

CHASE NEWS

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CHASE HORTICULTURAL
RESEARCH, INC.

New from Chase Horticultural Research for 2009

Greetings! We wanted to take the opportunity to tell you all about some current events from Chase Horticultural Research.

CHASE BASE

We have recently added 50% new reports to **Chase Base**. This brings up the reports to include everything we have up to the end of 2007. We will be adding 2008 reports next year. **Chase Base** is a database designed for subscribers to access our trials and search based on plant, disease or fungicide. You can subscribe for one year in our online store for only \$99 (new subscribers) or \$149.00 (renewal). Use your credit card to start your subscription or to renew it.

DIAGNOSTICS

Did you know you can purchase our diagnostic service in our online store? We started this service about 2 months ago and have been really pleased with the early acceptance of the new payment method. In addition, we are offering a short-term special package for pre-paid samples. If you purchase 10 samples before January 31, 2009, the cost is only \$750.00. This is a 25% discount over the normal \$100/sample fee. Don't worry about having to use them quickly since they have a two-year period before they expire.

CHASE NEWS

Over the past year, we have been slowly increasing the amount of information in each issue of Chase News. Starting in January 2009, we will be doing 5-6 pages per issue instead of the previous 4-5 pages. This will allow us to dedicate a single page to woody ornamentals and another one to perennials every month. Both of these plant groupings are important and continue to grow in our industry. We expect to do more research trials as well as supply summaries of new diseases and other researchers work to better inform producers of these two crops.

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Volume 7 will be available on CD from our online store on January 1, 2009 for only \$149.00. This is a great way to archive this resource for the future. Watch for an updated index on our homepage in January too.

CHASE'S FUNGICIDE CHART FOR 2009

We just finished an update of the popular fungicide wall chart. This represents two additional years of trials and will be available once again from Syngenta sometime in 2009. New products and new diseases have been added.

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The diagnostic lab will be closed from December 22 through January 1. Reports will be made through December 24th but new samples will not be processed until January 2nd.

Rhizoctonia Cutting Rot of Poinsettias

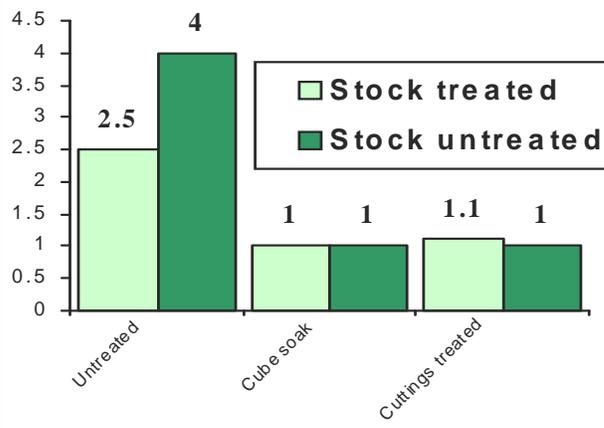
In September we started a trial to evaluate the effect of the application method on ability of Pageant to prevent Rhizoctonia cutting rot on poinsettia. We used 'Orion Red' for this trial, starting with a spray of half of the stock plants (18 oz/100 gal of Pageant) on 3 September 2008. The next day cuttings, were harvested and stuck into either untreated or treated Oasis cubes that had been soaked with Pageant (18 oz/100 gal) for 2 hours prior to use. Then some of each set were sprayed with Pageant (18 oz/100 gal) after sticking and again on 8 September. We inoculated the cuttings on 12 September.

Some Common Hosts of Rhizoctonia

Plant	Type of disease
<i>Ajuga</i>	crown rot
<i>Aster</i>	damping-off
<i>Azalea</i>	aerial blight
<i>Begonia</i>	damping-off
<i>Calla lily</i>	bulb rot
<i>Campanula</i>	crown and root rot
<i>Celosia</i>	damping-off
<i>Epipremnum</i>	leaf spot and cutting rot
<i>Euphorbia</i>	cutting rot
<i>Gomphrena</i>	damping-off
<i>Hedera</i>	aerial blight
<i>Hydrangea</i>	cutting rot
<i>Ilex</i>	aerial blight
<i>Impatiens</i>	damping-off
<i>Iris</i>	bulb rot
<i>Lavandula</i>	root rot
<i>Lupinus</i>	damping-off
<i>Matthiola</i>	stem rot, damping-off
<i>Nephrolepis</i>	aerial blight
<i>Pittosporum</i>	aerial blight
<i>Verbena</i>	damping-off
<i>Vinca - annual</i>	damping-off

The disease started about 2 weeks later and we rated cutting rot several times a week until 20 October when the test was completed. Disease was rated on the following scale: 1 (no cutting rot), 2 (slight), 3 (moderate), 4 (severe) and 5 (dead).

A simple one time spray of the stock plants reduced severity of Rhizoctonia cutting rot from 4 to 2.5. All other treatments (Oasis cube soak or cutting spray) were almost 100% effective in stopping development of the disease. None of the treatments affected rooting of the poinsettia cuttings. We plan to do another trial with these treatments using a lower rate of Pageant for the Oasis cube soak and the cutting spray in an effort to determine if one is a more effective way to prevent this cutting rot on poinsettias than the other.



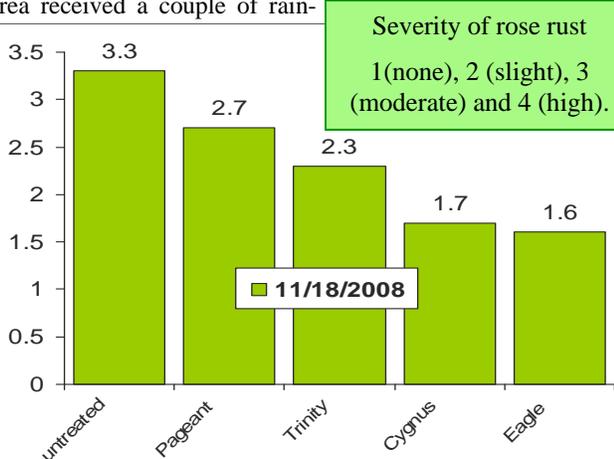
Top, left-Aerial blight on Boston Fern.
Top, right-Cutting rot on Hydrangea
Bottom, left-damping-off on Gomphrena seedlings

Long-term Control of Rose Rust in the Field with Gary W. Osteen

We have been trialing some products in field production of rose in the Wasco, CA area. The particular trial was conducted with furrow irrigation. We used plots about 3.5 feet wide by 10 feet long of 'Brite Eyes' and applied the products five times on a 14 day interval. Roses had slight to moderate rust (*Phragmidium* sp.) when this trial was started but due to the hot, dry weather, no new rust developed during the trial. Treatments included: untreated, Pageant (16 oz/100 gal), Trinity (unlabeled for ornamentals at this time—12 oz/100 gal), Cygnus (6.4 oz/100 gal) and Eagle 40WP(=Hoist at 6 oz/100 gal). Each spray was amended with 4 oz/100 gal of Break-thru. The last spray was applied on 19 September. About three weeks after the area received a couple of rain-

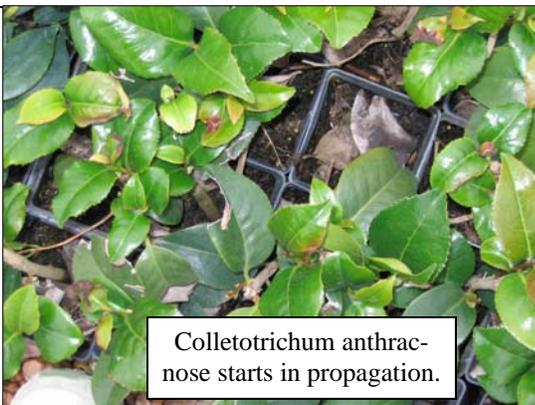
fall events, we visited and found that rust had reactivated. So on 18 November, we rated the rust.

The best prevention of new rust was achieved with Cygnus and Eagle. Trinity also provided significant rust prevention. The long-term benefits of some products were clearly better than others. This may indicate a possible benefit for a late season fungicide application even when the weather is not conducive to disease development. We are planning a trial on downy mildew control and also on powdery mildew eradication on field-grown roses over the next few months.



Seasonal Development of Camellia Anthracnose

One of the toughest groups of diseases to control is anthracnose. Anthracnose diseases are typified by leaf spot, blight, twig blight and dieback and occur in nurseries and landscapes throughout the country. This group includes a variety of pathogens from *Phyllosticta* to *Colletotrichum*.



Colletotrichum anthracnose starts in propagation.

Two Louisiana researchers, Copes and Thomson have been studying camellia anthracnose. In a research paper published in *Plant Disease* (92:1177-1182) in August this year, they reported the effect of temperature on the speed of development of this serious disease. This type of information is critical to determine spray intervals as well as efficacy of fungicide applications. Nothing costs more in disease control than applying the wrong product or the right product when disease has already been controlled.

Copes and Thomson used *Camellia sasanqua* 'Rosea' grown over the course of three years. During winter dormancy, the stems were least susceptible to disease development, taking an average of 57 days to show symptoms after inoculation. During the spring when leaves and stems were rapidly growing was an average of only 18 days was need for disease development. During the summer when stems were hardening and buds were being set the number of days to development was an average of 23. Finally, fall disease development took an average of 28 days. They also found that thinner stems were more easily infected than thicker stems.

It appears that timing fungicide sprays during the spring and summer most frequently with less frequent application during the fall would be most effective. Keep in mind that spraying stock plants within a week of taking cuttings should also be considered. If your propagation area is heated, then treating the newly stuck cuttings should be considered since temperatures will probably be favorable for more rapid disease development.

Research Round-Up

Susceptibility of Delphinium Cultivars to Powdery Mildew

Wegulo and Vilchez recently reported on a series of trials performed on cut flower cultivars of Delphinium (HortTechnology 18[3]: 407-409. These Delphiniums are often infected with powdery mildew caused by *Erysiphe aquile-*



gial var. *ranunculi*. They performed four trials between 2003 and 2004 and overall results are presented in the table below. Trials were performed in a lathe house at the University of California at Riverside and also at a field station in Southern California.

Moderate-High Severity	Low Severity	Variable Severity
Bellamosum	Cameliard	Oriental Blue
Blue Shadow	Galahad	
Belladonna	Blue Bird	
Casa Blanca	King Arthur	

Disease Reports from the UK

ADAS Hardy Ornamentals Technical Notes recently reported outbreaks of the some foliar diseases. It is interesting that although these reports come from the UK, the timing of outbreaks often coincides with the same thing in the US and Canada. So watch for downy mildew, powdery mildew and Botrytis blight in the upcoming weeks.

Downy mildew	<i>Ajuga, Digitalis, Hebe, Lychnis, Meconopsis</i>
Powdery mildew	<i>Aster, Malus, Monarda, Lonicera, Photinia</i>
Botrytis	<i>Berberis, Calluna, Erica, Fuchsia, Jasminum</i>

Steaming to Sanitize Potting Media

Linderman completed some very important work recently on the effect of aerated steam on survival of key soil-borne fungi (NMPPro Sept. 2008). His research showed that *Cylindrocladium scoparium*, *Phytophthora ramorum*, *Pythium irregulare* and *Thielaviopsis basicola* were all eliminated from soilless potting medium that was treated for 30 minutes at 122 F or higher. They also tested Vapam for its efficacy against the same pathogens. A rate of 1 ml Vapam per 1000 cubic cm of potting media was 100% effective.

Control and Cultivar Susceptibility for Cylindrocladium Leaf Spot On Boxwood

Moderate-High Severity	Low Severity	Variable Severity
<i>B. sinica</i> var. <i>insularis</i>	<i>B. balearica</i>	<i>B. microphylla</i> 'Faulkner'
<i>B. sempervirens</i> 'Suffruticosa'	<i>B. riparia</i>	<i>B. bodinieri</i>
<i>B. macowanii</i>		<i>B. microphylla</i> var. <i>japopnica</i>
<i>B. harlandii</i>		
<i>B. sempervirens</i>		
<i>B. glomerata</i> 'Green Gem'		

A recent research paper was published on fungicide efficacy on *Cylindrocladium* on boxwood cultivars. Henricot et al. tested a variety of fungicides available in the UK and although they are not all available here similar products are in many cases. The best results were achieved with a Cygnus (kresoxim methyl from BASF) two combination products (epoxiconazole, Cygnus and Insignia and epoxiconazole and the Insignia) and Pageant (boscalid and pyraclostrobin from BASF). The researchers also tested a series of boxwood species and cultivar for susceptibility to *Cylindrocladium* leaf spot (see table to the right). For a complete report see Plant Disease 92:1273-1279.

I have seen *Cylindrocladium* leaf spot once on field-grown boxwood but we do not know if it was caused by the same species of the fungus.

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