

# Soil vital to the vitality and yield of potatoes and onions

**“The soil is the engine of any arable farm”, says Marco van Gulp of N-xt Soil Services. “The soil is the engine of any arable farm”, says Marco van Gulp of N-xt Soil Services. In his opinion a good harvest and crop quality depend on this engine running optimally. Whilst looking for the best possible ‘engine output’ Mr van Gulp, together with his colleagues, developed a clear vision on fertilisation. A vision that they would like to share with as many people as possible via the company N-xt Soil Services. Why? “Because it makes crops more profitable”, explains the soil specialist.**

In the search for suitable fertilisation strategies, many arable farmers are looking for a product that feeds the crop.

Instead of taking plant nutrition as the starting point, Marco van Gulp focuses on feeding the soil. Van Gulp: “the soil is the home of the soil biology, of tens of billions of organisms living in a handful of earth. Performing the right soil analysis gives us a clear image of how this house is built, of its foundation. This also makes it possible for us to continue to optimise this habitat with suitable fertilisation, which improves the performance of the soil life. This improves the quality of the crops. The liquid fertilisers of sister company N-xt Fertilizers play an important role here.”

**N-xt Fertilizers supplies soil and leaf fertilisers that are used successfully for potato and onion cultivation. The products improve the yield, create more favourable size grading and a top-quality product. The N-xt products also improve the crop’s resistance to plagues and diseases.**

## Optimum use

An important property of the products of N-xt Fertilizers is that they make substances such as ammonium (nitrogen) and absorbable phosphate naturally available to the crop for a longer time period. “The minerals attach to the clay-humus complex within 24 hours and therefore do not leach out. The conversion into nitrate is prevented naturally, which means you do not need any chemicals that adversely affect the soil life. This helps to ensure that the phosphate and trace elements in the fertilizer are used to best effect.” The focus is emphatically placed on the creation of a natural soil balance for the plant. “Viewed from the perspective of the soil this starts with an optimum chemical balance. This in turn produces an optimum structure, or physical balance, and that is a prerequisite for a healthy soil biology.” This in turn produces an optimum structure, or physical balance, and that is a prerequisite for a healthy soil biology.” Mr van Gulp attaches great importance to the use of organic materials: “We use urea as the basis for naturally binding other minerals in all of our fertilisers. This technology is vegetable-based and environmentally-friendly.”



Nico Gebbink

## Practical experience

Nico Gebbink has an arable farm in the Noordoostpolder. As a long-term customer he has become more and more convinced of the effect of N-xt Fertilizers products on his crops: “We started with blocks of 3.5 hectares and we have now for some years been fertilising the soil for all of our crops with N-xt Fertilizers products. We have been seeing more soil life since we started using these products. There are clearly more worms in the soil, for example.” Nico Gebbink uses the fertiliser in combination with compost and other soil improvers. “This makes it possible for us to control much more effectively on the basis of nitrogen. We will have to see how it turns out this year, but after a few years of looking for the right ratios we had a better spread in the last potato

crop: less compaction, better tuber formation and more tubers per plant. We use the product not only for the yield, but largely to improve the quality of the crop and the soil. The stricter requirements set for the quality of the product and the more stringent legislation governing the use of fertilisers are forcing us to take action to improve the health of the soil."

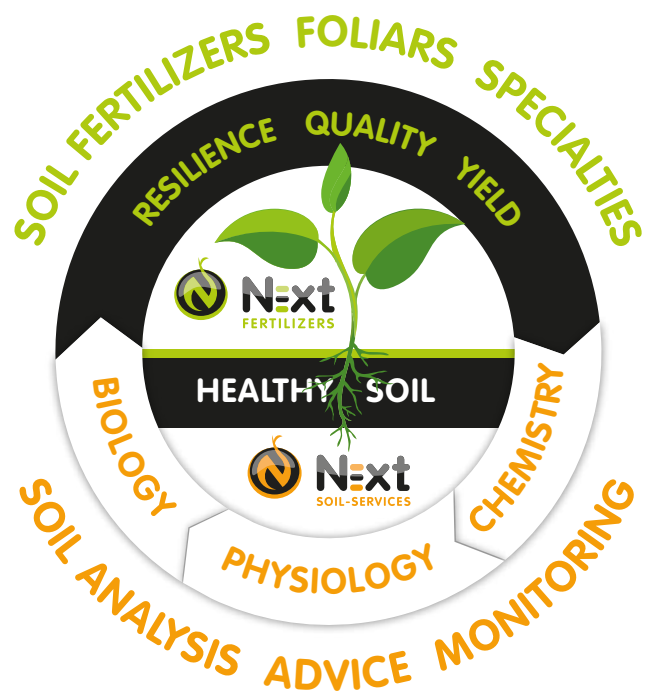
## The importance of calcium

Besides the soil and leaf fertiliser, Nico Gebbink also uses the quality fertiliser N-xt Calcium. This is a fertiliser that has been specifically developed to make calcium more easily available to the potato. Van Gorp: "Calcium is a tricky soil mineral, but is essential to the plant. Enough calcium prevents the blocking of nutrients, but its absorption depends on many factors - root zones, growing conditions, displacement and evaporation all play an important role. The importance and the effects of this mineral are still underestimated. High concentrations of nitrates and chlorine impede calcium absorption."

## Tuber formation

Calcium is also crucial to tuber formation because of the role it plays in the structure of cell walls and membranes, but also in enzyme control and a proper cell division and cell elongation. Potatoes absorb most of their calcium at the start of the growing season. "The best time to administer this fertiliser is after planting and before ridging up. This can be done very easily with the field sprayer.

As soon as the young hair roots start to form, there is enough bioavailable calcium. The calcium fertiliser certainly gets results in crops with a scab and peel quality problem", concludes soil specialist Van Gorp.



For more information about N-xt Fertilizers  
**Marco van Gorp**

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