June 2011

Flower Petal

Newsletter for the Floriculture Industry

An Essential Nutrient

Sulphur - As Important as N, P & K

Plants require a significant amount of the essential nutrient sulphur – as much as phosphorus – for optimum growth the recommended N : S ratio is 10 : 1 to 15 : 1. Despite this fact, many growers ignore sulphur in their nutritional programs.

Sulphur has many functions in the plant. It is a component of amino acids which form proteins; basic building blocks of plant cells.

Deficiencies of sulphur are often misdiagnosed as they are similar to nitrogen. Sulphur symptoms usually appear in younger leaves first, while nitrogen symptoms are noticed on older leaves. Symptoms include light green or yellow leaves, reduced leaf size, rolled down leaf margins, red or purple coloration, shortened internodes and stunted growth. Tissue analysis is the best way to tell what your plant is lacking.

Plants take up sulphur as sulphate through their roots. Sulphate is water soluble so is easily lost due to leaching, therefore regular replacement through fertigation is important. Another reason for a balanced fertilizer program is that most potting mix components contain little if any sulphur. An additional source is needed.

Sulphur fertilization can cause striking differences in a number of plant species' growth and color. Observations show that a minimum of 20 ppm sulphur is required in continuous liquid feeds for plants growing in soilless media. Suggested elemental sulphur concentration for the optimal growth of poinsettias is 50-80 ppm. Deficiency symptoms appear after about 4 weeks of growth where sulphur levels are too low. Symptoms included reddening of the petiole and main vein of new leaves followed by yellowing of these new leaves. Corrective fertilization with sulphur will return the chlorotic Poinsettia tissue to the normal green color within 1 to 2 weeks.

Sulphur nutrition can't be ignored. This essential nutrient is important for greenhouse crops and it only makes sense that it should be a basic component in any nutritional program.

Article paraphrased from 'Sulfur – an Emerging Star', S. K. Reddy and P. A. King in Grower Talks, April 1992.

Sulphur deficiency in Poinsettia. Uppermost leaves are yellow and veins and petioles have a slight red coloration.

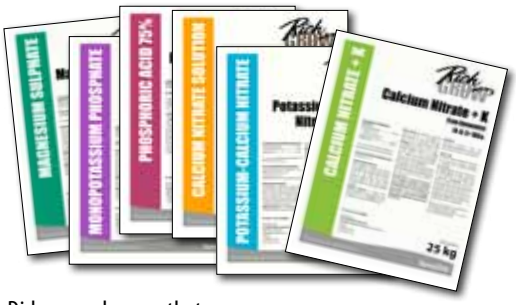
As you start your poinsettia crops consider a balanced feed containing sulphur. It just may be what the doctor ordered!

TerraLink offers the following soluble blend with additional sulphur that is perfect for greenhouse use. Other Technigro formulations also available.

Technigro 17-5-24 Plus contains 2% Magnesium & 2.65% Sulphur, essential nutrients that are often overlooked, for continuous liquid feed programs. This completely water soluble formulation has a slight acidifying effect, and is useful where irrigation waters have low-to-moderate alkalinity. It will not strongly affect growing media pH. This high nitrate formula is an excellent source to supply readily available magnesium and sulfur resulting in improved plant vigor and deeper green leaves. Nitrogen is available over a wide range of temperature and light conditions.

Something for everyone

NEW Richgrow Liquid Fertilizers – only from TerraLink



Did you know that TerraLink offers NEW Liquid Fertilizers? Immediate response from customers using these products is "Yeah", "Woot Woot", and "Thank you!". Here are some comments from customers:

- Richgrow Fertilizers save time as there is no bag breaking required;
- Richgrow Fertilizers save time because you don't need to mix and dissolve anything as with dry soluble products;

- Richgrow Fertilizers have less waste as there is no bag disposal;
- Richgrow Fertilizers are "Green", because TerraLink takes back and reuses the shuttles/containers.

We carry 5 liquid products for you; 3 of them have been added in the last year:

- **Richgrow Calcium Nitrate 8-0-0-11Ca**
- **Richgrow Potassium Calcium Nitrate 7-0-7-7Ca**
- **Richgrow Magnesium Sulphate (Epsom Salt) Aqueous Mg 5%**

Above products are available in refillable 1,000 Liter shuttles. Just turn the tap and use.

- **Richgrow Phosphoric Acid / Food Grade** available in 20 L and 1000 L containers.
- **Market Lab's Ironman 3.8% Fe DTPA Chelate** available in 20L and 200L containers.

For the environmentally aware grower, introducing Richgrow Liquid Fertilizers – only from TerraLink.

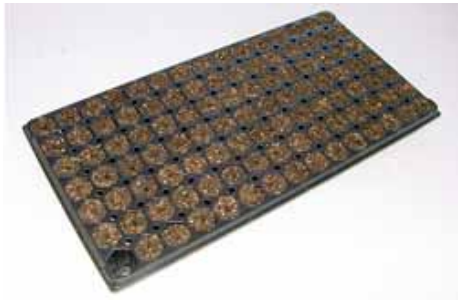
Rich GROW

Prefilled Media Trays

Healthier Plants in Less Time for

With bedding plant season upon us and poinsettia growing season fast approaching, now is the time to think of growing media. To save time and money, give our pre-filled trays a try this year. Quick start your season and reduce your growing time by having stronger plants with better roots. Q-Plugs and EXcel-Plugs manufactured by International Horticulture Technologies, can reduce your growing time by 10% or more.

EXcel PLUS



Excel pre-filled tray media is a patented formula combining peat, coco, perlite, a wetting agent and a low binding agent. This unique propagation plug is delivered ready to use. The plugs are moist, pH balanced, EC treated and have a dibble hole. Re-wetting plugs is easy allowing low risk storage. They are most commonly used for bedding plants, poinsettias and geraniums. Terralink currently carries 78, 105 and 144 count trays.

Q-Plug

(Energy Strip) pre-filled media trays are a patented formula combining peat, coco, a wetting agent and a binding agent. They are pH balanced with a slight EC charge. Similar to Excel trays, they contain more binding agent and no perlite. Most commonly used for poinsettias and geraniums as the binding agent allows transplanting as early as 14 days after sticking, promoting root growth and preventing twisting. Benefits include: earlier transplanting, better re-wetting ability and labour savings. With this media you can potentially save 10 to 20% growing time to a finished product. Terralink has these in 13 or 26 strips sizes.

Reduce Elongation

Plant Growth Regulators

Dazide 85WSG – A water soluble Plant Growth Regulator (PGR) for application on container grown ornamental plant foliage to reduce stem elongation. Treated plants develop a shorter, more compact habit of growth when compared to untreated plants. Controls plant height and promotes flowering in chrysanthemums, azaleas, hydrangeas, bedding plants (petunias, marigolds, zinnias, asters, cosmos and salvia) and poinsettias.

Piccolo – A plant growth regulator used on container grown ornamental bedding plants and plugs. It reduces internode elongation thereby producing more compact plants. Piccolo can be applied through a foliar spray or spray drench.

Helping control powdery mildew, rusts

Pristine® - New Registration on GH Bedding Plants and GH Lettuce

Pristine® has received registration for use on greenhouse bedding plants for control of powdery mildew, greenhouse lettuce for suppression of powdery mildew, and outdoor ornamentals for apple scab, pear-trellis rust and gymnosporangium rust.

With two distinct modes of action, Pristine® offers excellent disease control and an effective resistance management alternative against a broad-spectrum of diseases on an extensive list of registered crops, including the most recent additions. Pristine® is comprised of two active ingredients – pyraclostrobin is a group 11 fungicide while boscalid is a group 7.

Pristine® must be applied preventively, before disease symptoms appear. It should also be used as part of an integrated pest management program in rotation with other disease management products with different modes of action.

Visit www.tlhort.com to obtain a product label.

Little Pest - Major Damage

Thrips

Thrips remains a key pest for most growers. The wide range of crops it feeds on and the damage it can cause, its role as a vector of viruses and its resistance to most registered pesticides make it very difficult to control. For these reasons, large numbers of growers have turned to biocontrol as an alternate control strategy.

Thrips monitoring should start as soon as seeds germinate or cuttings are set out. Use yellow or blue sticky traps depending on the Thrip type you have present.

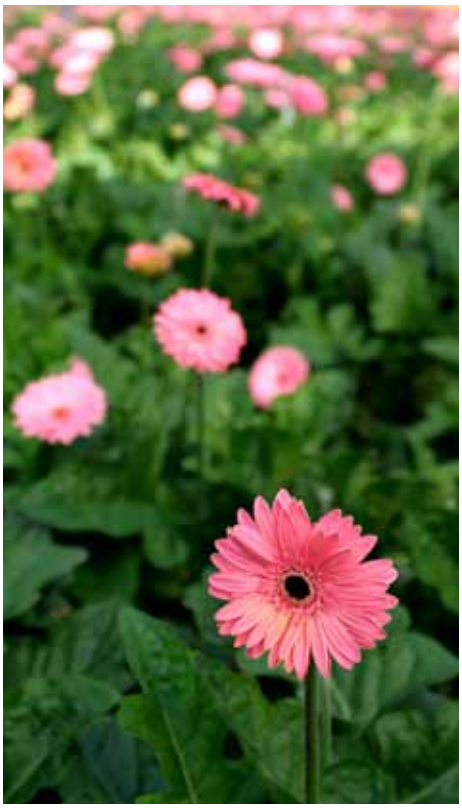
- Weekly applications of nematodes – the moist, warm conditions on the rooting bench are perfect.
- Weekly applications of predatory mites such as *Amblyseius cucumeris*. Growers usually apply bulk product that is sprinkled over the bench. Because of the closely packed plant material, there is very little wastage.
- One-time applications of predators such as Hypoaspis or Atheta, that live in the growing medium and feed on insects such as thrips pupae and fungus gnats.

Weekly monitoring will determine if other control measures are needed.

Today, nearly every insect pest problem in vegetable greenhouses can be managed with beneficial insects and organisms. Why hasn't this worked as well for floriculture? It has and continues to work in some instances, but the overall adoption has been slow. Biocontrol methods have succeeded for greenhouse vegetables, since in most cases, it is only the fruit that must be marketable. Flowers are bought for their appearance.

While many biocontrols can eventually achieve some control and population reduction, they do not always succeed before pest levels cause damage. Biological insect controls for floriculture require a new level of sophistication in pest management and is needed at very low numbers in order to minimize visible damage.

When required, you may use Ripcord 400EC, Diazinon 500E, Diazinon 50W, Lagon 480, Malathion WP or PlantFume DDVP for chemical control of thrips depending on the crop. Read the label to ensure that the plant affected is listed or if the product can be used inside a greenhouse or for outdoor use only.



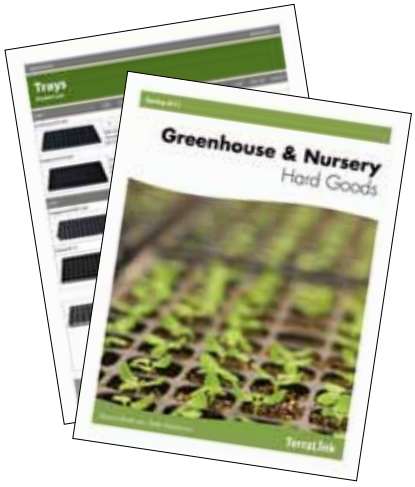
Innovation

2011 Greenhouse & Nursery Hardgoods Catalogue

Please find included with this newsletter our 2011 edition of the Greenhouse & Nursery Hard Goods Catalogue. For a digital copy of this catalogue, please enter the following link: http://tinyurl.com/3hzn7sm, or email marketing@tlhort.com.

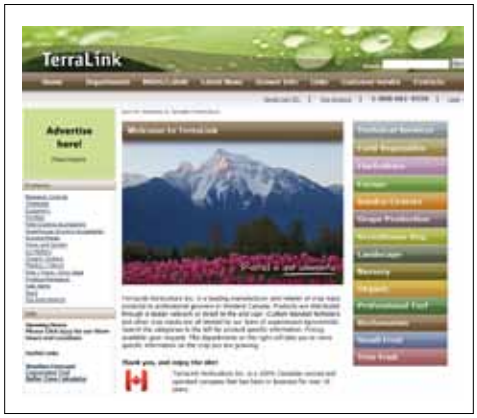
This new catalogue features a wide selection of growing and carrying trays, plastic and biodegradable plant pots, miscellaneous clips, hooks, elastics, bamboo trellises and hanging pulp baskets.

Check page 2 in the catalogue - we currently have inventory for fast delivery of 72-cell trays, which are perfect for poinsettia cuttings (SKU # P2072160).



Helpful Tools

Check Out Our Web Site!



If you haven't been to www.tlhort.com for a while, take a moment and check it out! Want to find a label or a Material Safety Data Sheet? Just use the search function. Want to know about a specific product? Use the menu bar on the left side, or again, use the search function. To make life easier, you can choose your specialty on the right side, then save that page to favorites. Link to a supplier site for more information on a product. Or, choose a technical link to use a converter tool, or try the PMRA's new buffer zone reduction calculator. Even better, dive into our library of agri advisors and newsletters under "Latest News" to access current or previous publications and articles.

Convenient Location

Products Available at Two Locations!

Don't forget, you can buy products from TerraLink at two locations: at the Abbotsford head office at 464 Riverside Road, or at Roddick Fertilizers at 4119–40th Street in Delta. If you farm in the Cloverdale area or to the west, the Delta location may be faster for you than coming out to Abbotsford or waiting for delivery. The friendly staff there can help you just like in Abbotsford. Come in any time, or call ahead: 1-800-661-4559 at Abbotsford and 604-946-8338 at Delta.

TerraLink Horticulture Inc., 464 Riverside Road, Abbotsford, BC, V2S 7M1
Toll Free: 1-800-661-4559 Tel: 604-864-9044 Fax: 604-864-8418
www.tlhort.com

TerraLink