

Stakeholder Consultation meeting For the Conservation and Management of Pollinators for Sustainable Coffee Production, Through an Ecosystem Approach in Kodagu (Coorg), State of Karnataka, India - 25th August 2005

B.A. Daniel* and Ajay Rastogi**

Food and Agriculture Organisation's office of the representative in India convened a stakeholders consultation workshop on August 25, 2005 at Madikeri (Coorg) Karnataka for the conservation and management of pollinators for sustainable coffee production, through an ecosystem approach in the State of Karnataka. The objective of the programme is to improve understanding of conservation and management of pollinators for sustainable agriculture through which appropriate recommendations on adaptive management could come and efforts towards necessary policy reform could be pursued. The invitation sent by Mr. Daniel Gustafson, FAO Representative in India and Bhutan was well received by the stakeholders. About 30 people attended this one-day meeting representing small growers, large planters, ICAR institutes, line departments, NGOs, academic and research institutions etc. pursuing activities in the related fields in Coorg region.

Ajay Rastogi, Organic Programme Coordinator welcomed the gathering on behalf of the FAO and appreciated them for the positive response to the invitation. He mentioned that the existing farm practices are mainly dependent on technical packages that are focused on external inputs. To a large extent commercial organic farming is going the same way by just converting to the use of organic and biological inputs but still being largely dependent on external inputs. This is largely true for plantation crops and big estates. In addition, interventions in organic farming so far have also been mostly restricted to maintenance and enhancement of soil fertility and pest and disease management. The focus has been on the agricultural land alone and the role of ecosystem services from the larger landscape has not been properly evaluated e.g. the service of pollination. While the role of pollinators is increasingly recognised, practical ways on how to maintain and enhance suitable habitat for pollinators in and around crop fields needs to be worked out.

The reason for selecting Coorg as a possible location is mainly due to the biodiversity richness, landscape diversity and predominance of pollination dependent crops such as Coffee, Orange and Cardamom and other important commercial crops. With this introduction and background information on the concept, he mentioned that in this stakeholder consultation we should all come up with ideas on suitable interventions to develop the concept in a participatory way. The project should have elements of: - action research to fill in critical knowledge gap, - training and outreach to build local capacity and incorporate recommendations in management of coffee; and - positively influence concerned policies

Following, all participants introduced themselves to know each other that had a diverse group of stakeholders such as bee keepers, agriculturists, estate owners, company and farm managers, scientists, researchers,

entomologists, Directors from government institutes, and members from local associations. Ajay, the convenor of the meeting thanked Mr. K.S. Subiah, Ananda Estate, Arapattu for his effort to convene this important meeting.



There were five presentations from the invited members and the gathering. Ms. Soubadra Devi, Fellow, ATREE gave very interesting presentation entitled "Forgotten Pollinators and Forsaken Food Security". In her talk she focused mainly on pollinators, the declining trend of pollinators, pollinators and productivity, threats affecting pollinators and solutions to prevent pollinator loss. She gave examples such as Bird friendly coffee, creating interface of pollinator friendly zones to increase connectivity (corridors) and understanding the economic value of pollinators. She also suggested forming of Coorg Pollinator Initiative (CPI).

Members welcomed the idea of CPI. They also expressed that extensive use of chemicals has to be restricted. The representative of the Coorg Bee-Keepers Cooperative Society mentioned that farmers in the earlier times took care for the pollinators and that is why Coorg came to be known as land of honey.

Dr. C.G. Kushalappa, Associate Professor, College of Forestry, University of Agricultural Sciences, Ponnampet, Coorg gave a technical presentation on Land use pattern and changes in Coorg region. He explained that Kodago which is a hot spot of biodiversity has 73% of its geographical area under tree cover and this district is the largest coffee growing district in the country. He pointed out that more than 30 ethnic communities with in Kodago have their own traditional practices that they still follow. He compared the land use pattern in Coorg 1977 with that of 1999 that showed considerable amount of land use change explaining conversion of private forested land into cardamom and coffee plantations. Some major changes that is happening are: Loss of forest cover, loss of native trees for coffee plantation and replacement by Silver Oak, loss of community lands, conversion of natural land into Teak plantation.

He also mentioned that in Kodagu 55-60 growers are into organic/ biodynamic practices cultivating approx. 2040 acres; and organic farming cannot be practiced with out trees.

Ms. Smitha Krishnan, Pollinator researcher from ATREE, gave a talk on Pollinator services provided by the sacred groves of the Western Ghats to the adjoining Agriculture

* Scientist, Co-ordinator, IPNSA, Zoo Outreach Organisation
** Ajay Rastogi, Organic Programme Coordinator, FAO of the United Nations, New Delhi. E-mail: Ajay.Rastogi@fao.org

landscape. The importance of the services and the role of the plantation as a continuous patch to the fragments of forest (Sacred groves). While explaining the work plan she explained the role of pollinators and by differentiating the social and solitary bees and their influence on pollination. She also explained the methodology involved in the study that will be carried at Virajpet taluk.

Dr. M.N. Venugopal, Principal Scientist, Cardamom Research Centre, Indian Institute of Spices Research presented their research on Cardamom and role of pollinators. This was a consolidated account of work done in three institutes, namely Cardamom Research Centre, Institute of Spice Research, Regional Research Station and the Mudigani station during the period 1982-86. Dr Venugopal pointed out that Cardamom has an extended flowering period from April – October, with a higher concentration during monsoon season. It is mainly pollinated by bees accounting to 92% and remaining by butterflies and others. There are about 3 species of cardamom cultivated over 73,000 ha that gives a production of 12000 M tones. The main pollinators are *Apis cerana* and *Apis dorsata*. Three to five bees visit per flower and six visits of bee are required for good pollination. However, Thrips is a major pest and it is difficult to manage it without spraying of chemicals. One of the participants informed that TATA Coffee is trying to introduce a variety that needs less pesticide.

Coffee Board representative said that it is a challenge to the environment and a major issue that people are now converting from Arabica to Robusta. Forest cover is also

lost due to this change. Main reason for this change is due to White stem borer pest problem. Every year we loose 1000-2000 acres of Arabica. Nearly, 10 lorries of Arabica roots are uprooted and transported every day and that implies that almost 2 acres is being removed daily. A community based approach is required to stop this.

Dr. Anu Appaya, Head of the Department, Microbiology, Field Marshal K.M. Cariappa College, Madikeri gave a very interesting talk on documentation of root rotting fungi in Coorg District that has an association with the honey bees. In Tamil Nadu there are about 54 different species of this fungi in 23 genera; in Kerala there about 62 species reported. We have documented over a period of 6 months and accounted 60 different species belonging to 34 different genera of this root rotting fungi. Some fungi are visited by bees (Feb. to Apr.) and butterflies. The frequency of visitation by the bees is more in early morning but for a specific fungus. Nectar is collected by house bee / butterflies. Better documentation is required.

Various types of yeast is available in Coorg. One of the rich sources is honey. The honey colour changes from season to season. Is there a role of yeast in honey colour? There is a relation between the colour & taste that differs from flower & Season. He also mentioned that Honey has high amount of residual pesticides

After the lunch break a session on issues and possible interventions by the project and identification of locations etc. was undertaken, this input will be used in the proposal.

Final Announcement

National Symposium on “Wildlife Health and Husbandry Constraints”

Fourth Annual Convention of Association of Indian Zoo and Wildlife Veterinarians
Collaboration: Assam Agricultural University, Guwahati & CZA, New Delhi
Venue: College of Veterinary Science, A.A.U., Khanapara, Guwahati, Assam, 781 022

Annual convention of the AIZ&WV and “National Symposium on Wildlife Health and Husbandry Constraints” are programmed to be held on 25th and 26th October, 2005 at College of Veterinary Science, Assam Agricultural University, Khanapara, Guwahati (Assam) with Cooperation of Assam State Zoo, Guwahati. The veterinary science professionals of Zoo and Wildlife Organizations, academic and research institutions are invited to participate, present their works/ observations/ findings in the form of paper and on the aspects of wildlife health and husbandry management matters. The wildlife managers are also invited to participate and contribute.

For registration please contact one of the following **Dr. B.M Arora**, President, AIZ&WV, Bareilly (UP)
Ph: 0581-2541644 / Mobile 09412463136

Organizing Secretary, **Prof (Dr). Dharmeshwar Das** Head, Division of Animal Genetics & I/C Wildlife Health Centre, College of Veterinary Science, Guwahati, Assam-781 022, **Ph: 0361-2331135**

Joint Organizing Secretary, **Prof (Dr.) Apurba Chakraborty** Head, Division of Pathology, College of Veterinary Science, Guwahati, Assam-781 022, Email: <apurbachkraborty@fastmail.fm> **Ph: 0361-2336833**