Details of a holistic IPM strategy with low pesticide input in a European farm

The Farm

Certified organic farm
Region: Leven (UK)
Area: 340 ha
Pedo-climatic context: Sandy loam soils (Grade 2 + 3.1 arable land - mainly free draining Darvel series). Maritime climate, cool and wet (800 mm annual rainfall average)
Main pests: Grass weeds – mainly brome and wild oat. Yellow rust/Septoria in wheat & *Rhynchosporium/Ramularia* in barley

How to limit inputs of plant protection products to a minimum to reduce financial risk

- Increased diversity of species in the rotation to improve weed, pest and disease suppression, including cover crops
- Alternating break crop is flexible to provide resilience within the system and acts to extend rotation to 6 years
- Intercrop cereal/legumes adds further diversity following a regenerative approach
- Straw rake before cover crop stimulates grass weed seeds to establish within cover crop
- Roller crimper destruction of cover crop also kills weed seeds/slugs and prepares for next crop sowing

Advantages of the system

- Very good control of yellow rust, powdery mildew, *Rhynchosporium*
- Very good evolution of use of fungicides and insecticides
- Low risk of plant protection products

Limitations

- Necessary to improve weed control
- Need for operations for no-till and cover crop to be successful
- Would be better to improve complexity of the system

“Moving to a regenerative system is a mindset change, and once I’d made a start I realised that there was much more to it than just saving money. The soils are becoming a great deal more resilient and this means that they have the ability to procure wider environmental benefits such as clean water; becoming more drought and flood tolerant due to higher water infiltration rates and water holding capacity; a better ability to hold soil nutrients, reducing soil erosion through higher soil aggregate stability, locking carbon into the soil and creating a platform in which to help biodiversity”. Douglas Christie, farmer

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