

## Organic Fertilizers Advantages

Because they contain a lot of organic matter and have lower salt concentrations, organic fertilizers, unlike synthetic ones, are beneficial for soil ecosystems. In more detail, the **advantages of organic feeding** are the following:

- ***Improved soil fertility and health.*** Incorporating organic matter-rich feeding into the soil improves its structure and fertility by encouraging the activity of earthworms and microbes.
- ***Better water retention.*** Thanks to the improved soil structure, both the soil's water-holding capacity and water infiltration are improving.
- ***Complete nutrient uptake by plants.*** Organic fertilizers, in contrast to synthetic products, gradually release nutrients, allowing plants to receive all the nutrients they need for growth without stress or overfertilization.
- ***No accumulation of toxins in the soil.*** There are no toxic compounds or salts released by these products that would build up in the soil.

## Synthetic Fertilizers Disadvantages

- ***Lack of meso- and micronutrients.*** While they contain the three essential nutrients, they typically lack the trace nutrients that a crop would obtain from organically decomposing materials.
- ***Environmental pollution.*** Most synthetic fertilizers, in contrast to natural ones, tend to run off and volatilize, contaminating the soil, water, and air and potentially reaching far-flung places.
- ***Altering soil pH.*** Long-term chemical applications may affect your soil's pH balance, making it hostile to beneficial insects and microorganisms.
- ***Overfertilization.*** Because synthetic fertilizing products are extremely concentrated, they are easily overused, for example, resulting in **fertilizer burn**.
- ***More frequent applications.*** Synthetic fertilizers, unlike organic ones, have a short-term effect and must be applied multiple times throughout the growing season.

***Can I use organic and synthetic fertilizers together?***

*Yes, combining synthetic and organic fertilizers is a [winning strategy](#). Say, you can apply compost/manure before planting and mineral N-fertilizer during critical growth stages (tillering and stem elongation in grain crops, branching in vegetables).*

**Schedule organic or synthetic fertilizing based on the plant's growth stage** using EOSDA Crop Monitoring's in-built BBCH growth stage calculation for the 40 most common crops (and more to come). Make sure to keep track of the plant development timeline across all of your fields so you can strategically apply synthetic feeding when needed.

Incorporating BBCH growth stages into fertilization planning.

Furthermore, our [precision farming capabilities lend agricultural consultants a hand](#) by informing their fertilization advisory services throughout the growing season. Growth stage data, VRA maps, historical weather and forecasts, multi-field crop monitoring, field operation planning, and crop rotation history are just a few of the EOSDA Crop Monitoring features that help agricultural consultants enhance their expertise, give more accurate advice, and promote a smarter way of applying organic and synthetic fertilizers.

Published: 03.05.2024

## References

1. Sinha, S. (Ed.). (2015, January). Synthetic Fertilizers; Role and Hazards. In: Fertilizer Technology I Synthesis, 176-199. Studium Press LLC, USA. [↑Book](#)
2. Li, Q. et al. (2022, May 1). Organic fertilizers activate soil enzyme activities and promote the recovery of soil beneficial microorganisms after dazomet fumigation. Journal of Environmental Management, 309. <https://doi.org/10.1016/j.jenvman.2022.114666>. [↑Journal article](#)