

Abstract

Seed plays a major role in the world's agricultural system and the seed sector is dominated by few big seed producing companies. Through intellectual property rights it is not allowed or associated with high fees for farmers to save seed on farm in order to sow it the following year. There is only a very small amount of varieties bred for organic agriculture, resulting in organic farmers mostly using those bred for conventional farming. These varieties are not adapted to the low-input system characterizing organic agriculture. Cultivars consisting of organic heterogeneous material (OHM) are not varieties in a legal sense, since the genetic material varies within one cultivar and one purpose of them is to adapt to the location where they are grown. Interviews with stakeholders of a wheat OHM cultivar and researchers working with OHM in general were interviewed in order to identify the benefits and costs of using these OHM cultivars for organic wheat farming. The interviews were analyzed through a structured content analysis. Several benefits and costs were identified, including agronomic benefits, quality benefits and social benefits such as the independency of farmers from big seed companies. Many benefits are tracing back to the genetic diversity within OHM cultivars, which especially seems to have a positive influence on the performance in yield and quality of populations and results in a buffering effect against external biotic and abiotic stress. This characteristic holds a great potential for farms to adapt to climate change. The costs often occur to breeders, who consider the lack of intellectual property rights as morally right, but it challenges them in terms of financing and acknowledging their work. There are also costs appearing for farmers and processors, especially if they are not trained well to work with populations. There is not yet a lot of literature available about OHM, but available papers are mostly in line with the view of the interviewed experts. In conclusion, the potential of OHM is visible for stakeholders within value chains working with it, as well as for researchers, but a lot of effort has to be put into building up a system around them in order to bring them out of the niche there are still in.