

D. P. Invernizzi

Tax and Estate Planning
Commission

April 5-6, 1989

Nehru Centenary Symposium on Agricultural Research

Suggestions

- ① KrishiNet - Computer Network.
- ② Computer aided extension (CAE)
- ③ Computer aided instruction (CAI)
- ④ Designing one District to each Agricultural University for wasteland development.
- ⑤ National efforts in biotechnology

on the analogy of the Rice Biotechnology project.

Elimination of Virus diseases - should be undertaken.

b) International Cooperation

- a) Research Bottlenecks - ^{clearly} articulated ~~the~~ Research
- b) Critical gaps in internal competence \leftarrow Faculty upgrading
- c) Research Cooperatives \leftarrow global climate change
Climate Monitoring,
Research + Management
- d) Technology Alert & Assessment.
- e) South-South collaboration.
- f) Intellectual Property Rights - Gene Patenting

Molecular Biology

Identification of Genes : Transposons

RFLP Mapping - Arabidopsis - suitable material

Virus control

Coat Protein gene

Anti-sense RNA

Ribozymes - introduce to cleave the messenger-RNA so as to stop some activities like the production of BCAA in Lathyrus sativus

International initiatives

FAO/UNEP Panel of experts on Integrated

Pest control. - legislative issues, use of pesticides and quarantine procedures.

A network of 8 countries (Philippines, India, Bangladesh, Thailand, Malaysia, Sri Lanka, Indonesia and China) exists under

the FAO Inter-country programme for

Rice IPC - from 1982. IRRI has a

Committee on IPM.

IITA - Cassava pest - Africa wide
Biological control Programme.

ICIPE - PESTNET.

RF. - Hot Spot Screening site

in the Toluca valley for

Phytophthora infestans in potato

Wheat: stem, stripe and leaf rusts -

International Rust Nursery -

led to the identification of

Mexican dwarf wheats

The Need for greater international collaboration in Pest Management

M. S. Swaminathan

For tomorrow the challenge is to determine how humankind can live in harmony on this finite globe, establish permanent relationships ~~it~~ to its finite shrinking resources as well as with infinite space and to enable achievement of the individual potentials of all human beings.

Each noteworthy civilization has grappled with the great problem of its time. Living in harmony with the earth and with each other is the great problem of our time.

Varietal diversity - danger of genetic homogeneity

Developing countries: Multiple cropping and

Discard farming

Crop Rotation: Crop to serve as a barrier to pest multiplication

in the same manner as climate does in temperate regions.

Broad Spectrum pesticides like synthetic pyrethroids used against Heliothis

armigera may control the target pests

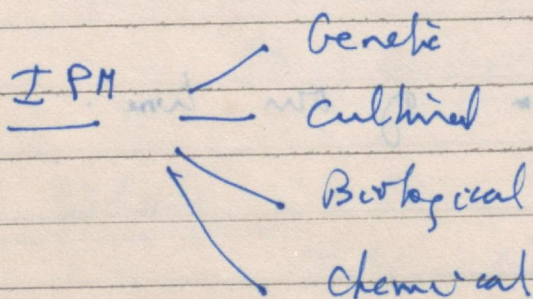
but non target pests like white fly

have a field day. Prophylactic sprays

affect an array of beneficial organisms

— parasites, predators and other

natural enemies



Social engineering aspects -

Chemical

Selective chemical agents - new areas
of research.

Cultural - crop rotations -
winter cropping

Biological - CIBC - 50 current
biological control projects
Newsletter: "Biocontrol News and Information"

Needs : (a) Expert taxonomic services -
computerised data banks.

(b) Information dissemination and
interpretation based on published
sources and reports, museum collections etc.

(c) Exploration, screening and evaluation
and selection of agents

(d) Third country quarantine arrangements

(e) Training

International efforts. (1) CABI - CIBC.

(2) International Organisation for Biological
Control (IOBC) - set up with support
from IUBS.

(3) CIRAD - IRAT.

(4) FAO - UNEP

(5) CGIAR.

(6) FEIPE

Women and IPM - Training in IPM Methodology.

Public Policy Support : Indonesia - in rice

Malaysia - Thailand.

and economic

Regional Political Organisations

SARC, ASEAN, SAARC, EEC.

Pest Management Decisions : Making

a dent in the problem in 5 years.

Weeds :

Mikania

Eupatorium odoratum

Salvinia molesta

Eichornia crassipes

Giant Mimosa, Mimosa invisa

Pests

Leucaena Psylla - Helicoverpa cubana

World Pesticide Market (1987) - \$ 20 billion

| | <u>% of sale in world</u> | India |
|------------------------------|---------------------------|-------|
| Herbicide | 43 | 5 |
| Insecticide | 30 | 78 |
| Fungicide | 21 | 15 |
| Others (Nematicide, etc.) | 8 | 2 |

Agricultural imperatives : { Expanding population
shrinking land resources.

Vertical growth in productivity
Higher intensity of cropping.

Sustainability, stability, productivity
and profitability of major farming
systems.

Cotton uses nearly 40% of the 80,000 MT
of pesticides used in India.

Synthetic pyrethroid increases the fecundity
and biological activity of the white fly.

Dyco-herbicides

Vial products.

BT gene in Bacillus thuringiensis

London

Better World Society Board Meeting

April 17

Maurice Shing: Does not want
to continue as President,
as he has shifted to Canada.

Sub committee, Ted, Russ & Maurice.

Chico Mendes campaign Brazilian Environmentalist

May - CNN World Report Broadcasting
Conference in Atlanta.

BWS Awards

① Communication - Times Incorporated -
for the Planet of the Year.

② Humanitarian Award : UNICEF

③ Population & Waddlem

④ Peace : Corbaker, USSR.
Stanley Schunbaum

⑤ Environment
Brazilian India -
Pewar
Daria Alagrede -
wildlife force behind Chico Mendes.

Peace, Population and Environment

~~Ed.~~ ^{and Equitable}
Sustainable Development

Nadras Engagements

Devendra Kumar ^{Td.} 566920

Chepauk State Guest House - Sunday, 14th May

Thiru D.K. Raja, Chief Electoral Officer

3.00 pm on 10th May, Planning Commission

Monday 15 Day: Inauguration of the Planning

6.00 pm

Commission

9 May, 1989

Tamil Nadu State Planning Commission

11.00 am

Meeting with Agricultural Products Commissioner,
Animal Husbandry Secretary (Shri Duruganai),
Oilseed Development Commissioner (Shri Selvaraj),
Forestry

Issues

Dairy Cooperatives
oilseed cooperatives
Vegetable "

Tree Growers' Cooperative

World Environment Day -
June 5

Climate change

Inauguration of the Tamil Nadu
Social Forestry R & D Society

Stage II

Issues

New Cooperative Societies

Guarantee of working capital

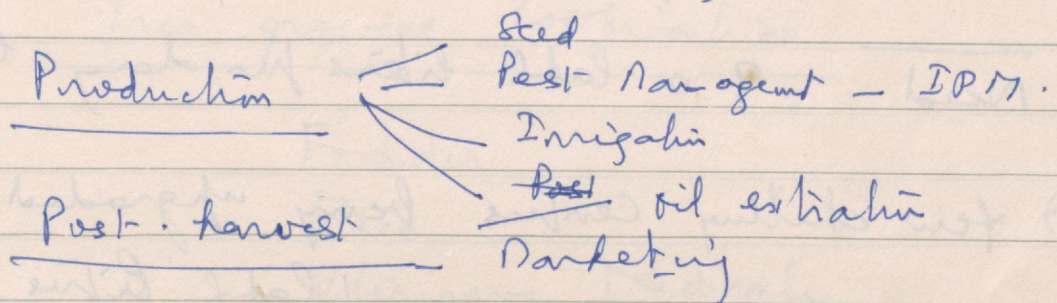
Does the Coop. want to take up Stage 2?

Stage I: Seed production at Nyeveli
Kudachalam -

Seed Production - Minor irrigation.

Integrated Pest Management

Post harvest Technology



oil Technology Division - coordination with
the cooperatives

Loss of 4 crores during 1988

Productivity improvement.

Thangavin District: Proposal to grow oil palm

Seerkazhi area: 500 ha

Sun Flower:

Groundnut

Sesamum

Coconut ← Wood Technol

Seed Production problems — to be reviewed

B. Dairy. Dr. Selvaraj, Mr. Nagarajan, ^{Dairy} Dev. _{Commissioner}

Operational Fleet III : 1987 — starting

Elections to Cooperatives — absorption of deputations

Managing Director to be appointed by Cooperatives
Cath

Nadras: 5.8 / litres per day

Need 9.0 lakh litres per day by 1990

A few chilling centres being upgraded to
1 lakh litres / day.
10 ton Milk powder plants at 3 places.

Thangavur
Pudukkottai) Not doing well

Quality of semen not good.

Working capital: Rs 8 to 10 crores.

Procurement is going up.

Priority: Third Dairy — in Dakshinapuram

More investment needed

More liquid N cylinders.

High quality semen — to be obtained
from the Netherlands

69
Annual Multitask — Fodder

Non-conventional energy sources —

Biomass utilisation

Absorption of defecation

III

Tree-growers Cooperatives

Dr. Govindarajan — Addl. Director of
Animal Husbandry

Tree growers Cooperatives

Fodder

Feed

Veterinary Medicals

Fuel Wood

Fertilizers

Paper Pulp

IV

Vegetable Growers

National Horticultural Development
Board

Nilgiris Vegetable Growers Cooperative

is functioning well

Vegetable vendors facilities

Quality for the consumer

Better Fair price for the producer

Important Areas

Leprosy cure - Dr. Ramani Sivarajan.

Decadal objective: Removal of leprosy from
Tamil Nadu by 2000 AD

Mrs Sarayu Aiyengar

