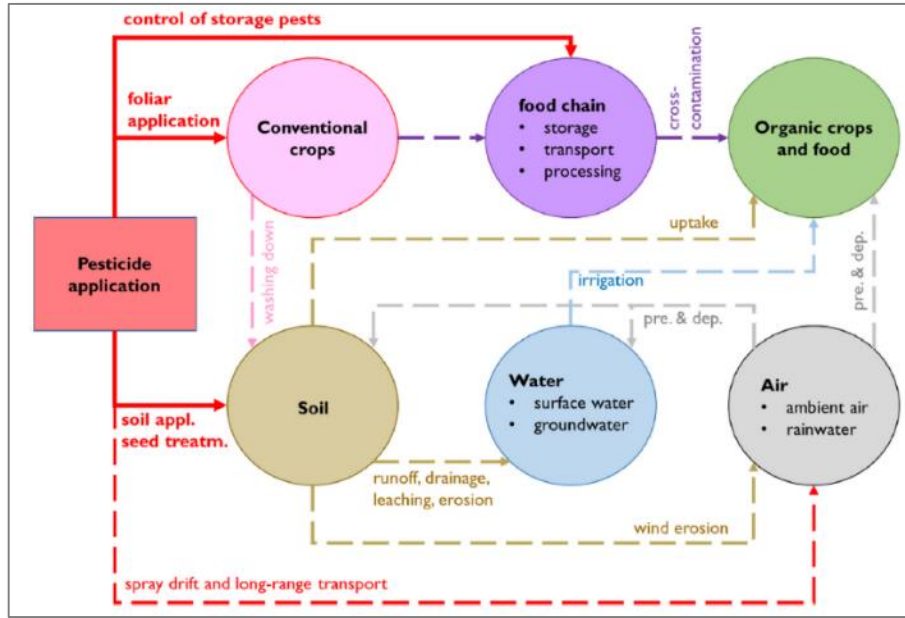




HOW TO PRODUCE ORGANIC FOOD IN A POLLUTED WORLD

Bernhard Speiser, Mirjam Schleiffer, Ursula Kretzschmar, FiBL

Pesticides in the environment





Our polluted world: contaminated soils

- Over 80 % of European soils are contaminated with pesticides *
- Well-known: uptake of organochlorine pesticides by cucumbers, pumpkins etc.
- Less known: Glyphosate adhering to soil particles is suspected to be a major source of contamination in Northern America



Our polluted world: contaminated water

- European water bodies are frequently contaminated with pesticides (surface waters more often than ground water) *
- contamination pathways are not well studied



Our polluted world: contaminated air

- Contamination of the air with pesticides is not well studied
- Well-known: spray drift
- Less known: long-range transport over distances up to 1000 km *

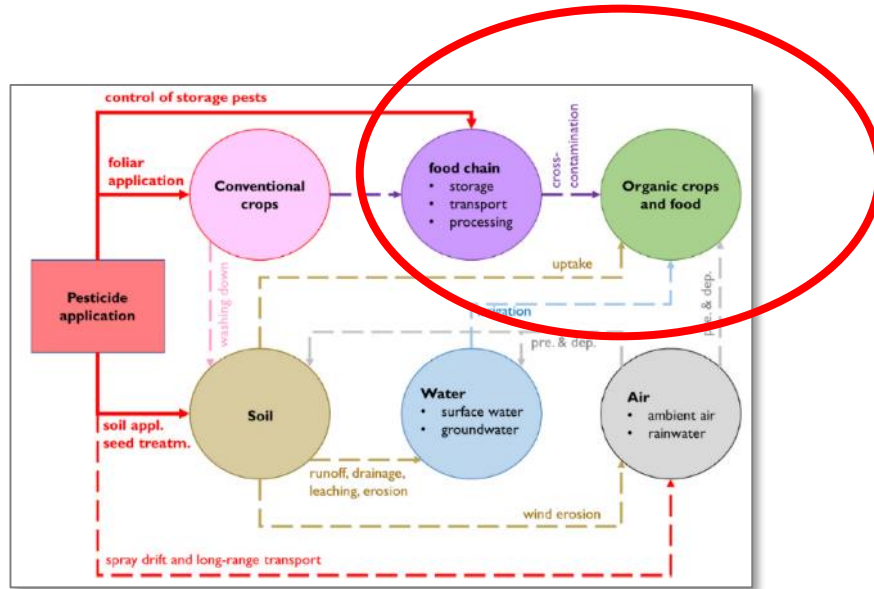


Our polluted world: contaminated facilities

Example studied by FiBL:

- Phosphine is widely used to protect conventional cereals, oilseeds and legumes against storage pests.
- Facilities for storage, transport and processing are often contaminated with dust containing phosphine.
- These dusts can cross-contaminate organic commodities which are later stored, transported or processed in the same facilities.

Pesticides from the environment may end up in the food chain



What can organic producers do?

Prevent contamination as much as possible, for example

- To reduce spray drift: plant hedgerows; talk to neighbours
- Avoid growing certain crops on plots with contaminated soil
- Clean machinery and equipment thoroughly
- Carefully choose your suppliers and the goods you buy

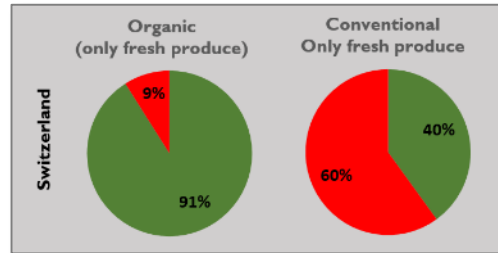




How effective are the measures?

Study on fresh products on the Swiss market. In organic products ...

- pesticides are found much more rarely (6 times less than conventional)
- If found, their levels are much lower
- As a result, the pesticide load is much lower (35 times less than conventional)





Monitoring of residues, reactions in case of detection

- Regular sampling
- If needed: investigation to determine source / cause
- Where appropriate: Corrective measures to avoid future contamination
- Decision on marketing as organic: certifier / authorities



Final words

Interpretation of pesticide residues is very demanding.

- Presence of pesticide residues
 - may indicate non-compliance, but
 - may also be due to unavoidable contamination, or
 - may be completely unrelated to pesticide use ('multiple source substances')
- Absence of pesticide residues does not guarantee an absence of fraud.
- The amounts detected usually give no clear indication regarding their cause.
- The current implementation is heterogeneous across Europe, and it is a heavy burden for operators, certifiers and authorities.

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THANK YOU FOR YOUR ATTENTION

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