில் மரபணு மன்றம் ஒன்
றையும் டாக்டர் எம்.எஸ்.சுவாமி
நாதன் தொடங்கி வைத்தார்.
அத்துடன் மோகனூர் ரோட்
டில் உள்ள வணிக வளாகத்தில்,
கொல்வி மலை மற்றும் நாமக்கல்
பகுதியில் உள்ளகய

உதவிக்குழுக்கள் மூலம்
நடத்தப்படும் கடைகளையும்,
கணினி தொடர்பு மையத்தையும்
பார்வையிட்டார்.

கோவில்கள்

தொடர்ந்து 2—வது நாளாக
கொல்விமலை பகுதியில் தனது
ஆராய்ச்சி நிறுவனத்தின் பணி
களை பார்வையிட டாக்டர்
எம்.எஸ்.சுவாமிநாதன் சென்
நார். அங்கு வாழ்வந்தி நாடு கூச்
சக்கிராய்ப்பட்டி கிராமத்தில்
சாமை, தினை, உமி நீக்கும்
நிலைய கட்டிடத்துக்கு அடிக்கல்
நாட்டினார்.

அத்துடன் வாழ்வந்தி நாடு
வல்—வில் ஓரி அரசு உண்டு
உறை விட மேல்திலைப்பள்ளி
யில் மரபணு மன்றம் ஒன்றையும்
தொடங்கி வைத்தார்.

மரபணு மன்றம்

திருப்புகழ்நாட்டில் உள்ள துவ
ரப்பணம், படசோலை ஆகிய
கிராமங்களுக்கு சென்று அங்
குள்ள கலஉதவிக்குழுக்களுடன்
இயற்கை வழி அண்ணாசி உற்
பத்தி மற்றும் ஏற்றுமதி விற்பனை
குறித்தும், மக்கள் தேர்வு செய்யும்
சிற்று தானிய ரகங்கள் மற்றும்
கேழ்வரவில் இருந்து "மால்ட்"
தயாரிப்பது குறித்தும் கலந்து
ரையாடினார்.

தீவன பயிர் உற்பத்தி

முன்னதாக நேற்று முன்தினம்
நாமக்கல் நளா ஒட்டலில் ம.சா.
சுவாமிநாதன் ஆராய்ச்சி நிறுவ
னமும், நாமக்கல் மண்டல
கோழித்தீவன உற்பத்தியாளர்கள்
மற்றும் முட்டை உற்பத்தியாளர்
கள் சங்கமும் இணைத்து
நடத்திய "தீவனப் பயிர்கள்
உற்பத்தி மற்றும் விற்பனை
குறித்த கலந்துரையாடல்
கூட்டத்தில் டாக்டர் எம்.எஸ்.
சுவாமிநாதன் தலைமை விருந்
தினராக கலந்து கொண்டு பேசி
னார்.

அப்போது அவர் கூறியதா
வது:—

புதிய உத்திகள்

தமிழ்நாட்டில் உள்ள கோழிப்
பண்ணைகளுக்கு தேவையான
மக்காசோளத்தில் 25 சதவீதம்
மட்டுமே நமது மாநிலத்தில் உற்
பத்தி செய்யப்படுகிறது. மற்றவை
பிற மாநிலங்களில் இருந்து இறக்
கும்பி செய்யப்பட வேண்டிய

முதலியார்
தெருவில் வசிப்பவர் சுப்ரமணிய
லம் மனைவி சம்பூர்ணம்.
இவருக்கு சொந்தமான மனை
திலத்தில் விடு கட்டுவதற்கு 6
கொத்தணர்கள் அஸ்திவாரம்
தோண்டும் பணியில் வேலை
செய்து கொண்டிருந்தனர்.
நேற்று பகல் 11 மணிக்கு சுமார்
4 அடி ஆழம் அஸ்திவார குழி
தோண்டிக் கொண்டிருந்த
போது சம்பத்தில பெய்த மழை

நிலை உள்ளது.
எனவே, மக்காசோளம் உற்பத்
தியில் புதிய தொழில்நுட்ப உத்தி
களை புகுத்த வேண்டி உள்ளது.
தமிழ்நாட்டில் மக்காசோளம் பயி
ரிடுவதில் உள்ள பிரச்சினைகள்
குறித்து மாநிலதிட்டக்குழு கூட்
டத்தில் பேசி, மாநில அளவில்
மக்காசோள உற்பத்தியில் புதிய
உத்திகளை கையாளுவதற்கான
ஆய்வு நடந்த நடவடிக்கை எடுக்க
ப்படும்.

சர்வதேச ஏற்றுமதி மையம்

நாமக்கல் மண்டலத்தில்
உற்பத்தியாகும் முட்டைகளை
வெளி நாடுகளுக்கு ஏற்றுமதி
செய்ய ஏற்றுமதி மையம் ஒன்றை
ஏற்படுத்தவும் நடவடிக்கை மேற்
கொள்ளப்படும்.

தமிழ்நாட்டில் வேளாண்மை
பொருட்களை ஏற்றுமதி செய்
பும் பொருட்டு 3 இடங்களில் சர்
வதேச ஏற்றுமதி மையம்
அமைக்க தமிழக அரசு முடிவு
செய்து உள்ளது. அதில் ஒன்றை
நாமக்கல்லில் ஏற்படுத்துவதற்கு
அரசுக்கு பரிந்துரை செய்யப்படும்.

சர்வதேச அளவில் ஆய்வுகம்

நாமக்கல் கால்நடை மருத்துவ
கல்லூரியில் சர்வதேச அளவி
லான ஆய்வுகங்களை ஏற்படுத்த
வும் சென்னை கால்நடை மருத்
துவ பல்சுலை கழக நிர்வாகிகளு
டன் பேசி நடவடிக்கை எடுக்கப்படும்.

மேலும், நாமக்கல் பகுதியில்
உள்ள முட்டை மற்றும் விவசாய
தொழில்களை மேம்படுத்தும்
வகையில் சர்வதேச அளவில்
பயிற்சி மையம் ஒன்றை அமைக்க
வும் நடவடிக்கைகள் மேற்
கொள்ளப்படும்.

இவ்வாறு டாக்டர் எம்.எஸ்.
சுவாமிநாதன் பேசினார்.

படப் பெயர்

முன்னதாக கூட்டத்துக்கு
எத்தவர்களை தேசிய முட்டை
ஒருங்கிணைப்பு குழுவின்
தலைவர் டாக்டர் செல்வராஜ்
வரவேற்றார்.

வெங்கடேஸ்வரர் ஹைசர்ஸ்
பொது மேலாளர் மக்தூம் இந்நி
லன் பங்கி மண்டல தலைவர்
செங்கடேஸ்வரன், நாமக்கல்
மாவட்ட வேளாண்மை இணை
இயக்குனர் நடராஜன், உழவர்
மன்ற நிர்வாகி ரஜினிகாந்த்
சுப்பையார் பேசினார்.

ஏற்பாடுகளை டாக்டர் எம்.
எஸ்.சுவாமிநாதன் ஆராய்ச்சி
நிறுவன ஒருங்கிணைப்பாளர்
டாக்டர் கோபிநாத் செய்து இருந்
தார்.

புதிய காசீத நிறுவனம்
(10 ஊழல்கள்) நே.நி: 04324-277025/26
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புதிய காசீத நிறுவனம்	புதிய காசீத நிறுவனம்		கூடுதலான	
	புதிய காசீத நிறுவனம்	புதிய காசீத நிறுவனம்	புதிய காசீத நிறுவனம்	புதிய காசீத நிறுவனம்
10,000	20,000	13.12.03	15.12.03	
1,000	20,000	13.12.03	15.12.03	

