Organic seeds and plant breeding
from the seed companies perspective

Coordinating Organic Plant Breeding Activities for Diversity — COBRA

ITAB Institut Technique de l'Agriculture Biologique

Frédéric Rey

ITAB, Institut Technique de l'Agriculture Biologique, France, www.itab.asso.fr, frederic.rey@itab.asso.fr 2

① Introduction

All organic agricultural systems suffer from a lack of plant cultivars adapted to organic production. Within the framework of the European projects SOLIBAM (Strategies for Organic and Low Input Breeding and Management) and COBRA (Coordinating Organic Plant Breeding Activities for diversity) a study was undertaken to provide an overview of the seed companies' breeding strategies for the organic sector and their viewpoints about the organic seed production. The main results in are described in this poster.

② Methods

Internet survey
(quantitative)

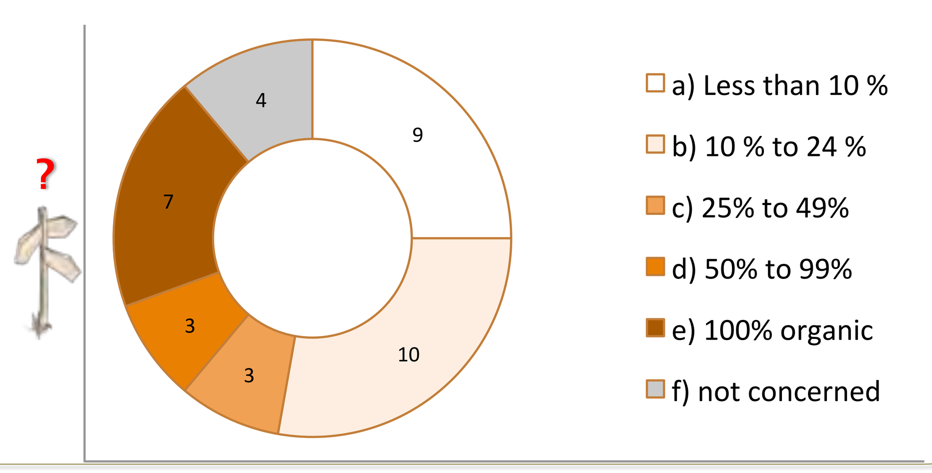
This study based on an online questionnaire was launched in September 2013 and supported by the projects' partners who allowed a wide and efficient dissemination across Europe. The preparation of the 7th European Workshop on Organic Seed Regulation (Oct. 13) by the European Consortium for Organic plant breeding (ECO-PB) provided a great opportunity to involve organic stakeholders in this study.

③ Contributors' description

Almost half of the 36 contributors came either from France or the United Kingdom, where the study had probably been more efficiently forwarded. Other responses came from The Netherlands, Austria, Denmark, Switzerland, Germany, Latvia and Bulgaria.
Most of the responders were companies producing vegetable and cereal seeds engaged both in conventional and organic seed production (Fig. 1).

List of contributors in § "Acknowledgements"

Fig. 1- What is the total organic plus conventional untreated seeds market share in your activity/business?



④ Results

Organic seed sales

According to the 36 contributors, it is in France, in the UK, in Germany and in Austria that their sales of organic seeds have increased the most over the last three years (Fig. 2). The majority of the responders also estimated that the organic seed market will continue to grow in the near future, but quite slightly (Fig. 3), mainly because of the easy granting of derogations for conventional seeds treated after harvest. Technical difficulties and the lack of market opportunities were also cited as limiting factors (Fig. 4).

Fig. 2- Organic seed sales increased in…

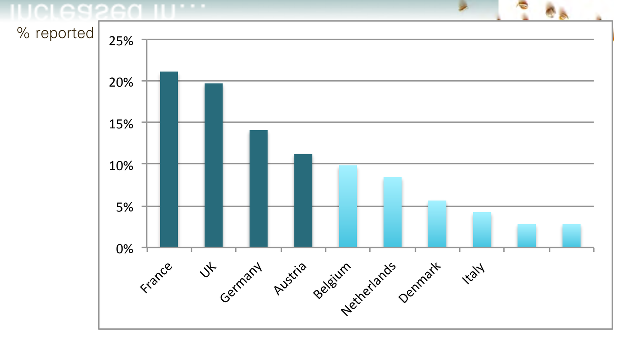


Fig. 3 - A positive growth of the organic seed market in the near future?

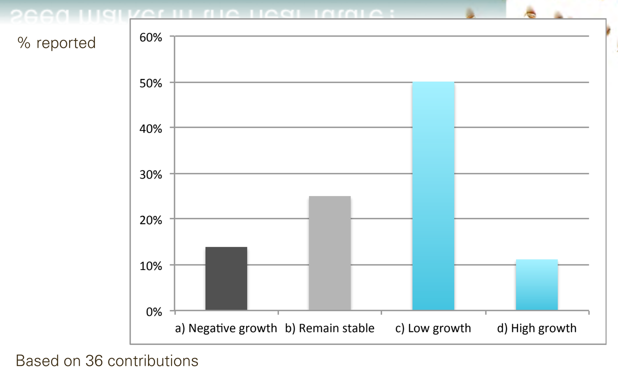
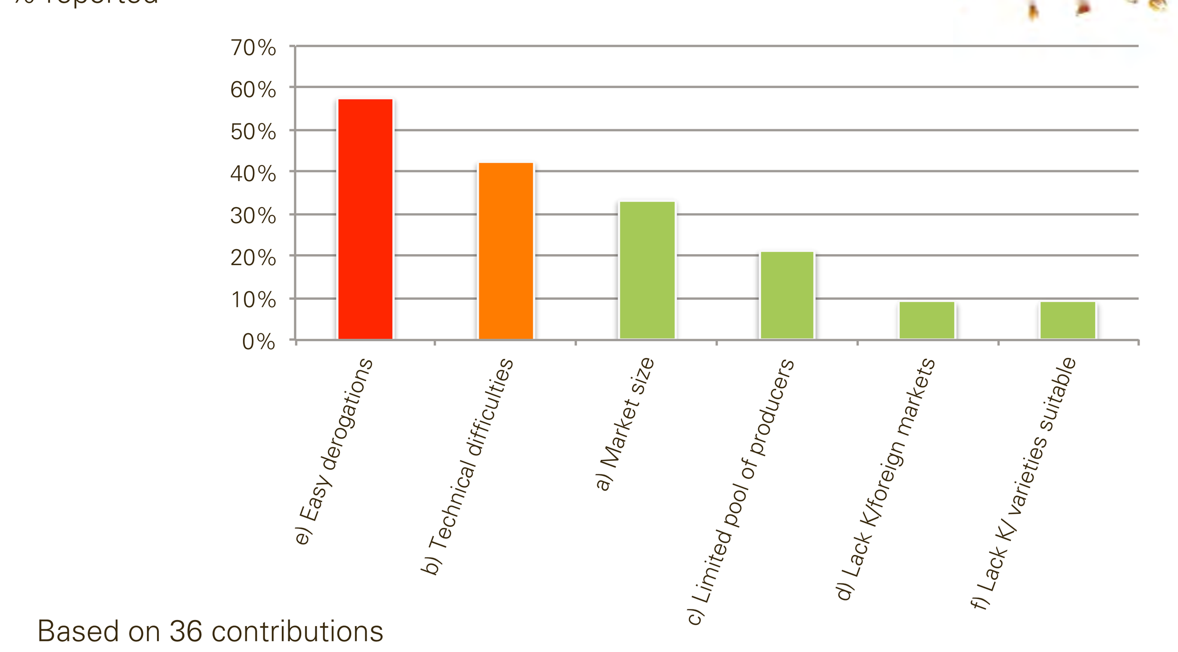


Fig. 4 - Main limiting factors: derogations, technical difficulties and market size…



Breeding for organic

We can bring out 3 different breeding strategies for organic systems (Fig. 5): 1) Programmes that are organic from the very beginning of the breeding process; 2) Programmes starting with a conventional approach and switching to organic in later stages; 3) No dedicated organic breeding programmes (entirely conventional).
For 54% of the companies, the main limiting factor to further development of dedicated organic plant breeding programmes is economic (Fig. 6). 22 % of the responders have also cited the lack of adapted rules for organic seed registration as a major impediment.

Fig. 6 - Breeding for organic, limiting factors

…economic reasons for **54%**

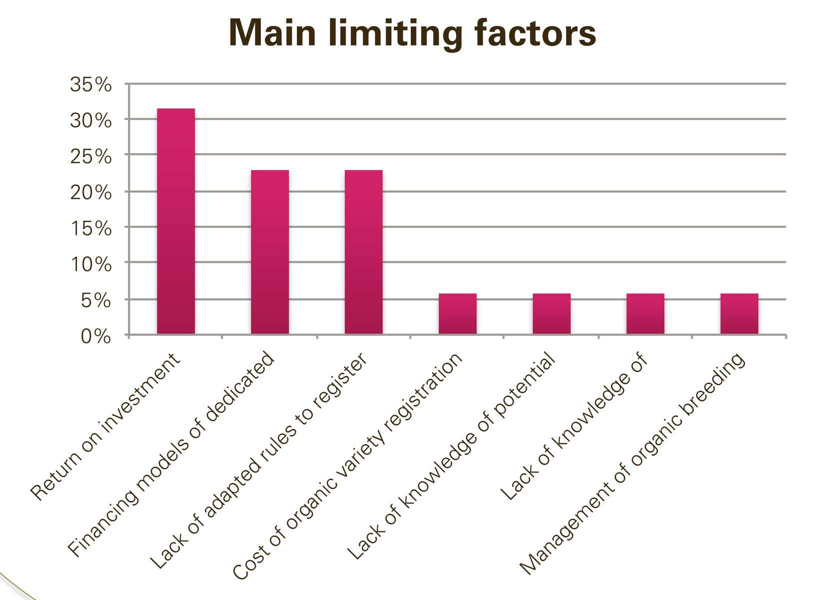


Fig. 5 - Breeding for organic

Various strategies:
- **8** companies are developing organic breeding program from the begining to the end.
- **7** start in common with conventional
- **4** don't make separation

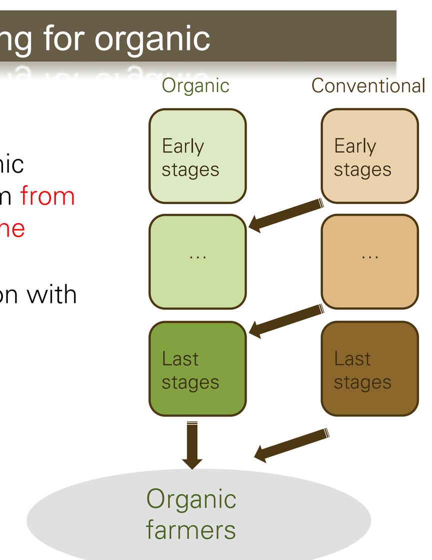
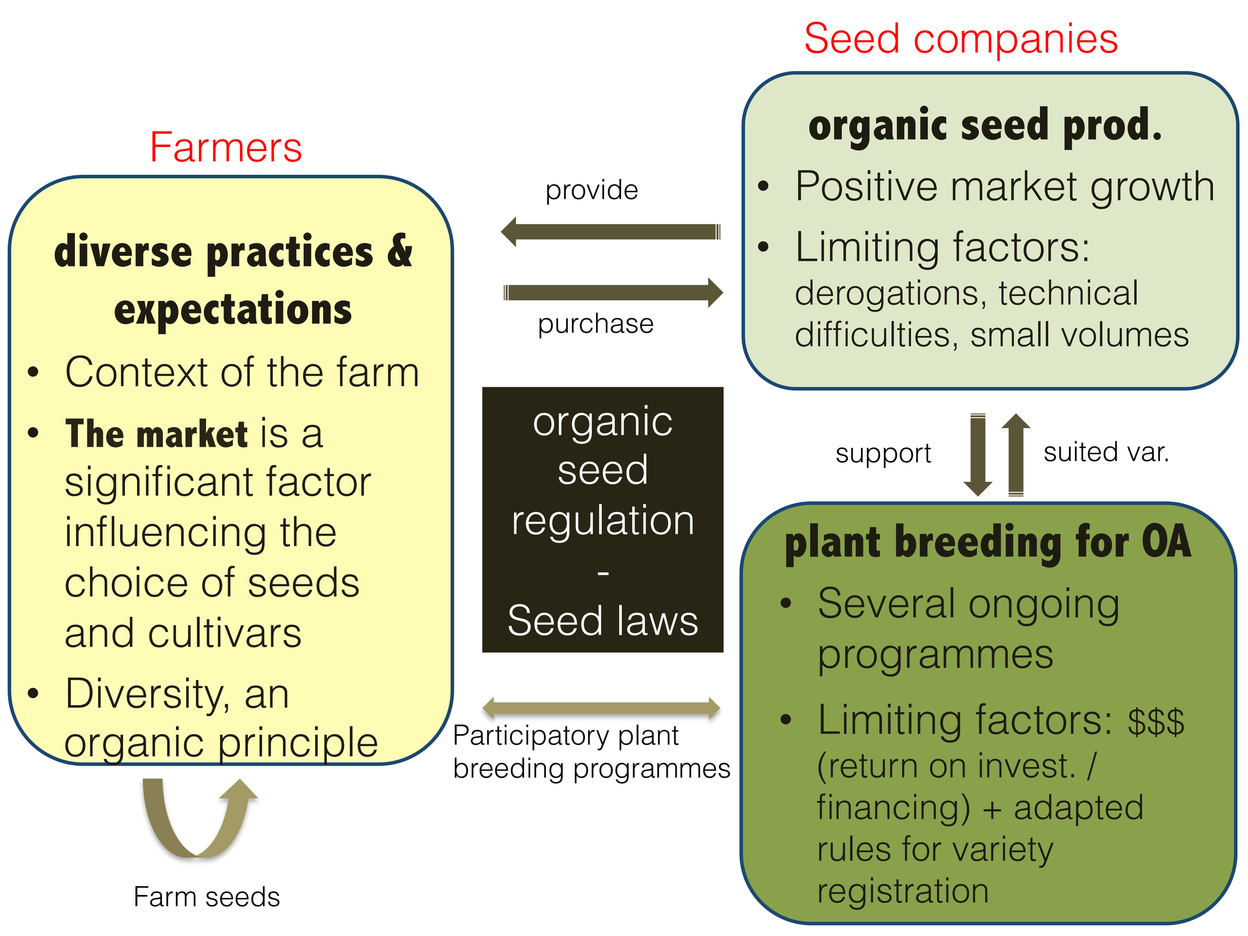


Fig. 7 - Organic plant breeding certification

…several seed companies would be interested in a formal certification (11)



④ Conclusion

The organic seed market has grown significantly in some countries (mostly in Northern Europe) in the last three years. This growth is however hampered by an easy granting derogation policy in some countries and technical difficulties in the field multiplication. Several companies surveyed are currently carrying out organic breeding programmes but they still remain relatively few because of the lack of return on investment and the absence of rules adapted to the registration of these varieties bred for the organic sector.

Acknowledgements

Special thanks to Dalmond F, Bocci R, Löchenberger F., Messmer M., Howlett S., Mariegaard Pedersen T., Kiss C., Raaijmakers M. who made this survey possible and successful.

Thanks to the contributors: Saatzucht LFS Edelhof, Saatzucht Donau GesmbH&CoKG, Esporus, State Stende Cereal Breeding Institute, Saatzucht Gleisdorf, Rijk Zwaan, Agrolocica, Sejet Planteforædling, Bejo Zaden, CARNEAU, Cope Seeds Ltd, Sativa Rheinau AG, Bingenheimer Saatgut AG, Skea Organics Ltd, Vitalis Biologische Zaden B.V., Cotswold Seeds Ltd, Stormy Hall Seeds, Pearce Seeds, Dalton Seeds, Bejo France, Moles Seeds, Agrico, Robin Appel Ltd, SA PINAULT, Otto Hauenstein Samen AG, AGROSEMENS, IAR Agri Ltd, Vitalis, De Bolster, Graines voltz, OBS, Innoseeds, Field Options Ltd, Le Biau Germe, Organic Seed Producers Co Ltd, Amititsa Ltd.

This publication was financially supported by the **European Commission** through the Collaborative Project (large-scale integrating project) **SOLIBAM**, contract no. FP7 KBBE- 245058, under the 7th Framework Programme and through the **COBRA** (Coordinating Organic Plant Breeding Activities for diversity) project, 2013- 2016, **ERA-Net CORE Organic II funding**, www.coreorganic2.org/COBRA