Organic breeding of einkorn (Triticum monococcum ssp. monococcum)

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Organic breeding of einkorn  
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The basic axiom of organic farming is, as clearly indicated in the name, the ban of synthetic  
chemical products in agriculture to decrease their negative impact on the environment, and to improve  
food safety. Even if the sustainability of organic farming and its impact on human health and food  
safety are already accepted, the independence of the organic sector is still questionable. Unfortunately organic agriculture still depends strongly on seed industry, especially on conventional  
plant breeding. Increasingly conventional plant breeding programs are focused on bio- and gene-  
technology, thereby forcing the organic sectors reliance on conventional breeding. Moreover,  
conventional breeding efforts in the past have largely developed in response to the demands of  
intensive agriculture production. Alternatively, organic farming supportive of a philosophy promoting  
the self-regulating principles of the soil, the plants, and the animals, requires a distinct breeding  
program. On the other hand, organic farming want to increase farm biodiversity, and in many cases  
prefers to grow local landraces or traditionally used neglected crop species as a source of special  
heritage of functional foods. One of the best example is the einkorn in many countries. Organic  
einkorn production is already growing in several areas of Europe, and in the present lecture we would  
like to give a general overview of einkorn production and organic breeding in Central Europe.

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