

## ASSESSMENT OF POLICIES AIMING AT BOOSTING ORGANIC SEED USE

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In the EU, market failure can be observed for organic seed and cultivars, with the seed market being dominated by conventionally bred varieties and conventionally multiplied seed (Döring *et al.*, 2012). By 2036, the EU plans to achieve 100% organic seed for the sector (New Organic regulation 848/2018). However, there is not yet a strategy in place on how to secure sufficient organic seed supply. The conflicting interests of different value chain actors and the lack of implementation of the current EU Organic Regulation 834/2007 contribute to the failure of the organic seed market. Thus, we propose an ex-ante value chain assessment approach to evaluate potential strategies to boost the organic seed sector.

To develop a suitable ex ante assessment tool, different existing approaches were evaluated, combined and extended. As actors along the seed value chain and actors at each level of the chain feature heterogeneity, a multi-agent system was considered best suited when modelling the seed value chain. Mathematical programming is used to simulate the decision-making behaviour of the agents. Based on standard microeconomic theory, it allows flexibility for agent behaviour by offering a vast range of decision options (Schreinemachers and Berger, 2006). The proposed model was developed and parameterised for 3 different case studies, i.e. the seed value chain of organic carrot production in Germany, of organic durum wheat production in Italy, and organic perennial ryegrass as permanent pasture in England. The chosen crop-country combinations represent important and at the same time diverse seed value chains.

Preliminary results for the wheat and carrot cases show that a sole phasing out of derogations for the use of conventional seed causes a loss in farm enterprise gross margin. This loss is not as substantial in the case of organic wheat production as in

the organic carrot case. However, in both cases it seems to be wise to mitigate by introducing a subsidy at seed price level to smooth transition. Furthermore, a step-wise phasing out of derogations seems advisable, so that organic seed production can be gradually and continually expanded by seed companies. Otherwise, a shortage of seed production side could occur. In the organic wheat case, a stronger focus on farmers' own organic seed multiplication seems to be an affordable way forward.

All in all, a combination of command and control measures as well as economic incentives to increase organic seed use and production are promising measures to overcome the organic seed market failure. Some individually adapted country-crop specific interventions may likewise promote success.

## References

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