An organic mixed farm cutting pesticide use thanks to holistic IPM

The Farm

Certified organic farm
Region: Tuscany (Central Italy)
Area: 300 ha in a hilly area including 700 olive plants and 0.4 ha of vineyard and forest
Specificity: agritourism (hospitality), high quality organic oil and grapevine production

The strategy for pest/disease/weed management in winter cereals and forage crops

- Crop rotation including different winter cereals (durum wheat, emmer) + legumes temporary grasslands or annual grasslands + pulses (broad bean, lentil)
- Mechanical weeding (light harrow) in winter cereals in late winter
- No use of fertilizers to lower the weed and disease pressure on crops
- Only legume forage crops for N-fixation and use of legume cover crops
- Forage crops early mowing to control weeds (especially monocot)
- Wheat and other cereal cultivars resistant to diseases and to drought
- Use of annual or perennial forage crops more suitable to low input farming and resistant to drought
- Seed cleaning before sowing to suppress weed dispersal
- On-farm experience with intercropping (sulla and Egyptian clover on durum wheat) and different cover crop mixes (e.g. broad bean and Egyptian clover)

Results

2021-2022 lentil relay sowing (early March)
2022-2023 contemporary sowing (late October)

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Cost-efficiency

- Increase in equipment costs: mechanical weeding, higher frequency of soil tillage operations, intercropping operations, seed cleaning and seed cost
- Increase in work load: mechanical weeding, higher frequency of soil tillage operations, intercropping operations, seed cleaning
- Chemical cost completely cut
- Reduction of fertilizer use with better weed control and comparable yields
- Increase in market prices (all certified organic)

"Since I turned organic, I do not spray anymore, I feel safer. I did not notice a drop in yields, results are comparable. I cut many costs including pesticides and fertilizers reducing the weed pressure. And I get better prices for organic products. I was already interested in intercropping and I was happy to get involved with IPMWORKS people to conduct field trials on it on my farm”. Simone Bensi, farmer