# IRON-TO-PERFORM™

## **LIQUID IRON FOR FOLIAR APPLICATION**



### **DESCRIPTION**

IRON-TO-PERFORM™ contains liquid iron (Fe) formulated for improved uptake and assimilation.

#### **KEY BENEFITS**

- Promotes the processes of photosynthesis and respiration
- Iron is a component of several vital enzymes, such as the cytochromes of the electron transport chain
- · Vital for the formation of chlorophyll
- · Suitable for use on a wide variety of crops
- Can be used as a foliar or fertigation application
- Suitable for use in combination with other micronutrients



### POSITIONING AND FUNCTIONS

IRON-TO-PERFORM™ is a single-element product, ideal to target iron-deficiency during specific growth stages. Iron functions as a cofactor for a large variety of enzymes that are essential for respiration, DNA biosynthesis, and nitrogen metabolism because of its capacity to accept and donate electrons. Iron is, therefore, necessary for the formation of chlorophyll and photosynthesis in plants.

Most plant deficiencies are caused by insufficient uptake attributed to the fact that most iron is not available for plant uptake at a neutral soil pH. In addition to the low solubility, the properties of iron require plant cells to place limitations on its accumulation. Superoxide and hydrogen peroxide, which are produced in the cells during the reduction of molecular oxygen, are catalyzed by Fe<sup>2+</sup> and Fe<sup>3+</sup> to form highly reactive hydroxyl radicals. The hydroxyl radical can damage most cellular components such as DNA, proteins, lipids, and sugars. Therefore, iron uptake in plants is highly regulated to prevent excess accumulation. Once iron has entered the symplast, iron is bound to various organic molecules, so that it remains in the solution and prevents it from participating in the generation of hydroxyl radicals.

IRON-TO-PERFORM $^{\text{TM}}$  can be applied early in the season when sufficient leaf area is available for foliar absorption.



