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Specialty Plant Nutrition experts
In plant performance



Ultrasoline[®] K Plus



Why iodine

With Ultrasoline[®] K Plus, iodine is applied at the required micronutrient levels in crops, well-aligned with the typical dose rates of potassium nitrate as an N and K source in the preparation of nutrient solutions for fertigated crops. Iodine binds to 82 plant proteins with important roles for the development of roots, leaves, flowers, and fruits.

Kiferle et al. 2021, (<https://doi.org/10.3389/fpls.2021.616868>)

Iodinated proteins are involved in diverse biological processes that are important for crop production, and in the regulation of these processes by the plant. In intensive, fertigated cropping systems under cover, the nutrient solution and irrigation water are the main sources of iodine. Iodine deficiency can occur when the presence of iodine in the nutrient solution is not adequate.



Improved root growth.



Optimal nitrogen metabolism.



Improved canopy development and branching.



Optimal photosynthesis.



Improved tolerance to oxidative stress.



Improved flowering and fruit quality.



Greater calcium concentration in the fruit and better shelf life.



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SPN experts in plant performance



Flowering and fruit quality

Iodine applied with Ultrasol[®]ine K Plus can help to maintain a high quality of fruiting vegetables, in high tech greenhouses. Fruit quality and balance in the crop are maintained even under low-light conditions or during high peaks in temperature.

A good fruit set and development of fruit quality, starts with a good quality flower. The development of pollen is disrupted by abiotic stress such as heat. Academic trials in sweet pepper have proven that iodine can increase the survival rate of pollen when submitted to high temperature stress.

Similar to a lack of potassium, a lack of iodine during fruit development can be one of the reasons for poor fruit quality. With Ultrasol[®]ine K Plus, an adequate level of potassium and iodine in the nutrient solution is ensured and this results in larger-sized, more uniform fruits, with more antioxidants, more brix and better color.

Ultrasol[®]ine protected the development of viable pollen in sweet pepper flower buds after exposure to 35°C for 24 hours. Growers of sweet pepper in The Netherlands noticed a perfect fruit development even during exceptional heat waves with outside temperatures well over 30°C when they were using Ultrasol[®]ine K Plus as source of potassium nitrate and iodine in their nutrient solution.

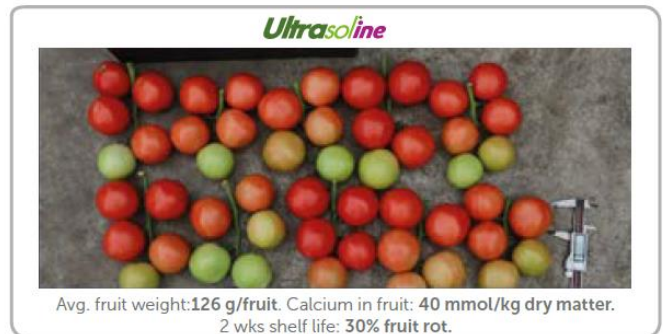
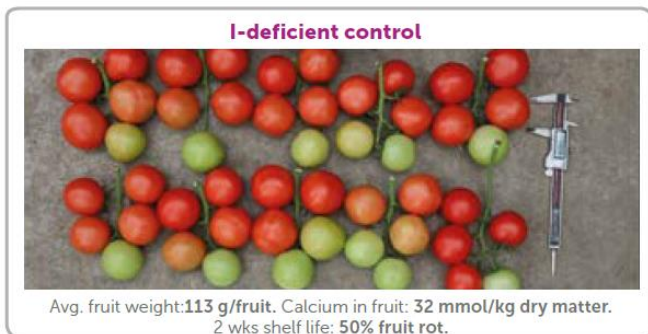


Ultrasol [®] ine K Plus (13.7-0-46)	
Total nitrogen (N)	13.7%
Nitrate Nitrogen	13.7%
Soluble potash (K ₂ O)	46%



Greater calcium concentration in the fruit and better shelf life.

Use of Ultrasol[®]ine K Plus in the nutrient solution can increase the level of calcium in fruits compared to a control where potassium nitrate without iodine is applied. This helps growers to prevent calcium-related disorders such as blossom end rot and also can reduce the incidence of rot during shelf life of the fruits.



Round tomato on the truss grown on stonewool in a high tech greenhouse using Ultrasol[®]ine K Plus showed greater fruit weight and elevated calcium levels in the fruit. With Ultrasol[®]ine K Plus better colored, more uniform fruits were observed, and fruit rot during shelf life was lowered.

DISCLAIMER

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