

Taming the pesticide cloud:

Balancing productivity and sustainability in farming

The word gives us a clue: pesticides are substances used to **control any pest**, mainly in agriculture. Without them today's **food system** would have much less productivity, but they also pose some risks. That's why it is advisable to do a **conscious use** and combine them with **greener alternatives**.



How common is to apply pesticides?

Very. Nowadays, about **one-third of crops in the world** rely on the application of pesticides for their production.



More and more demanded

A continuous increase in the **demand for food** pushes **agriculture productivity** and increases the **use of pesticides**.

Target organisms classify pesticides



Herbicides



Insecticides



Fungicides



Percentage use by type



The bright side

They contribute significantly to the **growth of food production**, especially in the agricultural sector.

- Decrease crop losses in a 30%-70% range
- Extend shelf life of agricultural goods
- Increase livestock yields
- Reduce insect-borne diseases

Responsible use

Still, it is recommended to apply several **measures to minimise risks**.

- Use of the right equipment
- Use of precise application technology
- Reduce the use in sensitive areas
- Raise awareness about pesticide risks



A warning

Since they are used to kill or control certain pests, they can be **toxic to non-target organisms** or humans, pollute the environment and affect biodiversity. Also, they can make undesirable species resistant to them.

Biocontrol

There are **biological products** or technologies that can work as pesticides but pose less risks.

- Auxiliary insects
- Micro-organisms
- Natural substances
- Biostimulants

Greener alternatives

To protect and ensure agricultural production pesticides are necessary but they are not the only way. In a **balanced ecosystem**, natural resources help **reduce the necessity of chemical products**.

Agroecology

Redesigning farming systems to **make the most of biodiversity** and improve soil health.

- Poly-cropping
- Use of local varieties
- Integrated crop-livestock systems
- Agroforestry

