Biostimulant: two farmers from Moselle design the first foliar product based on volcanic rock

Fertiroc: this new biostimulant combines micronized volcanic rock (zeolite) with nutrients. Jean and Pierre Niesner, farmers in Moselle, are behind the design of this original product, the benefits of which have been highlighted by official Swiss and Belgian trials.

Jean et Pierre Niesner, agriculteurs à Remering (Moselle), "FertiRoc est le premier biostimulant minéral à obtenir la norme CE pour ses capacités d'amélioration de l'efficience de l'azote."
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Products based on a volcanic rock with special properties, zeolite, are marketed for soil applications as an amendment. A first foliar application biostimulant based on zeolite is being marketed this year: Fertiroc. Farmers in Moselle and founders of the start-up Power the Nature, Jean and Pierre Niesner, are its designers. Several years of testing were necessary to achieve its approval.

Fertiroc biostimulant promises to improve nitrogen efficiency

Fertiroc was tested for four years by Belgian (University of Gembloux) and Swiss (Agronomic Institute) research organizations. In France, the organizations contacted had not shown interest in the project at the time of the first tests, according to Jean Niesner. The product obtained European certification as a biostimulant with the claim “improves nitrogen efficiency.” “It is the first mineral biostimulant with this claim to obtain this CE standard,” mentions Jean Niesner.

Zeolite has a structure that promotes the exchange of certain cations. In the Fertiroc product, the mineral has been ground extremely finely (3 µm) “to obtain a wettable powder that mixes well with water, does not clog sprayer nozzles and allows good penetration into plants,” specify Jean and Pierre Niesner. It is associated with three nutrient cations: potassium, magnesium and calcium, the association of which with the mineral boosts assimilation by crops.”

A 20-25% reduction in nitrogen fertilization without loss of yield

"With two scientific publications in peer-reviewed journals, Swiss research has demonstrated better nitrogen assimilation with the application of the product, with among other things an increase in the activity of certain soil enzymes leading to increased nitrogen availability," highlights Pierre Niesner.

Trials show a yield gain of 6 to 7% on wheat, at different fertilization levels. "The product makes it possible to reduce nitrogen fertilization by 20 to 25% without loss of yield," assure the farmers, referring to the test results. On winter cereals, the use of Fertiroc is recommended with two applications at 1.5 kg/ha, the first at the start of heading and the second when the last leaf appears. The biostimulant can be mixed with a fungicide and diluted in a volume of 100 liters of water per hectare. On corn, it will also be used in two applications on the foliage.

Approved for all crops and authorized in organic farming

Its cost of use is 42 euros per hectare. Allowing for better nitrogen efficiency, Power the Nature farmers recommend using the product combined with a 25% reduction in nitrogen fertilization on each fertilizer application. Fertiroc is approved for all crops and authorized in organic farming.

“The product is referenced in the Actura network of traders for its distribution,” informs Jean Niesner. “It is available in 10 kg bags.” The micronization of the rock for the development of the product is carried out in Germany. But the two farmers are considering creating a micronization plant in Moselle, if the product is successful. Fertiroc will have to prove itself in the field next spring.