

Recommendations of State Level Workshop
on
**CHALLENGES OF CROP HEALTH MANAGEMENT
IN ORGANIC FARMING**



Kerala Agricultural University
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Recommendations of State Level Workshop
on

CHALLENGES OF CROP HEALTH MANAGEMENT
IN ORGANIC FARMING

held on 05.01.2012
as part of



Agricultural Technology Transfer Week
"UZHAV 2012"

കാർഷിക കോളേജ് പടന്നക്കാട്
ഔദ്യോഗിക സാങ്കേതിക വിജ്ഞാന സ്വീകരണ വാരാഘോഷം
ഉഴവ് 2012
2012 ജനുവരി 5 മുതൽ 13 വരെ

- ശിൽപ്പശാലകൾ
- പരിശീലനങ്ങൾ
- കരുമാവ് കൃഷി സെമിനാർ
- കാർഷിക പ്രദർശനം
- കലാസന്ധ്യ

at
College of Agriculture, Padannakkad
Kerala Agricultural University

FOREWORD



The Kerala Agriculture University functions with the mission of Excellence in Agricultural Education, Research and Extension for Sustainable Agricultural Development and Livelihood Security of the Farming Community. Recent years have witnessed tremendous changes in the Agriculture scenario of the State. Organic policy has been adopted and Research and Extension activities have been strengthened to support sustainable development. Pesticides having red and yellow colour code have been banned in Kasaragod district and all extremely toxic pesticides have been banned in the entire state. But at the same time, biological alternatives have not reached the market on a large scale. It is at this juncture that the Kerala Agricultural University has taken up initiative to organize a workshop on "Challenges of Crop Health Management in Organic Farming". The workshop has created a platform for scientists, extension functionaries and farmers to interact and come out with valuable suggestions for sustainable agricultural development. The interaction was very fruitful and helped to crystallize valuable recommendations.

It is hoped that this publication will be useful to policy makers, scientists, development agencies and farmers to face the challenges of crop health management while formulating and practicing organic agriculture in the humid tropics.

Dr. K R Viswambharan
Vice - Chancellor,
Kerala Agricultural University

PROGRAMME

10 AM

Welcome Address

Invocation

Dr. M. Govindan

(Associate Dean, COA, Parlanakkad)

Presidential Address

Dr. M.G. Bhat

(Director of Cashew Research, Puthur)

Inaugural Address

Dr. T.P. Rajendran

(Assistant Director General, ICAR)

Special Address

1. Dr. George V Thomas

Director, CPCRI, Kasaragod

2. Dr. M.Anandaraj

Director, IISR, Kozhikode

3. Sri. V. V. Pushpangadan

Additional Director of Agriculture, Kerala.

Session-1

Chairman

Dr. Pathummal Beevi

(Associate Director of Research, KAU)

Co-Chairman

Dr. Narayanan Kutty

(Associate Director, RARS Ambalavayal)

District wise specific issues :

Present status and challenges of plant protection

Sri. Thirumaleswar Bhat, DDA, Kasargod.

Smt. V K Sudha, ADA, Kannur.

Present status & challenges of Soil Health Management

Dr. P.R.Suresh, Professor, KAU

Dr. A.S.Anilkumar, Professor, KAU

Organic input production-Problems and Prospects

Dr. M.Govindan, Associate Dean
Dr. K.P.Mammoolty, Professor, KAU
Dr. K.M.Sreekumar, Assoc. Prof, KAU
Dr. George V Thomas, Professor, KAU

Session-2

Chairman : **Dr. M. Anandaraj**
(Director, IISR)

Co-Chairman : **Dr. Thamban**
(Scientist CPCRI)
Dr. Narayanan Kutty
(ADR, IARS Ambalavayal)

Crop specific problems & strategies

- a. **Black Pepper and other spices:**
Dr. Neema V P, Professor and Head, PRS Panniyur
Dr. Sasikumar, Scientist IISR.
- b. **Coconut and Arecanut**
Dr. Merin Babu, Scientist, CPCRI
- c. **Vegetables**
Sri.Sajan Andrews, VFPCK Kasargod
- d. **Cropping System**
Dr. Jacob John, Professor, KAU

Session-3

Experience sharing of farmers

Panel discussion and finalization of report

Vote of Thanks : **Dr. B.Jayaprakash Naik**
Associate Director, RARS Pilicode

A state level workshop on “Challenges of crop health management in organic farming” was organized at the College of Agriculture, Padannakkad with the objective of achieving higher productivity through organic agriculture with special emphasis on Perceptions and perspectives in soil-crop-animal-human health monitoring and management in the tropics. It was organized in collaboration with Indian Council of Agricultural Research, Directorate of Cashew Research Puttur, Indian Institute of Spices Research Calicut, Rubber Research Institute of India, Department of Agriculture, Kerala, VFPCCK and Plantation Corporation of Kerala.

The recommendations that emerged from the various sessions in relation to strategies, approaches, institutional interventions, transfer of technology, farm mechanization, farm research, farmer-industry linkages and agricultural education are presented below.

I. Strategies for enhancing agricultural production & sustaining soil health

- Promotion of organic primary and secondary agriculture and allied sectors (farming, fisheries, animal husbandry) is of paramount importance and inevitable for the revival and revitalization of the agriculture sector of the country in general and Kerala State in particular.
- Technology innovations in organic agriculture is essential for accelerating the profitability through higher productivity in organic farming for all the identified sectors.
- Pollination ecology shall be detailed as major intervention in enhancing productivity of cross pollinated crops. Management of agro-ecosystems to facilitate higher support from cross pollinators shall be looked into. The state may declare that pollinators are the major crop production input in its agriculture, for both horticultural and field crops. Accordingly, due incentives could be built up to enhance input use efficiency of this major agricultural input. Transfer of improved technologies for empowerment of all stakeholders are to be carried out in a time bound manner.
- Environmental protection and ecological sustainability are to be achieved through soil and water conservation measures, soil health management programmes, *in situ* rain water harvest, conservation and utilization, recycling of waste water and soil waste management through appropriate measures.
- While considering the agricultural productivity, concerns about food safety, quality, environmental protection, safety of farmers and farm workers and welfare also have to be addressed. It is desirable to set up control and compliance systems for various kinds of farm produce covering horticulture, floriculture, food grains, aquaculture, livestock, poultry, etc.

II. Approaches for promotion of area under organic agriculture

- Statewide adoption of organic farming should be taken up with caution. Prospects of transformation to organic mode are to be thought of only on a phased manner. Areas, groups, and crops should be selected for shifting to organic farming, considering native soil fertility and the availability of local resources and the market for the organic produce.

- Crop Based Good Agricultural Practices formulated by the Bureau of Indian Standards has to be adopted and popularized.
- Cost-effective organic certification may be made through participatory mode. Farmer groups with participatory guarantee mode will be practicable since internal monitoring of organic practices is possible within the group. In States where the land holdings are small and marginal, group methods alone are proved to be economically viable propositions. Producer companies, in the lines of Adat panchayat model (of agro-chemical-free farming, as vibrantly promoted by Kerala state in association with Kerala Agricultural University and other active stakeholders of such panchayat) may be built up as nuclei of activities. Good Agricultural Practices, in accordance with BIS India GAP certification as prescribed under the provisions of *Bureau of Indian Standards Act, 1986* and Rules and Regulations framed there under may be introduced in organic production systems.
- Front Line Demonstrations (FLDs) and On Farm Trials (OFTs) are to be carried out in all agro-ecological zones to convince the stakeholders about the superiority of new varieties evolved and agrotechniques developed exclusively for organic farming. Considerable improvement in adoption rate can be expected.
- Experimental evidence in yield reduction to the tune of 25 % dissuade several farmers to shift to organic mode from chemical farming, warranting support from Government in the form of compensation for yield reduction for the first three years of transformation. The rates may be worked out for different crops in different zones for different seasons. However, these need not be the actual position in farms. Hence, each farmer needs to take up venture-based approach to satiate the ambiguous basis of such transitions to profitable organic farming.

III. Institutional interventions for policy support and mass production of organic inputs

- Participatory Guarantee System (PGS) for organic certification in small and marginal farms through Krishibhavans / KAU / NGOs / Registered Farmers' groups / Agri-Clinics / Agri-Business Centres may be accepted as a policy for export of organic products.

- Bio control and biofertilizer manufacturing units with appropriate accredited research and development set up, utilizing RKVY funds are to be set up in all the agro-ecological zones of the State for sustainable utilization of native flora and fauna in disease suppression and improving soil health.
- A sub-centre of the Regional Centre for Organic Farming, Bangalore may be set up in all the districts to facilitate organic certification for both knowledge servicing and technology back-stopping.
- A Pesticide residue laboratory may be set up at College of Agriculture, Padannakkad to monitor pesticide pollution in the Malabar region. The KAU's AICRP centre at Vellayani shall be part of this process.
- Incentives through higher procurement price/support price for organic agricultural produce in districts declared as organic may be fixed. Additional procurement centers to collect the produce covering all the farmers of the area and outlets to ensure the supply of poison free food are to be established and operated in public-private partnership.

IV. Measures for transfer of new cutting edge technologies

- On farm trials and front line demonstrations are to be laid out to demonstrate the significance of innovative and cutting edge technologies
- Training programmes are to be regularly organized in KAU stations and RATTCS for human resource development.
- Academy for skill development in agriculture and allied sectors may be set up at College of Agriculture, Padannakkad. The Academy will facilitate acquisition of skills to build professionalism among agricultural graduates and organizing practice sessions for school children and progressive farmers, unemployed youth, etc.
- Popularisation of newly released high yielding varieties, which respond very well to organic packages, through mass production and distribution of quality planting material

V. Promotion of farm mechanization for food security in traditional rice growing problem soils

- Increasing cropping intensity and cost effective organic rice production from traditional rice growing problem soils like Kaipad through farm mechanization. Setting up of food security army to revitalize organic rice production in the State will help a long way to achieve food security.

VI. Intensification of farm research for development of agro-ecological zone-wise technologies

- Documentation of indigenous organic farming practices and validation will help to understand more about agricultural heritage of India for fine tuning of location specific technologies.
- Developing appropriate technologies for enhancement of soil fertility and pest and disease management in organic mode will accelerate agricultural production without any ecological disturbance.
- Developing package of practices for organic farming of different crops in each Agro-ecological zone will encourage farmers to shift from inorganic to organic pathways.
- Database management of the different components of organic agriculture systems, viz, organic farmers, organic inputs, organic markets, research and development institutions, certification agencies, export promotion councils, domestic and foreign markets, market intelligence, supply chain management, etc. will facilitate stakeholders to take correct decisions for profit maximization.
- Five broad approaches need to be adopted for efficient food production system which is inevitable today are exploitation of genetic potential of crops, cultural practices, biological control, regulatory measures and clean planting materials.
- Development of economically and ecologically viable intensive integrated farming system models suited to different agro ecological zones will help organic farmers to maximize production and profit without accumulation of generated organic wastes in the different sub components of the system.

VII. Establishment of farmer-industry linkages for value addition and marketing

- Setting up of regulated markets for organically cultivated farm products will ensure remunerative prices for the farmers
- Tie up arrangements with pharmaceutical industries for cultivation of medicinal plants will help to generate economic wealth from our biological capital
- Value addition and product diversification of organic rice, organic coconut, organic cashew, organic pepper and organic fruits and vegetables will also ensure to avoid glut and adequate markets for organic products

VIII. Revamping of Agriculture education for building professionalism among agri graduates mastering in organic agriculture

- Revision of undergraduate and post graduate syllabus with adequate emphasis on various aspects of organic farming and certification will help to build professionalism among agricultural graduates and post graduates

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*Dr M.Govindan
Associate Dean &
Chairman, Organizing Committee.*



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Special Address
Dr. Anandaraj, Director IISR, Kozhikode



Welcome Address:
Dr. M Govindan, Associate Dean, COA, Padannakad



Special Address
Sri. V.V. Pushphangadhan,
Additional Director (DOA) Tiruvallur



Reception



Technical Session



Dr. T. P. Rajendran, ADG
interacts with KAU Scientists

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College of Agriculture Padannakkad Celebrates Centenary of Coconut Research Farm (1916-2016)