

Conclusions of the Workshop: Public-Private Partnership in the use of Agribiotech for Sustainable Solutions to Brassica Pest Problems. New Delhi 10 Feb 2005

Sponsored by: *Asia Pacific Association of Agricultural Research Institutions (APAARI)
Collaboration for Insect Management in Brassicas in Asia and Africa (CIMBAA)*

Organised by: *Asia Pacific Consortium for Agricultural Biotechnology (APCoAB) of APAARI
AVRDC- The World Vegetable Center*

Attended by staff from:

Indian Government

- Ministry of Agriculture
 - Office of the Agricultural Commissioner
 - Office of the Horticulture Commissioner
- Indian Council for Agricultural Research
 - Headquarters
 - Indian Agricultural Research Institute
 - Indian Institute of Vegetable Research
 - Indian Institute of Horticultural Research
 - National Research Centre for Plant Biotechnology
 - National Centre for Integrated Pest Management
- Ministry of Science and Technology - Department of Biotechnology

Indian Agricultural Universities

- Tamil Nadu Agricultural University
- University of Delhi – South Campus
- G.B. Pant University of Agriculture and Technology

Overseas Universities

- University of Illinois (USA)
- Cornell University (USA)
- Natural Resources Institute, University of Greenwich (UK)
- Centre for Environmental Stress and Adaptation Research (Australia)

Farmers' Representatives

- Federation of Andhra Pradesh Farmers' Association

Non-Government Organizations

- M.S.Swaminathan Research Foundation (MSSRF)

International Organisations

- Asia-Pacific Consortium on Agricultural Biotechnology
- AVRDC – The World Vegetable Center
- FAO – Asian Vegetable IPM Programme

Private sector

- Biotech Consortium India Ltd

- Asian Biotechnology and Research and Development Review, India
- Nunhems Seeds Pvt. Ltd; Nunhems Netherlands BV
- Bayer Crop Science AG (Germany)

Summary of the Meeting:

The meeting comprehensively explored the issues involved in this public private partnership initiative for sustainable control of insect pests of vegetable brassicas, in particular the diamond back moth (DBM) *Plutella xylostella* in cabbage and cauliflower, broadening the level of understanding of the various specialists. Active discussion raised a number of issues which will require further examination in the PPP work to come especially in the fields of biosafety, resistance management, economics and public acceptability

Key Quotations from the Meeting:

- **Dr J.Ketelaar** (FAO Veg. IPM Programme) – ‘Diamond Back Moth control and the overuse/misuse of insecticides is a major regional problem’
- **Dr O.P. Dubey** (ICAR ADG) – ‘>12% of vegetables reaching the market have residues over the MRL’
- **Mr C. Reddy** (Farmer Representative) – ‘Pesticide and fertiliser costs are far more significant than seed costs’
- **Dr Trivedi** (ICAR National Centre for IPM) – ‘Seed will be the most important component of IPM’
- **Dr G. Kalloo** (ICAR DDG) – ‘Gene pyramiding is a major drive of ICAR’

In the final session participants agreed that:

- Control of lepidopteran pests of vegetable brassicas is a wide scale and increasing problem
- It is highly desirable to minimise the overuse of environmentally damaging pesticides for health and economic reasons
- Existing IPM programmes are making significant progress particularly in highland cropping systems
- Bt plants could be useful as one additional component of IPM systems in certain situations
- Using Bt toxins in plants in a single gene setting is unlikely to be sustainable and therefore not recommended.
- Producing dual-gene Bt brassica material requires a public/private partnership because
 - a) the development and regulatory cost make it uneconomic for any single commercial organisation
 - b) without a PPP the benefits will not be quickly and cheaply available to small-scale, resource poor farmers

Recommendations of the meeting:

- In view of the above, the meeting supported the formation of a public consortium - ***Collaboration for Insect Management for Brassicas in Asia and Africa (CIMBAA)*** and the invitation of **Nunhems Seed Company** as the private partner to form a public/private partnership.
- The meeting recommended the involvement of Indian public sector organisations and other national and international organisations with this PPP. This was specifically endorsed by Dr G.Kalloo, Deputy Director General for Horticulture and Crop Science of ICAR, who stated explicitly that ICAR fully supports the international initiative and confirmed the Indian Agricultural Research Institute’s involvement to provide a novel solution to the DBM problem.
- The meeting recommended support of the PPP to the donor community
- The meeting recommended that the PPP needs to:
 - Request FAO for assistance in assessing the likely contribution of dual-gene Bt brassicas to sustainable pest control in developing countries, including the socio-economic and ethical impact of such an approach
 - Test the efficacy, non-target impacts and sustainability and bio-safety of the dual gene material and the consequent dual-gene plants

- Ensure that the material is rigorously tested for efficacy, biosafety and impacts on the environment and farming communities before release into any national market
- Ensure that the social and ethical implications of Bt brassicas are thoroughly addressed
- Ensure that the benefits of the material are also captured by small-scale vegetable producers