

CHASE NEWS

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CHASE HORTICULTURAL
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Ohio Florist's Assn. Short Course and Trade Show

Mike and I recently attended the OFA Short Course and Trade Show. This is one of the biggest shows and educational events in the US each year and we have been attending and showing at our booth for quite awhile.

One of the interesting changes this year was the OFA-Ball Publishing bookstore. All titles were on sale for 50% off and by the end of the show most of the books were gone. Ball Publishing has decided to discontinue publication of books although they will continue to publish on-line products. This was also our first show where we had some of the American Phytopathological Society books for sale including compendia on roses, turf, potted flowering crops, rhododendrons and others. Watch for these additional titles in our online store.

Since the beginning of June and all I will be doing until the end of October is traveling and talking. It has been challenging not to get too demoralized with traveling but I always meet interesting people and get new ideas for our research trials. I thought I would list the dates, places and topics in case you would like to attend one near you. If you would like more information on any of those listed please contact me at ar-chase@chaseresearch.net.



Inside this issue:

EcoGuard GN and Taegro Control of Pythium Root Rot	2
Severity of Rose Diseases in Field Production	3
Introducing Xeroton-3	4

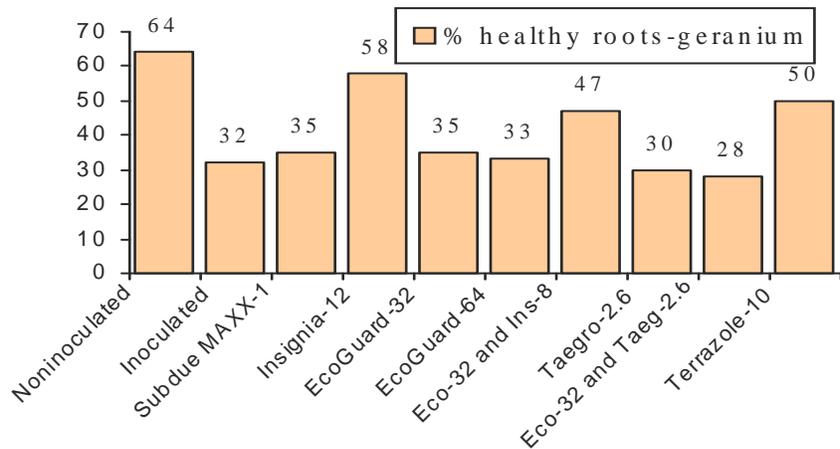
Meeting	Date	Place	Topic
Pageant launch	22 July	Houston TX	Research trials on Pageant
Pageant launch	7 August	Portland OR	Research trials on Pageant
Lectures in Bloom	10 September	Las Vegas NV	New Disease Management Resources on the Horizon
International Plant Propagators Society	16 September	Denver CO	New Chemical Tools for Control of Plant Diseases
BWI EXPO	17 September	Shreveport LO	New fungicides and incorporating them into effective rotational programs
MNLAcademy	18 September	Chaska MN	Cultural control of nursery and landscape diseases and Chemical and Biological control
Plug and Cutting Conference 2008	29 September	Orlando FL	Disease identification and control
34 th CAPCA Conference & Agri Expo	20 October	Anaheim CA	What can adjuvants do for fungicides?

EcoGuard GN and Taegro Control of Pythium Root Rot

Last year we started working on two biological products from Novozymes—EcoGuard and Taegro. We saw some positive results for Pythium control especially so we are doing a series of trials on *Pythium*, *Phytophthora*, *Rhizoctonia* and *Fusarium* with both products. Each trial will compare the products alone and in various combinations with each other or chemical fungicides. This month I report on two Pythium root rot trials.

The first was started on geraniums on 22 April. Plugs of ‘Orbit Orange’ were grown in Fafard 3B Mix in 3.5 inch pots and top-dressed with Osmocote Plus 15-9-12 (3-4 month release formulation). We treated them with drenches of Subdue MAXX (1 oz/100 gal), Insignia (12 oz), EcoGuard GN (32 or 64 oz), a combination of EcoGuard GN and Insignia (32 and 8 oz, respectively), Taegro (2.6 oz), a combination of EcoGuard GN and Taegro (32 and 2.6 oz, respectively) and Terrazole 35WP (10 oz). The products were applied as drenches at about 1 pint/square foot on a 14 day interval for a total of four applications. Plants were inoculated with Pythium irregularis (known to be Subdue MAXX resistant one week after the first treatment).

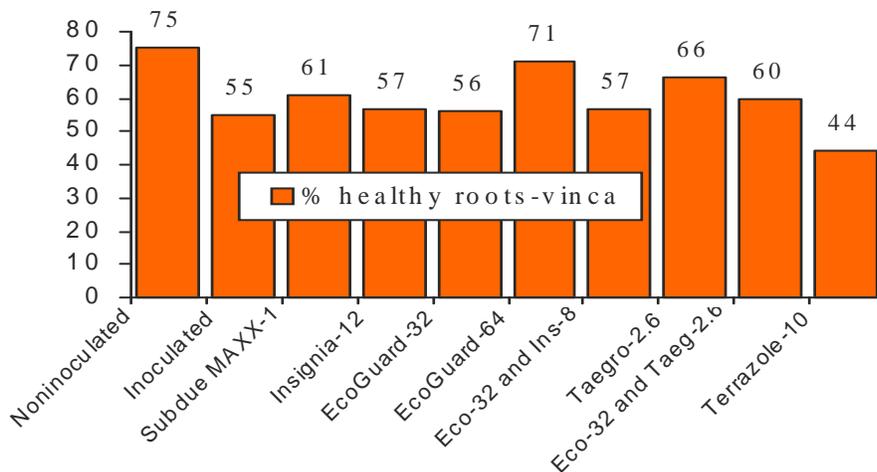
The data we collected included height, top grade and percent healthy appearing roots. The graph (above, right) shows the root data since the other data were not significantly affected by treatment. The best control was seen with Insignia at 12 oz followed by Terrazole and the combination of EcoGuard and Insignia. In this trial, the other treatments did not provide any control of Pythium root rot.



The second trial I report this month utilized the same treatments on the same intervals. In this case we used vinca



(*Catharanthus roseus*) ‘Cooler Raspberry’ and Fafard Mix 2B. The fertilizer, pot size and Pythium were each the same as in the geranium trial. The trial was started on 6 May with the first application. Once again, we rated top grade, height and % healthy appearing roots.



On vinca, both top grade and height were significantly reduced by the Terrazole treatment (phytotoxicity) but other treatments were all the same. Percent healthy roots (see graph below) was best in this trial on plants treated with EcoGuard GN used at 64 oz/100 gal and Taegro at 2.6 oz. The Terrazole treated plants actually had the least healthy roots in the trial and were somewhat worse than the inoculated control.

These results show the role that a specific plant may play in efficacy of biocontrol agents but also show that even with the same pathogen, chemical control may not be consistent either.

Severity of Rose Diseases in Field Production (with Gary Osteen)

We usually perform trials in our own greenhouses in Mt. Aukum, but occasionally we have the opportunity to do field trials. These add another dimension to our understanding of how fungicides perform so they are very important to me.

A couple of weeks ago I was in the central valley of California where many of the garden roses used throughout the US begin their lives. Gary Osteen (our associate in



Cultivar	Powdery mildew severity
Amber Sunblaze	Very low
Bridal Sunblaze	Very low
Brite Eyes	Very low
Carefee Wonder	Very low
Carefree Celebration	Very low
Carefree Delight	Very low
Coral Meidiland	Very low
Double Knockout	Very low
Knockout	Very low
Morning Magic	Very low
Morning Sunrise	Moderate
Nearly Wild	High
Panda Meidiland	Very low
Pink Double Knockout	Very low
Pink Knockout	Low
Rainbow Knockout	Moderate
Seafoam	Moderate
Sunny Knockout	Very low
Sweet Sunblaze	Very low
The Imposter	Very low
White Out	Very low
Winner's Circle	Very low
Yellow Sunblaze	Very low
Zepherine Dream	Low

central California) and I are conducting a trial on powdery mildew control with an experimental product. While there, we decided to evaluate natural infection of the roses for powdery mildew severity in one field and black spot severity in another field. The tables on this page show the results of these ratings. The roses are planted a few rows at a time across the entire field with repeats of many cultivars. We initially rated disease on each row using a numerical grade but decided to summarize the data as a level of disease.

There were many cultivars with no disease but I have listed these as very low in the tables. It was surprising to me to see how consistent the various cultivars were despite their position in the field. The highest severity of powdery mildew was found on 'Nearly Wild' which is the cultivar we use for our container powdery mildew trials. The 'Sun Sparkler' and 'Sun Sprinkles' were found with the highest levels of black spot.

We are starting trials in a week or so on both black spot and rust in separate fields. The products we will testing are Pageant (newly registered), Trinity (under development for BASF on ornamentals), and standards Eagle and Cygnus. Look for results in about three months. We will also try to get a rating on cultivar resistance to rust severity sometime in the next few months.

Cultivar	Black spot severity
Baby Blanket	Very low
Baby Bloomer	Very low
Caramel Kisses	Very low
Child's Play	Low
Electric blanket	Low
Feisty	Low-moderate
Happy Chappy	Very low
Hot sand	Low
Magic Blanket	Low
Petal Pushers	Very low
Raspberry Punch	Low
Red Ribbons	Very low
Sun Sparkler	High
Sun Sprinkles	High

Introducing



We have been working on a new product called Xeroton-3 from Phyton Corporation. Our first trials were run about four years ago. Xeroton-3 is in the same chemical class as ZeroTol. The trials summarized in the table were conducted comparing Xeroton-3 to ZeroTol in each case. We always noted safety to the crop as well as efficacy.

Xeroton-3 provided better control of Botrytis blight on cyclamen, Cylindrocladium leaf spot on myrtle, Phytophthora root rot on gerber daisy and powdery mildew on gerber daisy. The relative efficacy of Xeroton-3 and ZeroTol was similar for Alternaria leaf spot on common impatiens (excellent) and powdery mildew on rose (some). In only one case did we see better control with ZeroTol (Xanthomonas on ranunculus).

Neither product was effective in several other trials. Xeroton-3 was safe when used according to the label in nearly all trials. On New Guinea Impatiens, Xeroton-3 resulted in slight phytotoxicity while ZeroTol resulted in moderate burning. The damage actually resulted in a severe increase in severity of Botrytis blight for ZeroTol and only a slight increase for Xeroton-3. This has been our experience with any product that causes phytotoxicity

and Botrytis blight and is not unique to these two products.

Disease	Plant	Xeroton efficacy	Xeroton safety	ZeroTol efficacy	ZeroTol safety
Alternaria leaf spot	impatiens	excellent	safe	excellent	safe
Botrytis blight	cyclamen	some	safe	none	safe
Botrytis blight	N Guinea impatiens	slight increase	slight damage	100% worse	moderate damage
Cylindrocladium leaf spot	myrtle	good	safe	none	safe
Phytophthora root rot	gerbera	very good	safe	slight	safe
Powdery mildew	gerbera	good	safe	slight	safe
Powdery mildew	rose	some	safe	some	safe
Pythium root rot	snapdragon	none	safe	none	safe
Rhizoctonia damping-off	celosia	none	safe	none	safe
Rhizoctonia cutting rot	poinsettia	none	safe	none	safe
Rust	hypericum	none	safe	none	safe
Xanthomonas leaf spot	ranunculus	some	safe	good	safe

While not effective on all diseases, Xeroton-3 was safer and more effective than ZeroTol in our trials. Xeroton-3 is not a traditional bactericide-fungicide since it has little residual and acts immediately on surface pathogens. Be sure to read the label and follow the directions to make the most of this new product.



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