

# IONIC MaZiC®

TRACE ELEMENT FERTILIZER

COMBINED ACTION  
OF MANGANESE IONS,  
ZINC IONS, AND  
COPPER IONS.



MANGANESE  
ZINC  
& COPPER  
FERTILIZER

IONIC TECHNOLOGY  
FOR VIBRANT,  
HEALTHY AND  
RESILIENT PLANTS

Instant absorption  
and action

AgroCūre

# IONIC MaZiC<sup>®</sup>

TRACE ELEMENT FERTILIZER

MAZIC is a liquid fertilizer containing manganese, zinc, and copper in highly bioavailable and effective ionic form. It is used to address the deficiency of these three trace elements in plants, which can lead to chlorosis (yellowing) of young leaf growth, disruption of normal plant development, and ultimately, plant susceptibility and reduced crop yields

## The Role of Manganese, Zinc, and Copper in Plants

Manganese, zinc, and copper are primarily absorbed by plants in their divalent cationic form ( $Mn^{2+}$ ,  $Zn^{2+}$ ,  $Cu^{2+}$ ), either through the roots or foliar uptake. The absorption from the soil can be hindered by reactions that immobilize these elements in the soil. In contrast, foliar absorption is a more straightforward and efficient process, provided that these elements are supplied in a form easily absorbed by plants, such as the ions  $Mn^{2+}$ ,  $Zn^{2+}$ , and  $Cu^{2+}$  contained in MAZIC.

All three of these trace elements play crucial roles in various metabolic processes in plants, including chlorophyll formation and photosynthesis, amino acid and protein production, activation of enzymes, regulation of plant hormones and growth, respiration and nitrogen metabolism, genetic expression, carbohydrate metabolism, plant fertility, and disease resistance. A deficiency in these elements negatively affects plant growth, leaf and fruit size, shape, and color, as well as overall plant health and productivity.

Deficiencies, especially of zinc and secondarily manganese, and less frequently copper, are prevalent in Greek cultivated soils. They are often underestimated by producers and typically occur in alkaline and calcareous soils with a high pH (above 6.5), high organic matter content, sandy soils, and soils derived from rocks with low manganese, zinc, or copper content. These three trace elements are relatively immobile in plants, and symptoms of their deficiency first appear in young leaves as interveinal chlorosis, which can resemble iron deficiency symptoms.



## MAZIC: Unique Canadian Technology

MAZIC is produced using innovative technology that creates active ions of manganese, zinc, and copper complexed with water molecules. These ions rapidly penetrate plant tissues, move to areas where the three trace elements are needed, easily traverse cell membranes, and provide immediate and effective nutrition to the plants. The results are so fast that they become visible within 2-3 days after application.



## Some properties and advantages of Mazic

- It is applied foliarly for direct absorption by plant foliage within a few hours. Spraying is recommended during hours of the day with limited sunlight (at sunset) and moderate air temperature.
- It can be applied to the soil through irrigation systems, gradually reducing soil pH. In addition, MAZIC cleans the irrigation system from potential salt deposits.
- Large MAZIC doses per acre are not required. For foliar application, 100 ml per 100 liters of water are needed for prevention and 150-200 ml per 100 liters of water for the treatment of deficiencies. Hydroponic application requires 200-300 ml per 0.1ha, depending on the nutrient status and crop needs.
- Thanks to its large and rapid penetration into plant tissues, MAZIC immediately and significantly increases the content of manganese, zinc, and copper ions in plants within 2-3 days of application. As a result, the plants will start growing vigorously again, achieving high production yields.



## USE OF MAZIC IN IMPORTANT CROPS

The nutritional needs of each crop vary depending on factors such as plant age, stage, plant type, soil characteristics, and other factors.

It is generally recommended to perform soil analysis and foliar diagnostics before implementing an annual fertilization plan to determine the precise needs of the plants. This helps in the application of a rational fertilization program.

In any case, it is generally recommended to make multiple applications with small doses rather than a single or a few applications with large doses.



### CITRUS FRUITS

Recommended doses: 150-200ml per 100 liters of water for foliar application or 300ml per 0.1ha through irrigation, depending on the crop's needs.

Recommended volume of foliar spray: 150 to 200 liters per 0.1ha.



### POME AND STONE FRUITS, KIWIS, GRAPES, POMEGRANATES, OLIVES

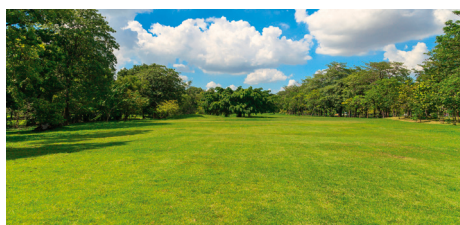
Recommended doses: 100-150ml per 100 liters of water for foliar application or 200-300ml per 0.1ha through irrigation, depending on the crop's needs.

Recommended volume of foliar spray: 80 to 150 liters per 0.1ha.



### STRAWBERRIES, SOLANACEOUS VEGETABLES, CUCURBITS, LEAFY VEGETABLES, AND OTHER VEGETABLES

Recommended doses: 100ml per 100 liters of water for foliar application or 200ml per 0.1ha through irrigation, depending on the crop's needs. Recommended volume of spray: 30 to 150 liters of spray solution per 0.1ha.



### GRASSLANDS AND ARABLE CROPS (RICE, COTTON, ETC.)

Recommended doses: 100ml per 100 liters of water for foliar application or 200ml per 0.1ha through irrigation, depending on the crop's needs. Recommended volume of spray: 30 to 80 liters of spray solution per 0.1ha.



### MAIZE, SORGHUM, TOBACCO

Recommended doses: 100-150ml per 100 liters of water for foliar application or 150-200ml per 0.1ha through irrigation, depending on the crop's needs.

Recommended volume of spray: 30 to 80 liters of spray solution per 0.1ha.

- It has a high content of water-soluble manganese, zinc, and copper (9.3 g per 100 ml of the product), in their most bioavailable and easily absorbable forms as divalent cations,  $Mn^{2+}$ ,  $Zn^{2+}$  &  $Cu^{2+}$ .

- It forms a homogeneous and stable aqueous solution, suitable for foliar spraying of plants, without agglomerates or clogging of nozzles.

- MAZIC is a liquid, acidic product, fully water-soluble, with excellent compatibility with other agrochemicals, 100% bioavailability of manganese, zinc, and copper, and a high rate of plant absorption.

- It does not soil or stain plants and plant organs that are sprayed.

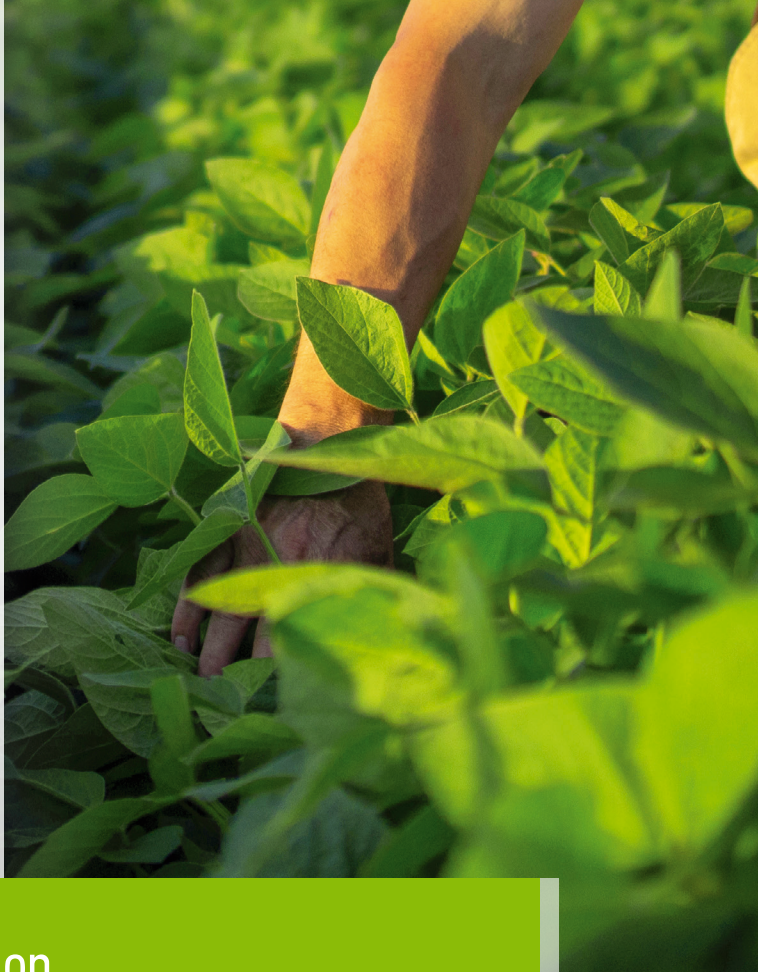
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## CROPS, APPLICATION METHOD, AND TIMING

MAZIC is applied to ALL crops preventively or curatively during the vegetative growth. It can be applied foliarly or in the soil through irrigation systems.

In general, it is recommended not to exceed 3 interventions with MAZIC per growing season, given its high effectiveness. Applications should commence at the beginning of vegetative growth and be repeated at intervals of 20-30 days, depending on the crop and its requirements in combination with the soil's availability of manganese, zinc & copper.

Do not exceed the recommended doses. MAZIC does not cause phytotoxicity when applied at the recommended rates.



MaZiC

Rapid Absorption and Action.  
Recommended for Organic Cultivation.



### COMPATIBILITY

Due to its acidic pH, Mazic is highly compatible with most agrochemicals. In any case of combination with other products, it is recommended to conduct a small-scale compatibility test.



### STORAGE CONDITIONS

Store in its original packaging, in a closed warehouse, protected from extreme temperatures, fire, and humidity, at temperatures above -40°C.

### ATTENTION!

Read the label carefully before use

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STAMP