



Knowledge grows

Feeding crops, preserving soils

Making every nutrient count



Healthy soil is the foundation for a resilient, sustainable food system

Soil health is the foundation for resilient crop production and sustainable farming. Just like us, soil is a living organism that needs air, water and essential nutrients to thrive. Healthy soil maintains water management, recycles nutrients, and plays a pivotal role in storing carbon, helping mitigate climate change.

Yara helps farmers in Europe preserve and improve the fertility and health of their soil – a benefit that is carried forward to future generations and helps ensure food security.





Our solutions, tools and services, including soil health analytics, support farmers with precise and balanced nutrient management.

Yara provides a complete offering of crop nutrition solutions, including fertilizers (granular, water-soluble, foliar, seed treatment), biostimulants and digital tools.

Applying optimal amounts of required nutrients, through for example a combination of mineral and organic fertilizers, promotes plant growth and thus increases the amount of residues and root biomass added to soil.

Roots play a key role in promoting soil health by increasing the carbon content in deeper soil layers and feeding microorganisms. The extra biomass produced by adding nutrients improves soil organic carbon, soil structure, nutrient supply and moisture retention, thereby also optimizing crop yields.

Biostimulants support better root development by enabling plants to absorb more nutrients and water or by improving the availability of nutrients in the soil.

How plant nutrition contributes to soil health	
	Supports the nutrition of soil micro-organisms
	Improves soil organic carbon content
	Maintains and increases the amount of carbon sequestered
	Maintains physical soil properties

Biostimulants support better root development



Untreated



YaraVita BioNUE™

Source: Yara biostimulants trial of maize roots, 94 days after application of YaraVita BioNUE™

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Biostimulants, fertilizers and smart management practices are all pieces of the same puzzle

By following the principles of balanced plant nutrition and by replenishing the nutrients that are removed during the harvest, European farmers and crop advisors can ensure soils remain healthy now and for generations to come:

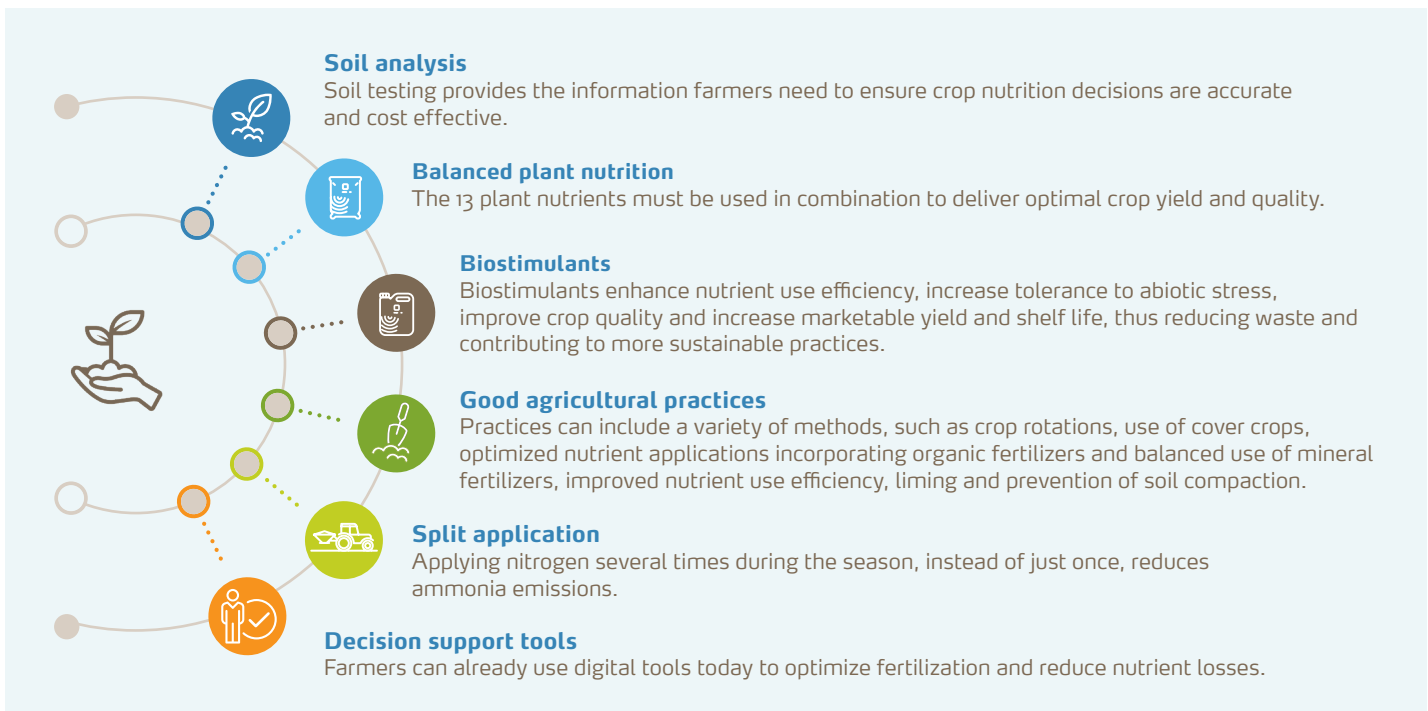
- Farmers usually first apply organic nutrients if they are available on their farms or nearby in the form of manure or slurry. However, on-farm sources of nutrients are rarely sufficient to meet all crop needs.
- Mineral fertilizers are thus an essential complementary product to help close the gap between the soil's nutrient supply and the plant's requirement for optimum development and to avoid soil depletion.
- Biostimulants are an additional tool that can be used to complement fertilizers, especially in situations where farmers need to ensure that every nutrient counts. While fertilizers are food for plants, biostimulants are like vitamins for plants and should therefore be considered as one of the solutions in an integrated crop management toolkit.

Here are six solutions that help improve soil health:

“Fertilizers and biostimulants go hand in hand in fulfilling our goal of ensuring that soils remain healthy for generations to come. By feeding crops with nitrate fertilizers, ensuring the right balance of nutrients, and combining their use with biostimulants, farmers in Europe can improve the efficiency of the nitrogen they use by 10%. Upscaling precision farming digital tools can increase nitrogen use efficiency by an additional 10%. These are two key pathways for farmers to contribute to the EU Farm to Fork Strategy ambition of halving nutrient losses by 2030.”



*Marion Martinez, SVP
South Europe*



How biostimulants contribute to soil health

It is more important than ever to acknowledge the important role biostimulants play in contributing to sustainable agriculture and a resilient food system. An estimated one third of agricultural soil is degraded, affecting food supply and carbon sequestration. Biostimulants can improve soil health and fertility in line with the EU's goal of ensuring long-term soil fertility. Biostimulants can also enhance plants' tolerance to abiotic stress, such as drought or extreme temperatures, helping mitigate the negative impact of climate change. Yara's biostimulants are a vital tool in helping improve plant nutrition and soil quality, both from an environmental and economic standpoint.

About Yara
Yara grows knowledge to responsibly feed the world and protect the planet. Supporting our vision of a world without hunger and a planet respected, we pursue a strategy of sustainable value growth, promoting climate-friendly crop nutrition and zero-emission energy solutions. Yara's ambition is focused on growing a nature-positive food future that creates value for our customers, shareholders and society at large and delivers a more sustainable food value chain. We operate an integrated business model with around 17,000 employees and operations in over 60 countries, with a proven track record of strong returns.