

International meeting on the use of organic seeds in vegetable production

ECO-PB together with the Fruit and Vegetable Advisory Service Denmark and the EU Organic Revision project are going to hold an international meeting on the use of organic seed in organic vegetable production. The meeting takes place at the Bejo head office in Warmenhuizen (NL) and starts on 28 September 2006 one o'clock pm and ends on the 29 September around lunch time. The program includes a visit to the Bejo organic variety trial fields. There is an extra excursion on Friday 29 September afternoon with the possibility to visit the organic seed company Vitalis Organic Seeds in Voorst, (NL) ([www. biovitalis.eu](http://www.biovitalis.eu)).

Further information together with link to the registration can be found on the ECO-PB Web page www.eco-pb.org. The **deadline for registration is the 1st of September 2006**.

Successful ECO-PB Meeting on Participatory Plant Breeding: Relevance for Organic Farming?

The ECO-PB workshop on participatory plant breeding has been held from 11 to 13 June 2006 in south-west of France with the help of INRA (Institut National de la Recherche Agronomique, ITAB (Institut Technique de l'Agriculture Biologique, Réseau Semences Paysannes (National Farmers Organization) and above all the help of a local association of organic farmers involved in PPB program (Biocivam11).

More than 100 farmers, researchers and breeders coming from 28 countries (from Europe, North-America and Middle-East) met to share their experiences on PPB, and to identify the main research questions and stakes for organic farming.

That was the first European congress on this subject and the organizers were obliged to turn a great number of interested persons away, for bursary reasons. The decision to organize such a meeting on an organic farm, was a real challenge but was made in the respect of the workshop context, and that needed an unusual logistic in such an unusual location.

The opening talk from S.Ceccarelli (ICARDA), on Sunday evening, presented the interest of PPB : *«It is widely recognized that conventional plant breeding has been more beneficial to farmers in high potential environments or those who could profitably modify their environment to suit new cultivars, than to the poorest farmers who could not afford to modify their environment through the application of additional inputs...Participatory plant breeding can be seen as a way to overcome the limitations of conventional breeding by offering farmers the possibility to decide which varieties suit better their needs and conditions»*

It has also permitted to draw some lessons from the South PPB initiatives and to consider perspectives in the North. *« PPB advantages are particularly relevant to developing countries where large investments in plant breeding have not resulted in production increases, especially in marginal environments, but can be equally effectively be applied in developed countries, and particularly in organic agriculture where the existence of genotype by agricultural system interactions are being demonstrated and need to be positively exploited»*.

After a film ("Regards sur la sélection participative »Prod :Petit Œil-Directors: N.Gasq, C.Joubert (joubert-christ@numericable.fr) on the French PPB initiatives especially directed for the congress, showing the different steps from the partnership to the legislation, C. Bonneuil, historian of science & technology, presented the context and stakes of PPB in Europe. He

showed how the five key features of 20th century plant breeding and genetics dominant paradigm [*i.e.* i) *the fixed varietal norms (purity, DUS)*, ii) *the centralization of breeding*, iii) *its delegatory character*, iv) *the search for wide spatial adaptation cultivars* and v) *the focus on breeding in/for high-input systems*] were strongly interconnected and formed a coherent whole. It will also point at research traditions in genetics, that were outside the paradigm of purity and remained marginal in 20th century plant breeding, but which are now at the roots of a rising «Evolutionary-decentralized-participatory-'specific adaptation'-low input» breeding paradigm.

During the all day, farmers and researchers showed, in turn, their interest in participating to PPB program in their country and in being involved in different actions enhancing biodiversity. There is no one model of PPB, but several extremely flexible, that can be adjusted depending on the crop, on the country and on the farmers' existing methods of handling genetic diversity.

A round table, bringing together representatives of seed companies and diverse European farmer's organizations, gave the opportunity to debate around the European legislation of varieties resulting from PPB program and adapted to organic conditions. After the meeting, it has been decided to organize a European working group on this theme to exert a pressure on registration legislation of each European country.

To close the meeting, the excursion to an organic farm allowed the participants (i) to discover the diversity of activities, on the 20 ha, from vegetables seed production to participatory durum wheat breeding, passing by presentation of experimental weed suppression mechanical techniques, or associated culture of triticale with leguminous plants, (ii) to debate in front of the fields and of the huge diversity.

This Eco-PB workshop was followed, on the same location, by the SUSVAR workshop on «cereal diversity: implications for production and products», where almost 70 researchers working on cereals have exchanged their experimental results and point of view on the need to cultivate mix and to involve more the farmers and end users in their research program.

These days have permitted to consider participatory research as a mean to restore a right place to each actor, from farmer to consumer.

Handbook "Cereal variety testing for organic and low input" published by SUSVAR (COST action 860)

The testing of varieties for organic and low input agriculture, compared to conventional variety testing, not only deals with different growing environments, but also with different priorities for traits to be assessed. For example weed competitiveness and nutrient uptake efficiency have been reported as relevant characteristics to be evaluated in organic variety testing. As these traits are not incorporated in conventional variety testing protocols, evaluation methodologies have been developed recently in several European countries. These and other methodologies such as lodging, susceptibility to diseases and processing quality are presented in the recently published handbook. Furthermore a chapter on trial set up and statistical analysis is included.

Editors: Dingena Donner (Plant Variety Board, Netherlands) and Aart Osman (Louis Bolk Instituut, Netherlands)

Chapters and authors are:

- Trial Setup and Statistical Analysis, Kristian Kristensen (DIAS, Denmark), Andreas Büchse (University of Hohenheim, Germany), Irene Felix (Arvalis, France) and others

- Weed Competitiveness, Clemens Kruepl (AGES, Austria), Steve Hoad and Ken Davies (SAC, Scotland), Nils-Ove Bertholdsson (Svalöf Weibull, Sweden), Roberto Paolini (University of Tuscia, Italy)
- Disease Assessment, Kerstin Flath, Franziska Waldow and Bernd Rodemann (BBA, Germany), Mike Cooke (UC Dublin, Ireland) Werner Vogt-Kaute (Naturland, Germany), Thomas Miedaner (University of Hohenheim, Germany), Fernando Martínez (University of Sevilla, Spain), Adrian Newton (SCRI, Scotland) Marja Jalli (MTT, Finland), Lisa Munk (KVL, Denmark) and Jakob Willas (DIAS, Denmark)
- Evaluation of Lodging Johan van Waes (DFE-CLO, Belgium)

Report on hybrid breeding

On 19 April 2006 the Bio Suisse Assembly of Delegates decided to ban hybrid cereal varieties (with the exception of maize) in organic farming from 1 January 2007. This decision has also met with a lively response abroad and is an important signal for the organic movement. For this reason the FiBL Report on "Hybrid varieties in Organic Cereals – Prospects and acceptance of hybrid breeding for organic production" has now been translated into English.

At present hybrid rye varieties give 10-20% higher yields than open-pollinated varieties and have better lodging resistance and sprouting resistance. Provided the rye can indeed be sold, hybrid rye could achieve an extra return of up to 400 sFr./ha.

The criticism of hybrid breeding and hybrid varieties concerns four areas:

- **Intrinsic quality:** There are concerns, especially in the biodynamic movement, that continued inbreeding and pollen sterility as part of the breeding process will lead to losses regarding the more subtle ripening and nutritional qualities. This poses the question of adequate research methods. There is still considerable need for research.
- **Socio-economics:** The fact that seed from hybrid varieties can not be saved and replanted leads to greater dependence on breeders and seed producers on the part of the farmer. At present this is not regarded as a problem in Switzerland as most farmers purchase new seed every year in any case but in the long term it renders agriculture vulnerable to manipulation.
- **Ethics:** Some people have concerns regarding the breeders' intervention into the flowering biology of the relevant cereal species. These interventions are at variance with the basic ethical-philosophical tenets of organic agriculture. Moreover, the fact that the hybrid varieties can not be saved and replanted effectively constitutes "patent protection" and promotes the ethically questionable change in meaning of seed from a cultural asset to a mere means of production.
- **Genetic depletion:** Hybrid varieties of self-sterile plants (e.g. rye) are genetically more vulnerable to environmental influences which were not considered during selection. This point is less relevant as regards self-fertile plants (oilseed rape, barley, wheat) as today's pureline varieties are already very uniform. Amongst all hybrid varieties which are based on male sterility, many so-called "different" varieties may share the same cytoplasm.

The quality issue is of particular relevance regarding the decision to ban hybrid varieties in organic bread cereal production in Switzerland. Further research is essential.

Abstaining from the use of hybrid varieties in organic bread cereal production in Switzerland is a clear signal to upstream and downstream sectors (breeders/trade and consumers respectively) that organic farming strives to consider long-term and future aspects of independence, quality,

and diversity and that it is ready to forego current agronomic advantages to this end. This must be clearly communicated to the trade sector when it comes to discussions on market prices. This report was prepared with support from the Coop Naturaplan Fund.

By Christine Arncken

French database is more and more used

At a meeting of the French seed experts in April 2006, recognition has been paid on the use of the database in 2005: more users, more sellers, more varieties and less derogation. Details are available on www.semences-biologiques.org in the part "La réglementation".

For species presenting a large number of varieties, experts have decided to establish a "special screen" on which users are informed to look at the list of varieties and, if they use another variety, that they could be especially controlled. It seems to be a good compromise for granting the use of organic seeds.

The multiplication areas for seeds are stable and not increasing, and companies involved in organic seed production seemed quite pessimistic for the future.

By Jean Wohrer (FRANCE)

Spain: Second EUROPEAN SEED SEMINAR LET'S "LIBERATE DIVERSITY"

is the title of a seminar which going to be held in Bullas (Murcia, España) from 12 to 15 October 2006. The seminar is organized by Red de Semillas "Resembrando e Intercambiando" and deals with politics on agro-biodiversity, Directive 98/95 and its application in the EU Members States, Regulation 1452/2003 on the use of organic seed in organic farming and the impact of GMO on farming and food systems.

For further information: Red de Semillas "Resembrando e Intercambiando", phone +00 34 618 177 810, e-mail: coord_redsemillas@agrariamanresa.org