

ECO-PB/COST860 SUSVAR Workshop on Organic Plant Breeding Strategies and the Use of Molecular Markers

From 17 - 19 January 2005 a successful international workshop was held in Driebergen-NL with some 50 participants. The contributions of molecular markers in organic plant breeding programmes was critically discussed with presentations from both the side of field evaluation and of molecular markers on the following cereal characteristics: yield stability, backing quality, weed competitiveness, nitrogen uptake and use-efficiency and disease resistance.

The proceedings will be available in a printed version and as pdf-file as soon as possible (Spring 2005). See: www.cost860.dk

By [Edith Lammerts van Bueren](#)

ECO-PB's Annual report 2004

On January 17, 2005 ECO-PB's General Assembly was held in Driebergen-NL. The board was re-elected, consisting of Christine Arncken (FiBL-CH), Edith Lammerts van Bueren (LBI-NL), Hanne Ostergard (Riso-DK), Oliver Ranke (ITAB-Fr), Klaus-Peter Wilbois (FiBL-D), Lawrence Woodward (EFRC-UK). The Annual report over 2004 was presented and is now available under www.eco-pb.org/09/annualreport_2004.pdf

Actions to be taken in 2005 and on-wards were discussed, covering tasks as networking and co-operation with other organisations related to organic plant breeding and seed production, political lobbying and stimulating plant breeding research projects.

By [Edith Lammerts van Bueren](#)

National annex 2005 on organic seed use in the Netherlands

To stimulate the use of organic seed and planting material and to make the derogation system as simple as possible, the Dutch Ministry of Agriculture, Nature Conservation and Food Quality has asked EC-LNV together with the Louis Bolk Institute, as in 2003, to conduct a project to investigate the availability of organically produced seeds and planting material and to bring together the expert groups to assess the appropriateness of the availability. The (sub)species were to be sorted into three groups:

1. (Sub)species for which no derogation will be given because sufficient varieties are available (National Annex list)
2. (Sub)species for which derogation is possible because there is some varieties available but not in sufficient quantity or for all cultivation and use.
3. (Sub)species for which general derogation is given because no organic propagation material is available.

On the Dutch national Annex 2005 are listed for arable crops: potato, cereals, some grasses, red and white clover, fodder, maize, yellow mustard, fodder radish. And 35 vegetable and herbal crops, under which are included: endive, lettuce, tomato (round, 30-80 and 80-120 grams) and cucumber. The number of crops on the national Annex has been increased. However in greenhouse cultures a number of crops, such as peppers, has been removed from the Dutch

national Annex, because market demands on varieties has changed and the appropriated varieties were not available.

For full list, see www.biodatabase.nl (under the information button).

By Edith Lammerts van Bueren

Vitalis Organic Seeds received the Broekema-Award.

Jan Velema, founder and director of the seed company Vitalis Organic Seeds, has received the Prof. L. Broekema-Award for his courage, vision and example for the plant breeding in the Netherlands. He was nominated because during the past ten years he has given the organic seed production and plant breeding an innovative impulse with convincing success and with a spin-off to the regular seed sector. This award is a highly appreciated award among plant breeders for a person with great merit for the plant breeding in the Netherlands. More information: www.vitaliszaden.nl.

By Edith Lammerts van Bueren

Organic fruit nursery: Preliminary French results

In 2001, EU Regulation 2092/91 was demanding growers to plant certified organic trees (i.e. with two consecutive seasons under organic standards) to sell organic fruits, from 2004 onwards. Since 2001, this decision has been modified since nurseries could not provide enough material, and a dispensation is possible for fruit growers, without a deadline.

However, GRAB (Research Group for Organic Farming), together with Cepem (Experimental Centre for Southern Nursery and Ctifl (Technical Centre for Fruits and Vegetables), initiated trials in 2001 in order to gather some technical and economical results in organic nursery conditions. Indeed, it has shown that costs of the fruit plants are the major bottleneck to nurseries, and it seemed interesting to identify main technical difficulties to grow organic, and their impact on additional cost.

Technical difficulties identified were :

- plant protection against aphids, xylophagous insects (zeuzera),
- weed management and
- diversity in material provided (cultivars and rootstocks).

We carried out trials on different objectives and fruit species :

Species	Year	Objectives
Peach	2002-2003	- Relevance of biodegradable mulches in the row
Apple	2002-2005	- Efficacy of plant strengtheners against diseases
Olive	2003-2005	- Effect of an organic fertilisation, compared to mineral one, on growth of olive plants - Effect of natural products on rhizogenese, compared to chemical hormones

The main conclusions out of the trails are :

- biodegradable mulches may not be relevant in nurseries. Their degradation (supposed to happen after 18 to 24 months) by irrigation or wind is too fast. Application of the mulches after planting also remains extremely expensive, and can not fit a commercial nursery. Lastly, mulches may have side-effects on plant growth, voles activity, and on soil fatigue, since they keep the soil inert, with a very low biological activity. Future research may be done on impact of leguminous sowing on the row.
- Plant strengtheners have been assessed regarding effects on diseases, but the damages of apple scab or peach powdery mildew have not been significant decreased. Insects are the main sanitary target to focus on in nursery.
- Organic fertilisation applied to olive trees may be a relevant alternative to expensive mineral one. Since this species is rather frugal, nitrogen dosage have been reduced but growth has not been affected. Cost of the fertilisation has been reduced up to 6 times. Those results may not be extended to other fruit species, since nutrient needs are specific. A trial carried out on *Nerium oleander* shows different conclusions.
- Final quality of organic plants, in terms of height and of sanitary guarantee is comparable in our trials to the one of conventional plants.



Further research should be carried out with regard to this objectives, since many questions are to answer. We especially wonder the consequences of an organic plant breeding on the tree capacity to start in the orchard, and to face water & nutrient lacks, or pathogens attacks.

A COST Action bringing together competences & experiences on fruit nurseries might be a useful tool to progress in know-how.

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New articles on organic variety trials of Elm Farm Research Centre on the ECO-PB Web site

Two articles on field trials carried out by Elm Farm Research Centre, UK: 'Disease, varieties and seed treatments in Organic Cereals' and 'Organic Cereal Varieties - the results of four years of trials' are now available on the ECO-PB Web Site www.eco-pb.org/08/