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How pesticides harm our future food production

An attack on nature is an attack on food security!

Pesticide reduction does not threaten food security - but continuing the status quo will! The current use of chemical pesticides, if it continues, will soon jeopardize the safety of our food production, here on European soil. IPCC, IPBES, and even the European Commission ^[1] recently, all repeat it: chemical pesticides contribute to the destruction of ecosystems and can damage soil health, leading to a decrease in productivity and lower yields.

Business as usual is not an option.

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FOOD SECURITY IS NOT AT RISK IN THE EU TODAY...

- We produce more than enough food for our needs in the EU: we throw away 88 million tonnes or 20% of all food every year^[2]. According to the latest estimates, even 153 million^[3]! Therefore, we urgently need to tackle food waste.
- We feed too much of our food crop to animals. **60% ^[4] of the EU's cereal production is fed to animals.** If we are serious about food security, then we have to focus on food, not feed!
- Too many edible crops are used for agro fuel production instead of food. In 2021, the EU used 11 million tonnes of cereals and 8.6 million tonnes of vegetable oils. In Germany alone, 18 % of field crops could be redirected to human and animal consumption instead of landing in fuel tanks^[5].
- What matters is to **ensure access to food for the most vulnerable members of our society.** This requires urgent economic and social measures, such as the end of speculation on food commodities.

...BUT PESTICIDES HARM THE BIODIVERSITY NEEDED FOR FUTURE FOOD PRODUCTION

- The population of insects in protected areas has declined by 75% in 30 years in Germany^[6].
- **50% of the entire grassland population of butterflies has disappeared** between 1990 and 2011

in the EU ^[7].

- Around **40% of all flying insect species worldwide are threatened with extinction**, but insects are very important for our food production as pollinators. ^[8].
- The loss of pollinators poses a threat to agriculture in the long term, but the use of chemical pesticides further contributes to their decline. ^[9].
- Besides, **80% of soils in the EU are already polluted with pesticides**^[11], which could affect their fertility and productivity.

A LOWER PESTICIDE USE IS POSSIBLE WITHOUT YIELD LOSSES

- Pesticides could be **reduced by more than 40% without any yield loss**^[12].
- Use of bee-killing neonicotinoids has been reduced by 95% without any loss of yield^[13].
- Pesticide use in potatoes and wheat has been cut by 90 % without reducing yields^[14].
- Pheromone biocontrol alternatives and nets are highly effective in protecting fruit production across whole landscapes and regions (grapes & apples) from pests such as codling moth - no need for insecticide application.

A LOWER PESTICIDE USE IS EVEN MORE PROFITABLE FOR FARMERS!

- Studies shows a **significant increase in farmers' input expenditure per hectare** in almost all major EU agricultural MS in past decades - and this increase substantially exceeded the yield increases achieved in the same period^[15].
- Average expenditure per hectare increased significantly between 1995-1997 and 2015-2017, from +58% in Ireland to +110% in Spain (compared to much smaller yield increases over the same period) ^[16].
- As a result, all major agricultural member states of the European Union (except Spain) saw a significant drop in their average gross income for agriculture between 1997 and 2017. This ranged from -6% in Germany down to -33% in Belgium^[17].
- The economic efficiency for farmers dwindles for every euro they spend on inputs, like chemical pesticides. **The more they use these products, the further their income decreases.**
- A study of 55 organic crops – grown on five continents, over 40 years – found that despite lower yields, **organic agriculture was significantly more profitable (22–35%)** than conventional agriculture^[18].

In short, agro-ecology has proven to be more economically efficient across the EU. Reducing the use of - chemical pesticides and hence, the costs, is “farming common sense”: **every euro you save is one you can invest for the future!**

PESTICIDES POISON FARMERS

- **Pesticides use can cause neuro-degenerative diseases and cancers, which farmers are the most exposed to**, in particular the non-Hodgkin's lymphoma, a cancer widespread among regular pesticide users^[19].
- The non-Hodgkin's lymphoma has been recently classified as an occupational disease of farmer and agricultural workers in France, and is now recognised by the health insurance system.
- Only France and Italy officially recognize Parkinson's disease to be linked to farm work^[20].
- A farmer won a recent court ruling in France against Bayer-Monsanto on the ground of acute

toxicity resulting in serious neurological damage from a herbicide.

PESTICIDES HARM HUMAN HEALTH

- The cost to human health of pesticide use amounts to **1.6 million unintentional poisonings per year in the EU**^[21].
- One third of fruits in the EU is contaminated with pesticides^[22].
- **20% of French people live in regions where the drinking water shows pesticide residues** above the legal limits at least some of the time^[23].
- In Vienna, a study by the University of Natural Resources and Applied Life Sciences measured 17 different pesticides in the air^[24].
- We are therefore constantly exposed to these chemicals, not only on an individual basis, but also to entire cocktails of different active substances. **The overall impact has neither been researched nor is it part of the authorisation procedures for pesticides in the EU.**

PESTICIDES HARM TAXPAYERS' BUDGET

- **€2.3M are spent every year at EU level to repair the damage caused by pesticides**^[25].
- Monitoring and testing of water quality alone costs several hundred million euros a year^[26].
- In France, the hidden costs due to the use of synthetic pesticides could amount to at least 372 million euros a year^[27].

In short, to preserve our food security, we must act now to protect vital resources such as ecosystems, soils and water. We must protect wildlife habitat, as much as we must protect public health and in particular those who feed us, namely the farmers. **Doing nothing will harm them and us in the long run.**

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REFERENCES

[1] https://commission.europa.eu/system/files/2023-01/SWD_2023_4_1_EN_document_travail_service_part1_v2.pdf

[2] Figures from the [European Commission](#)

[3] Report from [Feedback EU](#), 2022

[4] Figures from [WUR](#), 2020

[5] Figures from [DUH](#)

[6] Hallmann et al., More than 75 percent decline over 27 years in total flying insect biomass in protected areas, 2017. <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0185809>

[7] van Swaay C, van Strien A, Harpke A, Fontaine B, Stefanescu C, Roy D, et al. The European grassland butterfly indicator: 1990–2011. EEA Technical Reports. 2013;11.

[8] <https://www.inrae.fr/actualites/biodiversite-services-rendus-nature-que-sait-limpact-pesticides>

- [9] S. Myers et al. « Pollinator Deficits, Food Consumption, and Consequences for Human Health: A Modeling Study », 2022
- [10] Geissen et al., “Pesticide residues in European agricultural soils – A hidden reality unfolded”
- [11] Strona and Bradshaw, Sci. Adv. 8, eabn4345 (2022), JRC EU COM & University Helsinki: Coextinctions dominate future vertebrate losses from climate and land use change.
- Lechenet, M., Dessaint, F., Py, G. et al. Reducing pesticide use
- [12] Lechenet, M., Dessaint, F., Py, G. et al. Reducing pesticide use while preserving crop productivity and profitability on arable farms. Nature Plants 3, 17008 (2017)
- [13] Lorenzo Furlan et al (2017) An update of the Worldwide Integrated Assessment (WIA) on systemic insecticides. Part 3: alternatives to systemic insecticides (2018)
<https://link.springer.com/article/10.1007/s11356-017-1052-5>
<https://d-nb.info/1155575059/34>
- Pecenka, Ingwell & Krupke (2021). IPM reduces insecticide applications by 95% while maintaining or enhancing crop yields through wild pollinator conservation. Proceedings of the National Academy of Sciences. 118. e2108429118. 10.1073/pnas.2108429118. (up to 26% by pollination dependent spp)
- [14] Skevas, T., & Lansink, A. O. (2014). Reducing pesticide use and pesticide impact by productivity growth: the case of Dutch arable farming. Journal of agricultural economics, 65(1), 191-211.
- [15] Le Basic, “Break out of the Silo” 2021
- [16] ibid
- [17] ibid
- [18] ibid
- [19] Zhang et al., Exposure to glyphosate-based herbicides and risk for non-Hodgkin lymphoma: A meta-analysis and supporting evidence, 2019
- [20]<https://www.dw.com/en/poisoned-land-the-rural-rise-of-parkinsons/a-58319218>
- [21] Boedeker W, Watts M, Clausen P, Marquez E. The global distribution of acute unintentional pesticide poisoning: estimations based on a systematic review. BMC Public Health. 2020 Dec 7;
- [22] PAN Europe Study 2022
- [23]https://www.lemonde.fr/planete/article/2022/09/21/pesticides-20-des-francais-ont-recu-de-l-eau-potable-non-conforme-en-2021_6142608_3244.html
- [24] Johann G. Zaller, Maren Kruse-Platz et al, Pesticides in ambient air, influenced by surrounding land use and weather, pose a potential threat to biodiversity and humans, Science of The Total Environment, Volume 838, Part 2, 2022
- [25]https://www.arc2020.eu/wp-content/uploads/2021/11/Pesticides-a-model-thats-costing-us-dearly_EN-

[Concept-note-3.pdf](#)

[26] Neumeister 2010; i.e. NLWKN 2019

[27] Alliot et al, [The social costs of pesticide use in France](#), 2022.

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