

Nitrogen, Zinc and Manganese: key elements

Azavis MnZn is a foliar fertilizer with a high nitrogen concentration (24 % = 314 g/L) enriched with two micro-nutrients which are of fundamental importance for field crops such as cereals, corn and also rice: manganese (Mn) and zinc (Zn). Rainy springs and intense fluctuations of temperatures during the early stages of the growth cycle, block the absorption of mainly these two elements zinc and manganese from the soil. Because of the influence these elements have on the nitrogen metabolism of the plant, the nitrogen absorption is also compromised. Azavis MnZn has been developed for all these reasons. It is a foliar fertilizer containing a high concentration of directly available nitrogen, and a balanced mixture of chelated zinc and manganese. These trace elements are chelated with three chelating agents, EDTA, DTPA and HEDTA, guaranteeing a high stability and availability at any pH.

Why manganese?

- Activates the transformation of nitrates to amino acids and proteins..
- Plays an important role in the synthesis of amino acids.
- Increases the photosynthesis (catalyzes the photolysis of the water setting oxygen free during the hours of the days with sufficient light).
- Optimizes the water management of the plant and reduces the water consumption.
- Increases the resistance of cereals against the typical diseases of these crops.
- Strengthens the assimilation of CO₂ (carbon dioxide) = increases the formation of sugars and starch, resulting in larger and thicker grains/seeds.

Why zinc?

- Stimulates the production of the natural growth hormones (=auxins).
- Activates the photosynthesis.
- Stimulates the protein production.
- Has a direct influence on the nitrogen metabolism (zinc deficiency will reduce concentration of RNA and of ribosomes in the cells, resulting in an interruption of the protein production).
- Intervenes in the absorption and translocation of phosphorous.
- Intervenes in the production of vitamin C.

Nitrogen applications, why?

Production levels of most crops are first of all determined by the nitrogen availability. Nitrogen stimulates the growth of the plant and assures a good chlorophyll concentration in the leaves. The urea is transformed within the plant by the nitrification process into ammonium nitrogen. The efficiency and speed of this transformation is highly dependent of the temperature. The combination of mainly urea with smaller amounts of ammonium nitrogen in Azavis MnZn, guarantees an optimal and persistent nitrogen absorption on all crops.

Azavis MnZn



Recommendations

The use of the product

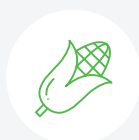
Azavis MnZn can be used in all field crops, but is mainly adapted to cereals, corn and rice: the high concentrations of nitrogen, zinc and manganese, increase as well the quality of the production as the total production potential of these crops.

The production potential of field crops depends first of all on the nitrogen availability. This is why it is of upmost importance that nitrogen is not only applied the most efficient way, foliar, but it must also be metabolized and transformed into organic nitrogen forms, such as amino acids and proteins, within the plant. Manganese and zinc play an important role in this transformation process (see first page), and this is exactly why the combination of these micro nutrients with nitrogen within Azavis MnZn is so ideal to assure the integration and the transformation of the nitrogen within the plant. With Azavis MnZn we can assure that the applied nitrogen is used the best possible way: Azavis MnZn is the ideal tool to reach the maximal production potential of the crops. Plants will function the most efficient way, without any growth interruptions, so that the production can increase continuously.

Foliar fertilization with Azavis MnZn can be a worthy alternative, completely or partially, for the last soil fertilization. With Azavis MnZn the traditional fertilization can be optimized and can often also be reduced considerably.

The product can be mixed with the most commonly used pesticides in field crops (even with these of the sulfonylurea family). For more information on the mixability of our products, consult the mixability list on our website www.chelal.com.

Dosage: 4-10 L/ha. Moment of application:



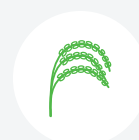
Corn

from plants with 2-6 leaves.



Cereals

In combination with the insecticides and/or fungicides until the appearance of the ear.



Rice

together with the insecticides and/or fungicides.

Composition

Azavis MnZn: Straight liquid inorganic macronutrient fertiliser in solution

24 % total nitrogen (N) (4,9 % nitric nitrogen; 4,9 % ammoniacal nitrogen; 14,2 % urea nitrogen);

1,0 % manganese (Mn), as chelate (DTPA, EDTA, HEEDTA), water soluble of which chelated by DTPA 0,10%, chelated by EDTA 0,79%, chelated by HEEDTA 0,11%; 1,0 % zinc (Zn) as chelate (DTPA, EDTA, HEEDTA) water soluble of which chelated by DTPA 0,05%, chelated by EDTA 0,89%, chelated by HEEDTA 0,06%. Poor in chloride.

pH range guaranteeing acceptable stability of the chelate: between pH=4 and pH=10

