

# Fertilizers by Yara – a combination of key nutrients

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*Agriculture is a sector that has been developing very intensively in recent years. Increasingly new and modern varieties and cultivation technologies for different crops are being offered on the market, but little is known in the field of plant nutrition. We expect ever higher yields from the plantations, but do we provide enough to the plants to enable them to realize their potential?*

The decline in soil fertility as a result of intensive exploitation is a problem to which we also do not attach due importance. Proper nutrition and high-quality mineral fertilizers can solve many problems for us. The soil itself consists of organic and inorganic matter and it also strives to achieve a balance in the levels of elements. Nitrogen is the driving force of growth and has its irreplaceable role in nutrition, but nitrogen fertilizers by their nature are products with a strongly acidifying effect.

A large part of the soils in Bulgaria are genetically acidic or secondarily acidified; with increasing acidification some nutrients become difficult for plants to access, while others are released to a degree that is toxic to plants. Under unbalanced conditions, soil microorganisms have weaker activity and, accordingly, the mineralization of plant residues is delayed, which leads to poorer uptake of the available soil nitrogen. In order to fine-tune crop nutrition, it is advisable to know the actual reserve of nutrients in a given field.

Yara Vita™ fertilizers are in the form of liquid formulations and suspensions, in accordance with the highest quality standards in food production and in the chemical industry. They contain adjuvants, emulsifiers, surfactants and stickers, which improve the uptake of nutrients compared to competing products. Another advantage of the specially developed fertilizers is the high content of nutrients, with individual products containing up to 700 g/l of active substance. Products containing organic matter are gaining increasing popularity.

Yara Vita™ Universal Bio is a liquid fertilizer containing nitrogen, phosphorus, potassium, manganese, molybdenum, boron, copper, zinc, Ascophyllum nodosum extract – cytokinins, auxins, gibberellins, adjuvants, stickers and surfactants. Uptake of nutrients through the root does not always meet the optimal needs of plants due to insufficient nutrients in the soil or the influence of adverse environmental factors – drought, waterlogging, low temperatures, etc. There is no nutrient that can be called secondary; each missing one limits the yield in the field. Besides the choice of the correct product, the application stage is also important. Overcoming the “hidden hunger” is the most precise moment in the nutrition technology. The foliar fertilizers from the Yara Vita™ series ensure to the highest degree the needs of the plants.

Among the granular soil fertilizers we offer products from the Yara Mila™ series, which are characterized by high efficiency. The mineral fertilizers from this series dissolve upon contact with moisture in the soil, which allows application without incorporation into the soil. They can be successfully applied both as base fertilization and as top dressing during vegetation. The granules are of uniform size and shape, do not bind to each other and do not disintegrate. These properties prevent changes during transport and storage. The uniform distribution of the granules over a given area promotes the uniform distribution of nutrients in the plants. Yara Mila™ Complex is the most efficient fertilizer for all soil types; one of the most important characteristics that distinguishes it from all fertilizers present on the market is the content of phosphorus in the form of ortho- and polyphosphates, which enables the high efficiency and availability of phosphorus on sites with different pH values. We also offer two products for the initial start of agricultural crops. Their role is to meet the early needs of plants for nutrients when the soil is still cold and phosphorus is difficult to access: Yara Vita™ Teprosyn NP + Zn and Yara™ Starter NP + Zn + B.