

Zion[®]

IONIC ZINC



ZINC FERTILIZER

UNIQUE TECHNOLOGY OF IONIC ZINC FOR GREEN, VIGOROUS, HEALTHY AND PRODUCTIVE PLANTS

Lightning Fast Action



Zion®

IONIC ZINC

Zion is a liquid fertilizer containing zinc sulphate monohydrate ($ZnSO_4 \cdot H_2O$) in a hydrated ionic form of high bioavailability and efficacy, which is used against deficiency of zinc in plants that causes leaf chlorosis/yellowing, normal growth inhibition and decreased production.

Role of zinc in plants

Zinc is absorbed by plants in its bivalent cationic form (Zn^{2+}) either through the roots or foliage. Absorption by foliage is a much simpler and more direct process as long as zinc is administered in a readily absorbable form such as Zion's bivalent zinc ions (Zn^{2+}).

Zinc plays an important role in the regulation of plant growth, enzyme activation, gene expression, phytohormone activity, protein and chlorophyll synthesis, photosynthesis, carbohydrate metabolism, plant fertility and defense

against diseases. Potential zinc deficiency slows down or inhibits these processes and ultimately reduces plant health and productivity.

Zinc deficiency is very common in agricultural crops. It occurs usually in alkaline and calcareous soils with high pH or high content in organic matter, in poor sandy soils as well as in soils that resulted from rocks poor in zinc. Almost half of the world's soils suffer from zinc deficiency, while this nutrient has been identified as the most critical and deficient for plants, causing serious production losses.

Zinc deficiency usually manifests with pale green, yellow or white discoloration between leaf veins which starts from new and middle leaves, with plant, stem or dwarfing and with deformation of leaves and fruits. What is more, even in cases of marginal deficiency without obvious symptoms, the quality and quantity of production can be adversely affected.



Zion: Unique Canadian Technology

Zion is produced through innovative technology which achieves the creation of active zinc ions interlaced with dipole molecules of water, which penetrate rapidly into plant tissues, move to parts in need of zinc, penetrate cell membranes easily and provide zinc to plants quickly and effectively. The results are so fast that they become visible in 2-3 days from its application.



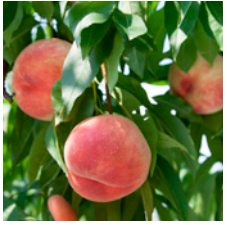
Properties and Advantages of Zion

- **Low dose rates of Zion per ha are required** to cover crop requirements for zinc. The effective rates range from 50-100ml per 100 liters of water foliarly while through fertigation they range from 1-2 liters per ha depending on crop condition and requirements.

- **Zion can also be applied through the soil** through fertigation systems, gradually reducing soil pH. Zinc is not bound by soil components because it is protected by special interlocking agents. In addition, **Zion cleans the fertigation piping** from potential scale deposits.

- **Preventive action.** Application with Zion, foliarly or through the soil, will help plants to absorb zinc immediately and therefore to continue photosynthesis and other vital functions seamlessly.

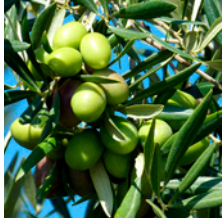
- **Therapeutic action.** If symptoms of zinc deficiency have already occurred, Zion will bring back green color of leaves rapidly and restore all suspended plant metabolic processes.



USE OF ZION ON IMPORTANT CROPS

Crop requirements for nutrients are different depending on plant species, crop stage and age, soil properties and other factors.

Generally, it is recommended that a complete soil analysis is made before implementation of an annual fertilization program. The exact crop requirements will be specified and a sustainable, rational fertilization scheme can be planned.



POME AND STONE FRUIT, NUTS, KIWI, GRAPEVINE, POMEGRANATE, OLIVE

Indicative rates: 75-100ml Zion per 100 liters of water for foliar applications, or 1.5-2 liters Zion per ha for fertigation depending on crop requirements.

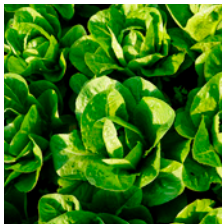
Indicative water volume for foliar applications: 0.8-1.5 tons per ha.



CITRUS

Indicative rates: 75-100ml Zion per 100 liters of water for foliar applications, or 1.5-2 liters Zion per ha for fertigation depending on crop requirements.

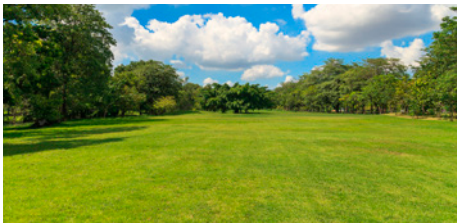
Indicative water volume for foliar applications: 1.5-2 tons per ha.



STRAWBERRIES, SOLANACEAE, CUCURBITS, FOLIAR AND OTHER VEGETABLES

Indicative rates: 50-75ml Zion per 100 liters of water for foliar applications, or 1-1.5 liters Zion per ha for fertigation depending on crop requirements.

Indicative water volume for foliar applications: 0.3-1.5 tons per ha.



LAWN TURF, AND AREA-WIDE CROPS (RICE, COTTON, etc.)

Indicative rates: 50-75ml Zion per 100 liters of water for foliar applications, or 1-1.5 liters Zion per ha for fertigation depending on crop requirements.

Indicative water volume for foliar applications: 0.3-0.8 tons per ha.



MAIZE, ALFALFA, TOBACCO

Indicative rates: 75-100ml Zion per 100 liters of water for foliar applications, or 1.5-2 liters Zion per ha for fertigation depending on crop requirements.

Indicative water volume for foliar applications: 0.3-0.8 tons per ha.

- Zion is a liquid and acidic formulation, **fully water soluble, with very good compatibility with other agro-chemical formulations** in tank mixtures, with **100% zinc bioavailability** and high absorption speed from plants.

- Thanks to its **high and fast penetration** into plant tissues, Zion increases zinc ion content in plants significantly within 2-3 days from its application time. Thus, plants will start or continue to grow intensely, achieving high production yields.

- Zion has a **high content of water-soluble zinc** (9.4gr per 100ml) in its most bioavailable and easily absorbable form, the bivalent zinc cations Zn^{2+} .

- **It forms a homogeneous and stable aqueous solution**, for foliar spraying of plants, without agglomerates/sediments and risk of nozzle blockage.

- **It does not stain plants and plant organs** (i.e. leaves, flowers, fruits) which are sprayed

CROPS, APPLICATION METHOD AND TIMING

Zion can be applied on **all crops**, preventatively or curatively, **during the vegetative growth**. It can be administered to plants either through foliar applications or through the soil via fertigation systems on glasshouse crops, orchards, vines etc.

Generally, Zion is not recommended to be applied more than **3 times** during the growing period because of its high potency and efficacy. Applications with Zion should start with the onset of vegetative growth and be **repeated every 20-30 days** depending on crop requirements in combination with the availability of zinc through the soil.

Recommended doses should not be exceeded. Zion does not cause phytotoxicity if applied at the recommended doses.



Zion

Lightning fast action
Incomparable in action speed and efficacy



MIXING INSTRUCTIONS

Due to its acid reaction, Zion has good mixing compatibility with most agrochemicals. However it cannot be tank mixed with fosetyl-Al and chlorpyrifos.



CANADIAN TECHNOLOGY

It is manufactured by ENVIRO SAFE SOLUTIONS Sdn Bhd.



STORAGE INSTRUCTIONS

Zion should be stored in its sealed package at temperatures above -4°C in a closed warehouse, protected from extreme temperatures, fire and moisture.

ATTENTION!

Read the product label carefully before use

AgroCu^{re}

STAMP OF
LOCAL AGRONOMIST