SPRINT

SUSTAINABLE PLANT PROTECTION TRANSITION

REDUCING THE IMPACTS OF PESTICIDES ON HUMAN, ANIMAL AND ENVIRONMENTAL HEALTH

The Challenge

Farmers rely heavily on pesticides to secure their yields. However, some are potentially harmful to environmental, plant, animal and human health. Data on the risks and impacts associated with their use is scarce and fragmented. Meanwhile, the socio-economic pathways to making change on these impacts are underdeveloped.

We are...

- 28 partners from across Europe and Argentina (where fodder crops are grown for European markets).
- A transdisciplinary group from soil science, social science, agronomy, ecology, fate modelling, epidemiology, and (eco)toxicology.

Working with...

- Both non-organic and organic farmers, their neighbours and food consumers, from 11 countries.
- Stakeholders in governance, input supply, production, processing, retail and consumers.

Our Aims

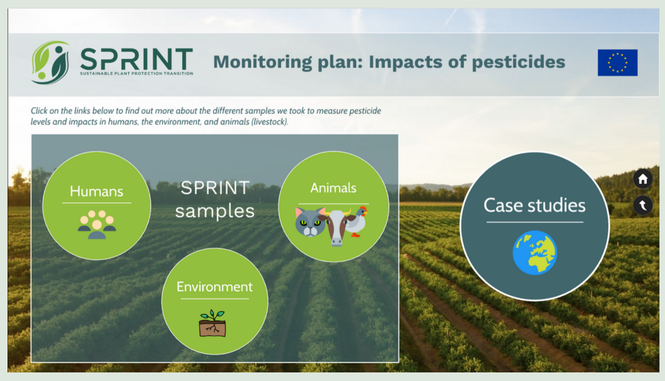
- Fully assess the overall risks and impacts of pesticide formulations, residues and metabolites on the environment, animal and human health
- Harmonise data collection approaches to this across Europe through a tested and validated Global Health Risk Assessment Toolbox
- Assess the environmental and economic sustainability of alternative pesticide use strategies, co-developing transition pathways towards these with stakeholders

Sign up to our newsletter to be the first to see our results: https://sprint-h2020.eu/index.php

Interactive tools

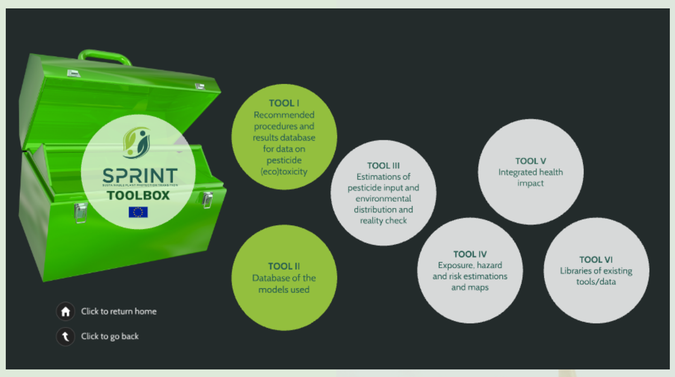
Monitoring Plan

Visit our interactive prezi to find out more about our approach to sampling undertaken across our case study sites, from people, animals, livestock and the environment.



SCAN ME

SPRINT Toolbox

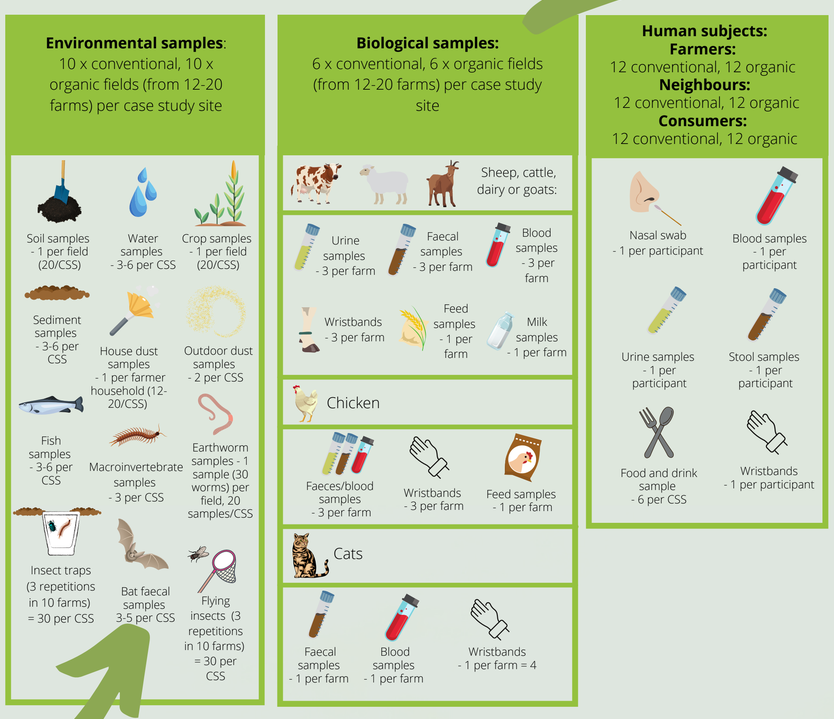


Explore this interactive toolbox to find out more about the various tools we're developing to move towards a harmonised approach of assessing exposure, risks and impacts of pesticide use.

SCAN ME

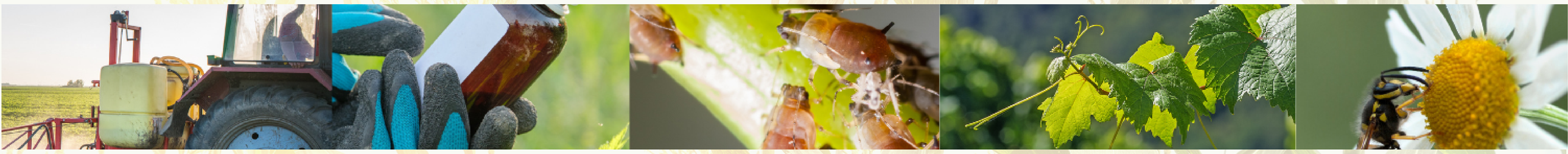
Methods

1. Engage with stakeholders & identify knowledge needs
2. Assess pesticide component mixtures and health status in environment, animals & people
3. Estimate exposure levels in case study sites
4. Develop lab tests to determine pesticide mixture effects
5. Develop a Global Health Risk Assessment Toolbox for health impact assessment
6. Assess integrated risks, costs & benefits of pesticide use
7. Co-develop transition pathways towards sustainable plant protection & provide policy recommendations



Selected Publications

- Silva, V. et al. (2022) Environmental and human health at risk – Scenarios to achieve the Farm to Fork 50% pesticide reduction goals. *Environment International.* https://doi.org/10.1016/j.envint.2022.107296
- Nath, R. et al. (2022) Dissipation kinetics, residue modeling and human intake of endosulfan applied to okra (Abelmoschus esculentus). *Science of the total environment.* https://doi.org/10.1016/j.scitotenv.2022.155591
- Kosnik, M.B. et al. (2022) Toward assessing absolute environmental sustainability of chemical pollution. *Environmental Science and Technology,* https://doi.org/10.1021/acs.est.1c06098.



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