



Moisty Says...“Welcome to the first GSI Newsletter!”

Fall 2006

GSI Horticultural



Stress...a plant's worst enemy. Stress leads to physiological damage, weakened cell and plant growth, and even disease and pest infestations. Recent research is confirming that stress is at the core of many plant problems.

GSI Horticultural, Bend, Oregon, has developed several revolutionary products to help growers contend with stress...especially stress brought on by extremes, whether it is weather, shipping or transplanting. And, these same, safe products are now showing effectiveness in controlling serious pests and common diseases.

These newsletters will introduce you to some amazing products, but also keep you current in the research and practical experiences revolving around anti-transpirants. GSI Horticultural's two products, *Moisturin* and *Root-Zone*, are changing the way growers view and use these innovative production tools. We have a passion about these environmentally-friendly products and see unlimited use as research is completed and the grower/user base expands. For more of this passion, read GSI founder Jim Glessner's "editorial" below.

Moisturin, the popular anti-transpirant, comes in five-gallon and one-gallon concentrate sizes.



GSI Newsletter Editorial

By Jim Glessner, President, GSI Horticultural

Stress for Your Plants Means Stress for You (and Your Bottom Line)

GSI Horticultural recently completed a six-month study on plant stress and its effects on plant growth and, more important, plant health. You, as growers, will find the results both interesting and thought-provoking.

It is interesting to note the type of products you see advertised in the various industry trade journals. It is no surprise that pesticides, fungicides, miticides and herbicides lead the way. Why? Obviously it is due to the costly damage caused by disease and pests.

Yet, our study of a broad spectrum of articles and research papers showed at least 80% of plant problems

“Acute stress” is a single event or sharp environmental change of shorter duration, including transplanting, shipping and rapid weather extremes.

are caused by stress, not insects and disease. Research has also shown that stress weakens plants, making them susceptible, actually desirable, to pests and opportunistic diseases.

In fact, it seems that a large portion of plant problems, now solved using toxic chemicals, could be mitigated by reducing plant stress. So, just what are the stresses making is so difficult for plants to survive and reach their maximum potential?

Chronic or Acute Stress?

First is chronic stress,” which is an ongoing, long-term condition. It is often caused by soil deficiencies, such as a compacted structure, water-logged conditions, or poor mineral nutrition. No anti-transpirant, even *Moisturin*, affects this kind of plant stress.

But, both *Moisturin* and *Root-Zone*) will affect “acute stress,” which is a single event or sharp spike in environmental conditions of shorter duration. Examples include transplanting, shipping and extreme weather conditions, such as early dormant season freezes and searing summer temperatures.

Three Times...Creating an Unhealthy Plant

Our study indicates that more than three stress “events” a year can seriously impact plant quality. This stress can cause changes in a plant's internal physiological processes, such as cell elongation and division, photosynthesis, and carbohydrate relocation. This can lead to plants that are unhealthy, prone to disease and under-developed

Yet these “acute stress” events are controllable, and benefits
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(Editorial - continued)

of using anti-transpirants are documented in both research and actual nursery use. Other compounds, such as vitamins, growth regulators or fish fertilizers, claim to help alleviate stress situations, but anti-transpirants are the only proven aid to reduce transpiration and prevent harmful desiccation.

To learn which anti-transpirants are the most effective, go to www.gsihorticultural.com and look for the Oregon State University Test Results under the Moisturin section.

OVS

Oregon Vineyard Supply
Now Offering GSI's
Moisturin & Root-Zone

McMinnville & Aurora
800-653-2216
www.ovs.com

Root-Zone...A Drench Anti-Transpirant

Anti-transpirants are mostly spray-applied products that coat leaves or foliage, basically blocking stomatal action, leading to less water loss. Coverage is the challenge. Certain crops have characteristics that limits their use, including some conifers with their waxy-covered needles and softer, succulent greenhouse varieties.

Now, GSI is introducing Root-Zone, a radically different approach to anti-transpirants. Applied as a drench, this compound is absorbed through the soil, translocated through the roots to leaves and stems where it "tells the plant to go to sleep." It literally signals the stomata to close, effectively reducing water loss. When one wants the plant to "wake up," the container soil just needs to be thoroughly watered, which washes out the Root-Zone and shuts off the stomata signal.

This unique drench form should find expanded uses into greenhouse and containerized conifers, but clearly works on any containerized plants. For more about this innovative production tool, visit www.gsihorticulture.com.



Moisturin Now in Two New Consumer Packages

We are receiving a tremendous amount of email and calls from home gardeners and landscape contractors wanting to know where they can purchase Moisturin. In the major search engines such as Google and Yahoo, under the heading for anti-desiccants, Moisturin is now the leading product mentioned. Because of this, Moisturin will be introduced to the retail arena (Garden Centers, etc.) in the first quarter of 2007.

It will initially be sold in a one-quart, ready-to-use spray bottle and a small concentrate container. GSI Horticultural already has purchase commitments from a number of independent garden centers and popular chains.

Moisturin Helps Oregon Plants Survive... China Gardens Upscale for 2008 Olympics

Oregon's nursery industry saw a chance to promote its plants in a new market....China. The country sought help to prepare for the upcoming 2008 Olympics. Oregon growers were happy to help

But, after the first shipment of plants for the display garden in Beijing Botanical Garden arrived suffering from obvious stress, consultant Don Richards looked around for a solution. His answer...Moisturin.

"Our second shipment was a different story," he said. "All the plants were treated with Moisturin and when we examined them the plants looked very good two weeks after arrival and planting."



Plants needed special treatment to make the trip to China. The second shipment arrived in better shape after being sprayed with Moisturin.



Don Richards (2nd from left) inspects the shipment of plants being prepared for shipment to China for the 2008 Olympics. Below, shipping containers are lined with plastic for added protection.

...Richards said the plants were in transport for weeks, under less than perfect conditions. The resulting landscape will be a great showcase for Oregon grown plants, he added.

But, the project still faces challenges. The Ag. Trade Office in Shanghai has now reported that many of the plants succumbed to Shanghai's hot, humid weather over the summer and some have died.

Another application of Moisturin might have prevented this loss.



(Photos: from OAN Digger)