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Stoker Horticultural & Hydroponic Supplies (2004) Ltd

Newsletter

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WINTER GROWER TIP

At the moment we are all struggling for growth. One common problem is quite outstanding. The greenhouse plastic is in dire need of a clean.

With the daylight length so short and most days cloudy and wet; or foggy, our plants really struggle for light. Sunlight is equally important as a properly balanced nutrient made up with the best quality fertilizer procurable.

It is surprising just how low in the sky the sun is at this time of year. That summer growth on your trees could be blocking out some of that much needed sunlight.

We have a greenhouse plastic and glass cleaner – it will not harden and age your plastic. Simply spray the diluted product on and leave it – nature will take care of the rest. The cost is \$46.00 + GST per litre and one litre will make up 100 litres of product to use.

- For greenhouse cleaning spray on to plastic covers, glasshouse panes or shade cloth evenly to the point of runoff.
- It works better if not washed off by rain for at least 6 hours. Can be applied when covers are wet but the solution should be allowed to dry on the cover before it gets washed off by rain.
- Scrubbing is NOT required. Dirt and green slime get washed off in the first few rains. The big lichens go brown, their edges curl up and over a period of time are washed away.
- If water is collected from roofs, disconnect collection pipes before spraying and only reconnect after first good rain.
- For best long term results, roofs should be sprayed annually.

DO YOU HAVE A GROWSAFE CERTIFICATE

You must be competent to manage the safe, responsible and effective use of agrichemicals in accordance with the New Zealand standard, NZS 840-:2004 Management of Agrichemicals.

PHOSPHOROUS DEFICIENCY

Phosphorous is usually the first mineral to stop entering the plant when the nutrient is too cold, and growth then stops. When nutrient temperatures are low, phosphorous deficiencies will be the first to show. Different plant types like different temperatures in the root zone, watercress for example loves a temperature of 12+ °C, while cucumbers require 20+ °C to grow well. It pays to check out the minimum and maximum temperature that the root zone of your plants receive, a simple digital min/max temperature meter (\$41.50 + GST) will give you this information. Armed with this information, we will then know if we have to heat the root zone with warm nutrient (or cool it in summer). Lack of sufficient root temperature will very quickly lead to a phosphorous deficiency, typically, slow or stunted growth. Phosphorous is a mobile element, and can be moved to parts of the plant where it's needed. Phosphorous is a part of many important organic

compounds, amino acids, proteins, coenzymes, nucleic acids and chlorophyll.

Deficiencies are often seen in the older, lower leaf, where leaves become dark green, often developing red and purple colours, in the later stages show yellowing, finally drying to a greenish brown to black colour, stalks remain short and thin, especially in the later stages of growth. Plants look stunted. Growth usually stops. Most crops require at least 0.35% phosphorous in the leaf, with deficiencies occurring below this level.

SPECIFIC CROPS

Lettuce: Growth is severely reduced, and hearting types fail to heart. Leaf analysis is often required to confirm, as other symptoms are practically non-existent. Leaf analysis range should be 0.35 to 0.6%.

Minimum root zone temperature for best growth is 14+ °C, with excellent growth at 18 °C.

Spinach: Growth is drastically reduced, but very few visible symptoms show. Leaf analysis range should be 0.48 to 0.58%.

Peppers: Young leaf is often dull, flat and expand very slowly. Leaf analysis range should be 0.3 to 0.6%.

Tomatoes: Shoot growth restricted, with thin stems, leaf small with a downwards curve, upper side bluish green, under side showing purple veins. Leaf analysis range should be 0.4 to 0.7%.

Cucumbers: Young leaf small, stiff and dark green, older leaf and cotyledons may show large water-soaked spots including veins and interveinal area. Leaf analysis range should be 0.7 to 1.0%.

Courgettes: Young leaf dull, slow growth, older leaf shows purple veins on underside. Leaf analysis range should be 0.3 to 0.7%.

Watercress: Stems and petioles, show purple veins, leaf dark green, bronzed, especially on underside and very small leaf.

We can give our plants the finest formulation in the world, with all the necessary minerals for top quality growth provided, but if the root temperature is too low, we are wasting our time, however, the heating of the root zone has to be tempered by the cost.

During the cold winter months, we have to add extra phosphorous in the form of top grade mono potassium phosphate to the nutrients, as we will be using less phosphoric acid for pH adjustment, often this extra addition is all that is required to produce the growth needed, temperature being the deciding factor.

When growing in a run to waste system, root zone temperature often has to be kept up to the minimum required using air heating, a much less cost effective way of root zone heating than that employed in NFT systems.

ARE YOU AN APPROVED HANDLER?

The law changed on 1 January 2007. You will not be able to purchase many commonly used agrichemicals such as fungicides, insecticides, herbicides, acids and Hydrogen Peroxide without an Approved Handler Certificate. To purchase a tracked substance will require you to prove you are an Approved Handler.

We will require copies of your certificate to have on file so you can purchase these types of products from us. If you would like more information with regards to these requirements, please call ERMA on 0800 376 234 and they will be happy to assist.

AGRONOMIX

Try agronomix – it really does work. If you struggle to send lettuce of good size out the gate try some agronomix. We use it at the rate of 1 gram per kg of powdered nutrient i.e. 20 grams per 20kg pack of nutrient. This goes into the B drum, and gets dosed in with the nutrient. It's a vitamin based fertilizer supplement. It enables the crop to better utilize the available nutrients, and so speeds growth. Agronomix will normally add approximately \$8.00 to the cost of a 20 kg box of nutrient.

SEEDLINGS

We often associate fungal problems with warm moist conditions, but it's the cool moist conditions at the moment which produce the greatest risk.

In our systems of gardening we see two problems when growing from seed – firstly – often we have our seedlings too wet. If your seedlings are in NFT gullies you really need to stop the flow down the gullies. So either use a solenoid valve and timer or put the seedlings on a separate system with intermittent watering. If using flood and drain reduce the depth of water and the frequency of flooding.

The trick is: if when you pick up a seedling – water runs out of the root mass – this plant is already wet enough. As conditions are at the moment watering once, or twice a day is fine.

The second problem would be lack of ventilation, so at 8.00 or 9.00 am in the morning you should open everything up and purge the stale air and close the vents down again in the afternoon.

Please pay accounts: Directly to our bank A/c 06-0317-0725026-00 (we NEED your grower name on the statement) or you can Mail to Stocker Hort & Hydro, 1 Matos Segedin Drive, Cambridge 3495.