

# Position Paper

## Pest and disease management & pesticide handling



### Introduction

*Pests and diseases are a constant threat for farmers. They can reduce the yield or quality of a crop, or in the worst cases wipe it out altogether. For farmers who already struggle to achieve a sustainable livelihood, this can be devastating.*

*This is why most farmers worldwide use pesticides. Yet pesticide use comes with health risks for the farmers and workers, and there are concerns about pesticide residues in final products. In addition, there's the serious cost to the environment: damage to biodiversity, in particular pollinating insects such as bees, and pollution of water sources.*

*The debate around pesticides is often framed in terms of competition between two conflicting interests: agricultural yields versus the health of people and the environment. In reality, these apparently conflicting interests are in fact complementary. Sustainable productivity depends on a healthy population and the protection of natural resources.*

*UTZ puts this into practice through a system of Integrated Pest Management (IPM). In this system, the first line of defense against pests and diseases is based on good agricultural practices that have a preventive effect. Second comes non-chemical control such as mechanical removal or use of natural enemies. Only when these methods have been exhausted should farmers use chemical pesticides, with strict rules on safe, controlled and appropriate use set out in the UTZ standards. The most harmful pesticides as defined in the UTZ list are banned altogether.*

*At the same time, we constantly seek out opportunities to collaborate to further promote Integrated Pest Management.*

### UTZ's Vision

We want to create a world where sustainable farming is the norm. Sustainable pest management and safe pesticide handling mean that:

- The pesticides on the UTZ Banned Pesticides List are eliminated;
- Farmers can optimize their productivity with respect for people and the planet;
- The health of farmers, workers and consumers is protected;
- Biodiversity and natural resources are safeguarded.

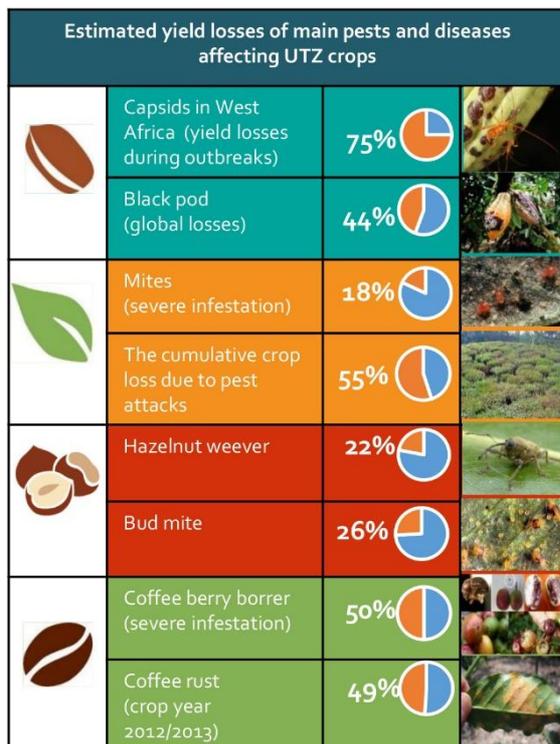
### The Issue: Pest Management and Pesticide Handling

Farmers use pesticides to increase their yields, but they come with health risks for people and the planet.

#### Pests and diseases can mean low productivity

Pests and diseases are one of the most important factors that influence the productivity of a farm. Worldwide, around one-third of all agricultural products are consumed or destroyed by insects (Popp et al, 2013). Many farmers use pesticides to counter this threat and protect their crops. A changing climate means even greater risks for farmers, as pests and diseases become more unpredictable, leading to sudden occurrence of pest outbreaks and disease epidemics.





**Graph 1.** Some of the most common pests and diseases and their impact on cocoa, tea, hazelnuts, and coffee

### Pesticides cause health risks for farmers, workers and consumers

Approximately 3.5 billion kg of pesticides per year are applied worldwide (Pretty and Bharucha, 2015). Among these pesticides, many are classified as 'Highly Hazardous', and can pose serious human health problems both in the short and the long run. The World Health Organization (WHO) has indicated that around three million farmers suffer annually from serious pesticide poisoning and 25 million farmers suffer from mild poisoning, resulting in approximately 200,000 fatalities among agricultural workers annually.

Pesticide residues have also become a serious concern among consumers (Stoytcheva, 2011). Many NGOs work actively to highlight the risks of pesticide residues to human health, including contributing to diseases like cancer. In response, supermarkets and retailers are becoming stricter in terms of Maximum Residue Limits (MRLs). This means that pesticide residues are becoming a barrier

to trade, because if the product does not comply with the respective MRLs regulations, the produce is simply not accepted in the importing country. This can have major economic implications for farmers and producing countries.

### Pesticides can cause loss of biodiversity & water pollution

Agricultural production is highly dependent on the ecosystem. For example, a healthy environment contributes to better crops through natural pest control, pollination, and soil fertility, among others (Power, 2010). However, this fragile system is being compromised by the overuse of pesticides. For example, the decline in the population of bees and other pollinators attributed to pesticides is a major concern. Around a third of the plants grown for human consumption depend on bees and other pollinators, including cocoa and coffee (FAO, 2016).

Pesticides are also a cause of water pollution, often spreading extensively from the original location and contaminating both surface and groundwater.

### UTZ strategy

Sustainable production cannot come at the expense of the health of people or the environment. We contribute to sustainable pest management in several ways. Our Code of Conduct sets out strict requirements for certified farms, and at the same time we work in partnership with others in the sector to contribute to systemic change.

### Pest management on UTZ certified farms

#### Pesticide use is minimized through Integrated Pest Management

UTZ requires that farmers follow a system of Integrated Pest Management (IPM). IPM combines different management strategies and practices to grow healthy crops and minimize the use of pesticides. Farmers must



prioritize prevention, followed by non-chemical control, and using chemical control only as a last resort:

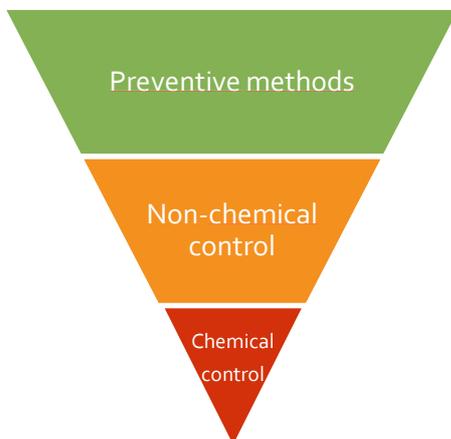
### Prevention

The first line of defense against pests and diseases should be prevention. A healthy crop is less likely to get infected by a disease or attacked by insects. Therefore, measures are needed to guarantee good conditions for the crop development. For example, pruning and weeding to optimize nutrient and water uptake.

### Non-chemical control

If pest control is needed, the first step should be using non-chemical control methods. This includes:

- *Cultural methods*: practices to make the environment less favorable for pest e.g. shade regulation, cover crops;
- *Mechanical methods*: direct removal or killing of pests
- *Biological methods*: e.g. the use of natural enemies of pests and diseases.



Graph 2. IPM pyramid

### Chemical control

Chemical controls should only be used if cultural, mechanical and/or biological controls have been applied and pests or diseases still

reach threshold levels. In the case that pesticides are used, there are extensive requirements that regulate their use to ensure protection of people and the planet.

### The most hazardous pesticides are banned

UTZ is committed to the long term goal of eliminating substances that are highly hazardous. To clearly communicate which pesticides are not allowed, UTZ has compiled two lists.

The List of Banned Pesticides sets out which pesticides may not be used under any circumstances. The list is based on:

- Pesticides banned or severely restricted by international conventions: the Rotterdam convention, Stockholm convention and Montreal protocol
- Pesticides classified by the EU Globally Harmonized System as carcinogenic, mutagenic, endocrine disruptors or toxic to reproduction;
- Pesticides classified by the WHO as Extremely and Highly hazardous.

In addition, through our Pesticides Watchlist, we aim to create awareness of other pesticides that pose risks to humans and/or the environment. This includes pesticides that are in discussion for their impact on the bee population such as the Neonicotinoids and others.

### The Code of Conduct sets out requirements for farmers

There are more than 20 requirements in our Code of Conduct linked to pest management and pesticides handling. Criteria and principles are described below.



Principles	Criteria linked to the principle
Better farming methods	<p>IPM is implemented to reduce the use of pesticides and encourage the use of knowledge based practices. A combination of practices (cultural, mechanical, biological methods) is applied before using chemical control.</p> <p>When pesticides are used, they are used responsibly and effectively. Farmers are trained in pest monitoring, so they can assess when to take action. In addition, farmers and workers are trained on how to use pesticides responsibly and therefore reduce the risks related to their use. E.g. using pesticides registered for the particular crop; following the label instructions (right dosage, application method); respecting pre-harvest intervals and re-entry times; having adequate and calibrated equipment; safe pesticides storage and correct disposal of pesticides containers.</p>
Better working conditions	<p>Workers must use appropriate protective equipment and handle pesticides safely. E.g. making proper facilities available for workers to handle and minimize risks related to pesticides use; respecting re-entry times to avoid people re-entering the fields soon after pesticides are applied; ensuring vulnerable people such as pregnant women or workers under 18 years of age do not work with pesticides.</p> <p>Pesticides that can pose risks for workers (acute, e.g. poisoning, or chronic, e.g. cancer, mutagenic problems, endocrine issues or problems with the reproductive system) are included on the List of Banned Pesticides or Pesticides Watch List.</p>
Better product quality	<p>The implementation of good agricultural practices contributes to food safety, reducing residue levels in the final product. E.g. following the correct dosage and ensuring that pesticides are not applied too close to the harvest; using the appropriate equipment to reduce the risk of spraying more pesticides than recommended; other postharvest practices.</p>
Better care for nature	<p>Natural habitats and ecosystems are protected. E.g. the use of buffer zones, measures to avoid impact of pesticides on bodies of water, and correct handling of empty pesticide containers.</p> <p>Pesticides that can cause serious environmental damage are included on the List of Banned Pesticides. Through the Pesticides Watch List, awareness is raised of those that pose certain environmental risks.</p>

UTZ certified farmers are audited on the criteria in the Code of Conduct. If non-compliances are found, corrective actions will be set out. For example, if it is found that not everyone who handles pesticides wears personal protective equipment, the corrective actions could include: purchasing more equipment; introducing a procedure to replace equipment when it is damaged; training farmers and workers on health and safety. If no measures are taken to comply

with the Code, farms will lose their UTZ certification.

### Farmers are supported to build knowledge through training

Building knowledge and giving training on how to apply these criteria is very important. UTZ develops e-courses and face to face courses for trainers, technical assistants and members on the implementation of the Code



of Conduct, including topics like IPM and pesticide handling.

## Change at the Sector Level

In addition to promoting sustainable pest management and safe pesticide handling through the Code of Conduct, UTZ works with the sector to raise awareness and contribute to progress on the issue.



Graph 3. UTZ IPM strategy

## We form partnerships to share knowledge

One of the greatest challenges is that farmers in general lack knowledge about the less hazardous alternatives to pesticides.

Accessibility to alternatives is still a challenge for many producers, and collaboration is needed on this complex issue. Therefore we have joined hands with other members of ISEAL, the membership organization for credible sustainability standard, to form the IPM Coalition.

The goal of this collaboration is to work together to reduce or eliminate the use of Highly Hazardous Pesticides and to achieve a significant reduction of pesticide risks to health and the environment with effective standard and certification systems' tools. Together we will create a platform to facilitate knowledge exchange on IPM in order to find alternatives.

## We support supply chains on reducing levels of pesticides residues

UTZ works together with industry partners on the challenges of meeting Maximum Residue Levels, in sectors such as tea. UTZ is currently working on identifying strategies to minimize pesticides and contaminants in the final product and is developing a guidance document for members on measures to reduce risks related to these particular food safety hazard.

## Conclusion

The issue of pest management highlights the importance of balancing all three pillars of sustainability: economic, social and environmental. True sustainability means that farmers can run a productive, economically viable business, while at the same time the health of farmers, workers and consumers is protected, and natural resources are safeguarded. By promoting Integrated Pest Management, and banning the most hazardous substances altogether, we enable hundreds of thousands of farmers to take steps towards greater sustainability.



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