

Vetchin (MSG)

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The umami factor, Monosodium Glutamate (MSG) has attained an idol status in gardening. It has garnered hundreds of followers in the Philippines. Plant hobbyists bath their plants with dissolved vetchin and enriching their soil and media mixes with it. Those who have used the food ingredient in gardening will pour out their testimonies in social media as their stepping stone to virtual fame. A review is in order to sort out this “Why Not?” Rationalized -Eureka moment among gardeners.

Glutamic acid, the main active ingredient of the much maligned food additive (i.e. Chinese Restaurant Syndrome) is at the center of controversy. L-Glutamic acid, a bicarboxylated amino acid produced by hydrolyzing proteins is common in many proteins. It has been found that the acid form can chelate bivalent cations: Calcium, Magnesium, Manganese, Cobalt, Copper and Zinc. A company, Albion used this as a base for their amino acid chelated trace elements.

In nature, bacterial or fungal breakdown of proteins helps the humates and fulvates hold on to the cations and serve as growth promoters in plants.

The Evil Partner – Sodium

All the good things about L-Glutamic Acid are balanced by its cation partner, Sodium. In Tagalog, sodium is the “Kambal Tuko” or the “Jekyll and Hyde” or alterego partner of Glutamic acid in MSG. It is the sodium that is responsible for the blood pressure elevation in humans and toxicity syndrome in plants.

Sodium toxicity in plants is not easily diagnosed in plants as chloride toxicity. Typical toxicity symptoms are leafburns, scorch and dead tissues along the outside edges of the leaf. An extended period of time is required for the symptoms to manifest. Symptoms appear first in on the older leaves starting with the edge of the leaf moving inwards towards the midrib. Sensitive plants include nuts, citrus, avocados, beans and lots of inland plants, indoor plants and rainforest plants.

In ornamental plants, most succulents and caudiciform plants (except those that came from the rain forests) are not bothered by the level of Sodium from MSG. They do not die but leaves get a dull grayish hue which does not serve well the purpose of the ornamental plants.

Shoreline plants will benefit from the MSG application since they are adapted to the salt. Coconut trees may benefit from MSG as Sodium is essential for its growth and life cycle. Throwing half kilos of MSG into the axils of the coconut tree may improve the yield of the tree but economic evaluation of the system will point out that ordinary sea salt will do the same at a more cost-effective way.

For most of the plants in Horticulture, MSG poses a threat to the quality of the produce. The plants look dehydrated and sick. Massive leaf drop does not improve the looks and burnt root tips result in lower leaf drop resulting in unmarketable plants.

Some gardeners use small amounts of MSG, where the sodium level may easily be tolerated by the plants and may be lucky to get unaffected plants. The plant may not get the fertilizer benefit that it professes to do and therefore is a waste of effort.

For whatever fertilizer value it has, it comes with a great risk of plant damage. It is not like you can just yank the sodium off MSG easily. They come together.

Better keep the MSG in the kitchen where it belongs and just use the more economical, conventional fertilizer feed.