Integrated Crop Management (ICM)

The crop protection challenge in 2030
Reduce the overall use and risk of chemical pesticides by 50 %
Reduce the use of more hazardous pesticides by 50 %

Transition to sustainability
Truly integrated pest, disease and weed control requires a redesign of the system
From single-season targeted control measures toward an integrated, multi-season, farm or regional approach

ICM: a framework for redesigning crop protection
1. Crop diversity in time and space
2. Cultivar choice and cropping strategy
3. Soil management
4. Targeted control
5. Proper monitoring and evaluation

Approach
- Identify potential biological stressors
- Build frameworks for pests, fungal diseases, weeds and nematodes
- Design a crop system based on the IWeedM, InsectM, INematodeM and IDiseaseM frameworks
- Test the ICM design in a farm context for ecosystem services such as economy, yield, pest, disease and weed control, biodiversity and environmental impact