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Sowing companion plants with winter oilseed rape to reduce herbicide use. A survey

The use of frost sensitive companion plants, sown with winter oilseed rape (WOSR), started a few years ago in Switzerland. Some farmers consider it as a very innovative technique allowing pesticide reduction, and especially herbicide suppression, which is supported by federal subsidies. According to others, the technique is not ready yet and intercropping represents a high risk of yield loss.

A recent survey among Swiss WOSR producers gathered their practices and opinions on intercropping. The aim of this work was to understand the motivations, concerns and fears of farmers toward this new technique. The survey was sent by email to Swiss WOSR producers, and could be answered online. The 33 questions asked about (i) general structure of the farm, (i) WOSR management, (iii) farmers' opinion about companion plants. The last part (iv) was only for farmers who were growing their WOSR with companion plants, and allow them to share their experience.

The survey gathered 1063 answers, representing about one sixth of the producers. The results showed great disparities between Western and Eastern Switzerland. Whereas in the first one, intercropping is being more and more popular, it remains confidential in the rest of the country. Sowing WOSR with companion plants was more frequent when the farmers chose to grow this crop with minimum tillage. Moreover, it was often combined with the "extenso" program, designed to support farmers producing without any fungicide or insecticide. Most farmers acknowledged that intercropping was efficient to reduce weed and allowed to give up herbicides, but the fear of a negative impact on yield is still very high. The choice of species sown with the WOSR revealed various strategies among farmers, and could be influenced by both extension services and the market, as 70% of the farmers are sowing "mixture for WOSR" offered by seed retailers. Finally, the support of more extensive practices through subsidies seemed rather effective to promote undersowing, and more generally low pesticide farming, but with large differences among areas.