



Strategic visions for transforming rural areas

ASIA AND PACIFIC REGIONAL WORKSHOP

2-4 December 2014

Siem Reap, Cambodia



I Kerala Farmers Problems

- Wild animal - crop cropped
- Calamity and Drought Relief Fund
Not being implemented effectively

II Potential

Growing menace of adulterants in medicinal plants

Scope for inter-cropping in plantation crop

III ATRA rubber. Need for resolving doubts

IV Inter-cropping of medicinal plants in demand

Architectural ~~the~~ Cubic volumes of air and water

Dr. Anil Kumar

Int. Symposium on Plantain Crops

Coffee

Pepper

C 4 - Conservation, Cultivate, Consume
Land to Land - Farmer to Farmer ^{emerge} bearing

Pepper, Cardamom

Diseases

Climate change - Rain

(Continuously, last 70)

Nonlinear Market - Determinants

Cultures Debate

Participatory Research - Participatory

Technology Development
Planning National

technology

services

Public Access - Price Stabilization fund

5 prices Participatory

Pepper / Cacao Participatory

Enfho Eldho Baby - Farrow School

Coffee, Pepper

Farrow to Farrow Learning

Post-harvest value addition

- Rubber Price

Demand - Supply

Enter - cropping - Crops

Pulses, Vigna as a
Cover Crop

Natural Rubber

1.3 million small holdings, with
an average holding size of 0.54 ha
Holdings less than 2 ha constitute 81%
of the total holdings in coffee

5th Major plantation crops

5th 12 million ha
Cement, arecanut, Castor, (8-12 million ha)
Tea, Coffee & rubber

others: oil palm, Cocoa, cardamom,
pepper, nutmegs etc - cover
0.6 million ha.

WTO - Nirmala Seetharam

Mechanisation - of Rubber Tapping

Low Heavy weathers

Genetic diversity in pepper is very high

NJALLANI

Joseph Nyallani - Cardroom Varieties

Farmer breeders

Institutional recognition

CAIATHS - Kallara

CABC - Kallara

I Funding Security
Financial Autonomy } chopra committee

II 4 C Policy Napers' Sense

Bottom-up Policy

Feb., 2015

2015 International Year of the Soil

Annual Report of NSSRF

Attapudi Nalukutor 4 Zero

George Challa

1st Phase Programs

① Farm School

② Mahila Kisan Sashaktikaran
Program

③ APN Pyat.

(near Silent Valley Biosphere)

Rich in agro-biodiversity

Sivanandan — December 15

Arif. 20th December — coming to Kottayam

Corporate Sector — Gopalakrishna

Mr Sivanandan (IAS)
Mr Ginzar

coming on 12th
December (Parade)

International Symposium on Plantain Crops

Kozhikode, 10-12 December 2014

① Dr M. Anandraj

Divacheri, Indian Institute of Species Research

Species of Plantain crops

② Dr Mithul Ba

③ Dr P. Rajendran, VC, KAU

④ Dr N.K. Kuruvu Kumar DDA (Horticulture)
ICAR

⑤ Shri Rajani Ranjan Rastogi, IAS

Adl. Secretary, Ministry of Commerce

Ms Nandini Sathyanarayanan, Minister, Commerce & Industry

Dr S. Devadasacharyam, General Convener

Dr M. Anandraj, General Chairman

Conservation

① Role of Botanical Gardens. Rich diversity

Kew Botanical Garden, Natural Rubber
for Henry Wickham. from Brazil.

- Malabar Botanical Garden (Derecha,
- TE BARS Dr R. Prakash Kumar
- Kalfalke - CABIC

② Major crops

① Coconuts, arecanut, oil palm,
cashew, tea, Coffee and rubber.

② Medicinal Properties Turneric, Pepper
and Garlic.

Anti-oxidants, Nutraceuticals

Therapeutic properties - Rasayana Therapy

About 60% of all spices in the

global market are grown in India

India's share in the global market
is less than 15%.

Yield

Black Pepper . Average yield in India is
around 240 Kgs per ha

In Vietnam, the average yield is
around 2900 kg/ha

Challenges

I Productivity Improvement

3 integrated steps

Soil

Water

Technology + Inputs

credit + insurance

Assured and remunerative
workably

Nadhwa's Teacher address
— Live Mumbai

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91538 775 885

Sanu Kapale

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pc Kasaran

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Sowmya, Nilaja letter to

Nadhwa

Achieving the Transition from Food to Nutritional Security

① Food Security: - Adequate ~~at~~ Calorie
Cultural

Availability

Access

Absorption

B. GoPales - Undernutrition often becomes the mother of malnutrition

C. GoPalan: First Come first approach

A malnourished person is prone to diseases -

Leprosy, TB, HIV/AIDS etc

② Nutritional Security

Balanced diet, clean, drinking water, sanitation, primary health care

③ ~~Current~~ Current use

Food Security + Nutrition

II current status of malnutrition

Natural Geographer

Family Health Survey

IFPRI

→ Hunger Index

↘ Multiple Index

III

Three forms of hunger

1) ~~Acute~~ Under-nutrition - Calorie deficiency

Restra: National Food Security Act, 2013

2) Protein Hunger

2016: International Year of

Pulses

Eggs, milk (140 Nutrition)

3) Hidden hunger

Vitamin A, Vit B12, Iron, iodine,

zinc, etc

③ Overcoming Hidden Hunger

Leveraging Agriculture for Nutrition

Three approaches

(a) Naturally Biofortified crop
of Orange, Sweet-potato, bread fruit.
etc

(b) Biofortification by breeding
Iron rich legume.

(ICRISAT + NIRMAL
Seeds

(c) Genetic Modification
Golden Rice —

A rice — analysis of
risks & benefits

Community Hunger or Rights

Malayala Manorama

Mr Jacob Mathew - Chief Editor

Threaty river linking. There is a view that
of Achenkott water is taken to Tamil Nadu
through river ^{linking} ~~linking~~, Kullharad may pose
ecological ~~disaster~~ disaster

Science and the Zero Hunger Challenge

The Year 2015 marks the beginning of serious and integrated efforts by all nations to ensure that by the year 2025 no child, woman ~~or man~~ or man goes to bed hungry ~~and~~ that no one's physical or mental potential is stunted by malnutrition. These were also the goals of the World Food Congress held in Rome in 1974 but they ~~are~~ remain until today ^{just} desirable goals. Over 800 million children, women and men will go to bed hungry tonight. (How then are we going to meet the Zero Hunger Challenge of 2025?)

Hunger has three dimensions.

First, a majority of the hungry suffer

from under-nutrition, mainly due to inadequate purchasing power. Second, large numbers suffer from protein hunger due to insufficient consumption of pulses, egg, milk and other protein rich foods. Third, over 2 billion, many of them being pregnant women suffer from ~~the deficiency~~ ~~hunger~~ hidden hunger, ~~caused~~ caused by the deficiency in the diet of iron, zinc, iodine, Vitamin A, Vitamin B.12, etc. ~~is~~

The Zero Hunger Programme involves ~~concentrating~~ attention to all these 3 forms of hunger.

The extent of prevalence of hunger and malnutrition also depends on the availability of food at affordable prices, economic and social (particularly gender) access to food and absorption of

the food in the body, which is a function of ~~the~~ access to clean drinking water, sanitation and nutritional literacy. Thus, there is need to take a holistic view of the zero ~~hunger~~ hunger challenge, taking into account both the food and non-food components of food availability, access and absorption.

The UN has identified the following two major components of the Action Plan for achieving the elimination of hunger.

These are:

All the above require intensive scientific research and support. For example, food availability needs research on the ~~low~~^{low}-green revolution methodology,

So that an increase in productivity can be achieved in perpetuity without associated ecological harms.

Economic access will need a biovillage approach to rural development so that both on-farm income and market.

driven non-farm employment opportunities are maximised.

2016 ~~is~~ has been designated ~~as~~ the International Year of Pulses. We should make a major effort to bridge the demand-supply gap in pulses, so that protein hunger can be addressed.

To overcome hidden hunger, we need a major effort in bio-fortification, so that agricultural remedies can be provided to the major nutritional malades.

2015 - V W Decade z Sestavami Devote

The first decade of the 20th century
was a time of great change and
progress in almost every field
of human endeavor. It was a
time of discovery and invention.

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17. Feb, 2015

IFAD, IPARI, MSSRF

Reinforcing the resilience of poor rural communities in the face of food insecurity, poverty and climate change through on-farm conservation of local agro-biodiversity

Dr Stefano Padulosi, Bioversity International

Dr Vincent Darlong, IFAD, New Delhi

① Stefano: Add value to life saving crops-

IFAD support has helped to strengthen the conservation of orphan crops

India's Food Security Bill
includes millets in PDS

② Vincent Darlong (IFAD)

Post-harvest Technologies

is important

Climate Smart Agriculture

Stefano Padulosi

Participatory Monitoring & diversity
What has been the impact of loss
of cultivated ~~crop~~ crops on farmers
heredity? (Red listing of crops)

Form Coalitions of the Custodians
Conversations

Suman Sahai (Gene Campaign)

Finger Millet (Setaria)

is less sensitive to drought

Women are not knowledgeable about
heredity

Establishing Seed Banks
Gene Bank
Grain Banks

Training Women

Finger millet yield can be increased

Make a calendar of operations

(3) Dr Ashis Mondal

Market plays an important role

Supply side should be improved

Sustainable Conversion of

traditional crops

50 Small Millet Producers'

Group

Participatory breeding + crop

improvement

5 varieties selected

Farmer Producer Company

25% sold (seeds of

small millets)

organic farming

The economic value of neglected crops has declined

Source guarantee is important
Stimulate group generation's
interest in agriculture

(4) Dr. Steven King

Limitation in Value chain &
markets

Conservation - culture - employment
- commerce

Climate Smart Millet - Millet's
ownership knowledge

Community Best Practices

Interventions to reduce drudgery
Value chain Development

Millet Processing Units
Village Knowledge centers

Dr Sanderh Neupane, Nepal

Nepal

Research on Amaranth

435 accessions - National Gene Bank

Community Gene Bank -

National Gene Bank

Litology

Dr. Nirjala Yeragi

Ms Jennifer Meldrum (Biodiversity)

Neglected and Underutilized species (NUS)

Spreading the message - Information

Platform

Let us stay in touch

Dr. Minerva Knapic (Dharwad)

Women Centric Farm to Market
Value chains of local crops for
Nutrition Security
Millets are both cheap & widely
available
Millets can be eaten instead of
rice or wheat -
Women play a key role
Need training opportunities
Nutrition Education - Millets & Health

Mr. Karthikeyan, Dhan Foundation

Promoting NUS for the Masses

Inadequate Policy Support
Declining consumption
Promoting consumption
Policy Advocacy

Dr Rakesh Kumar, Dehra Dun

Ganga but not fit for drinking
Millet are cultivated in Uttarakhand

18 Feb

Enabling Policy Environment

④ Dr Kedar N. Rai, Crop leader,
Harvest Plus

① D. S. Daryata Rao

Indian Institute of Millet Research

(formerly Directorate of Sorghum Research)

Market driven - products

Ambaras

Dr. Dayakar Rao

(12)

Billets are included in Post-graduate
meal scheme in Karnataka

Nillet Bala

Natural Food Security Nurseries

Insurance cover for billets

Arish wele, Mineral Seeds

High iron Bajra

Profitability is essential for
Sustainability

open pollinated varieties

Bio-fortification

Pearl Millet and Wheat -

iron, zinc, Vitamin A

363 tonnes of seeds of hybrid Bajra

were sold

Boya
Higher non + zone

15 to 20% use yield

Deficiency: No Market

and hence can be misappropriated

Stepano Padaloe

End of Project - Reflection on
Achieves

① Build an Enabling Policy Environment

India
Farmers + Breeders
Rights

Technology + Public Policy - Synergy

② Documentation + Monitoring

Community Biodiversity Register

(eg of Bolivia)

③ The International Treaty - ITPGR

(Dr Shabaz Bhatti)

④ National Food Security Act, 2013

⑤ A Global Network

(Evaluation of the custodians of
Conservation)

IUCN & Biodiversity
should work together

⑥ Rural & Tribal Women's
empowerment

Role of Rabbits: Minor & Major threats

Climate Risk Management

Nutrition

less irrigation water

Label for Conservation

Label for organic honey, IFOAM.

IFOAM type of organizations

17 March, 2015

LANSA - UNICEF Discussion
Visit of Dr Saba Mehra

UNICEF

1. Dr Saba Mehra, Chief of Child
Development & Nutrition
UNICEF
2. Dr Farhat Sayed, Nutrition Specialist
UNICEF, Chennai
3. Dr Vani Selvi, Nutrition Specialist
UNICEF

Saba: Nutrition food
Women & child development
Nutrition quality

Agriculture, Nutrition & Health

Vani Selt

Nutrition, livelihood promotion

Nutrition & health - of TB, HIV/AIDS

Public or

Drug and Food based approach.

Dr Farhat

Krishnagiri district, Chennai

Focus: Mother & children

Zero Hunger challenge

1) Zero Hunger villages ^{later}

Calorie free villages

Tamil Nadu has been studied

Nutrition Policy of Tamil Nadu - out of date

Communit's Hunger Fighters - Nutrition literacy

Coalition for Nutrition Secure And

Zero Hunger Village

- Under nutrition - calorie deprivation
- Protein Hunger
- Hidden Hunger
- Drinking water, sanitation
journey health care

Every Village - a Nutrition
Secure Village

Towards a Huga-fue Turbo

Chandigarh

12-14 March, 2015

13 March (Friday)

Prof. E R Kashyap oration

Dr Harsh Nayyar

Dr Randhawa

Dr Manjit Kang) came for luncheon
Neelra

Dheran Vir - Former chief Secretary &
former V.C, Haryana Agr University

Dr ~~B~~ Dua - formerly IARI

Dr Anil Grover, V.C

14 March

① Aisha Barnala (~~nieta~~ grand-daughter
of Surjit Singh Barnala)

② Sardar Jagjit Singh Hara (Ludhiana)

③ Dr Harsh Nayyar

④ Dr Randhawa

82 Kailash Satiyartha, N.L (Punjab)

2014

along with Nabeela

Kailash Satiyartha sends his best regards

G. New

Jagjit Singh Hara

Rice-wheat: Mandatory rain water harvesting

Cost of higher yield

New concept

Cost-cutting innovations in agriculture

PAW: 55 Kg DAP/acre

Hara explains: ~~25~~ 25 Kg DAP gives

the same result. - saving 30 Kg of DAP

DAP. Rs 25/kg. Rs 750/acre is the
Saving

90 lakh acres in Punjab under wheat

675 crore saving in Punjab alone

Natural Level 70 lakh acres

90% of DAP is imported

Deep placement - Pulled area

Improve the efficiency of fertilizer use

Rice Seed rate: 1 quintal / ha

Saving of seed & fertilizers

Breeding for High Yield
Ready for High Yield

Make rain water harvesting mandatory

Seed drill - 40%. Saving
Quantity System - Positive system

✓✓ Invert M. Hara for the 1st Year of
Soil water

Special Agricultural Zone - Punjab

(SAZ)

2014 - Nobel Peace Prize

Child Rights

Kailash Satiyarthi - child labor

Malala Yousafzai - girl education

Conferred in Oslo on ~~the~~ December 10, 2014

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Parada

Raw.

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(1) Support for Research
Molecular Genetics
Opportunity for Rubber in the
North east

Sabitha Daffy



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