

# 2nd International Webinar Conference

## Snow Princess Lobularia Brian Whipker, NCSU

2nd International Webinar Conference

Sponsored by:



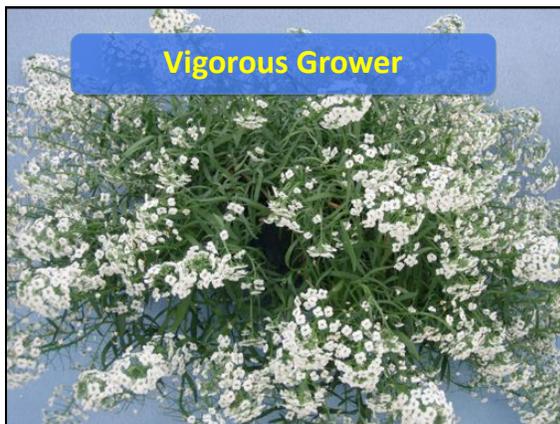

1:30 to 1:55 Eastern

**SNOW PRINCESS LOBULARIA:**

**TIPS AND TROUBLESHOOTING**



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Production Challenges	
Situation	Questions
<ul style="list-style-type: none"> <li>• Lower leaf yellowing (leaves around base)</li> </ul>	<ul style="list-style-type: none"> <li>• What is the cause and how to prevent it?</li> </ul>
<ul style="list-style-type: none"> <li>• Vigorous grower</li> </ul>	<ul style="list-style-type: none"> <li>• How to manage growth?</li> </ul>
<ul style="list-style-type: none"> <li>• High irrigation demand</li> </ul>	<ul style="list-style-type: none"> <li>• Can water use efficiency be improved?</li> </ul>

**What causes lower leaf yellowing?**

Nitrogen deficiency



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### Nitrogen Deficiency Expt.



**Initial** → **Advanced**

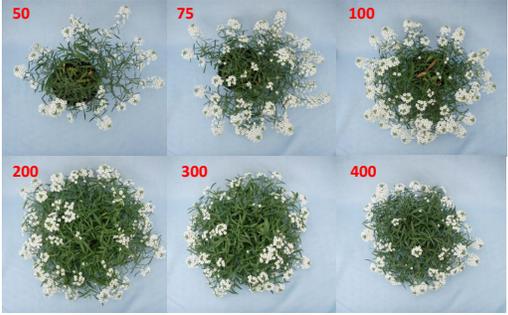
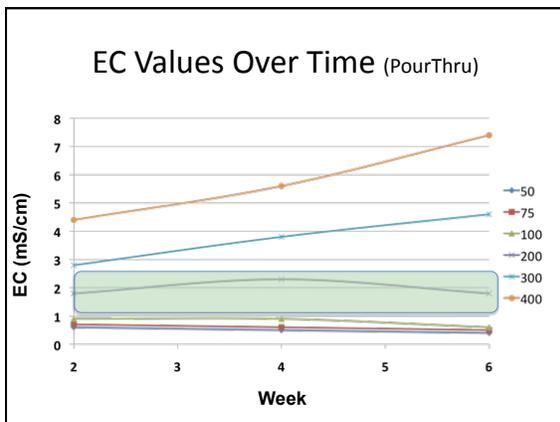
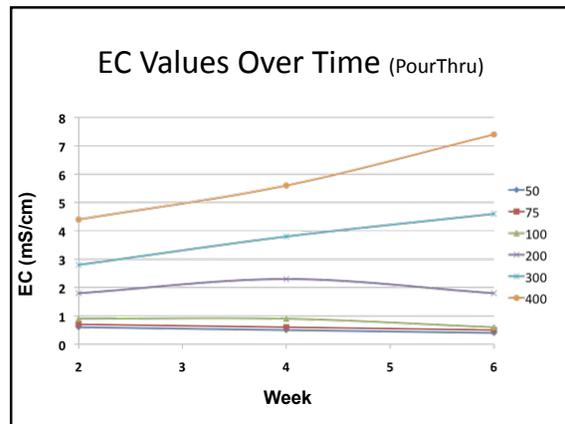
*Lower leaves completely yellow.*

*Symptoms progress up the plant. Yellow leaves become necrotic over time.*

### Nitrogen Rate Expt.

- Plugs transplanted into round 5-inch pots.
- Fertigation:
  - with 50, 75, 100, 200, 300, or 400 ppm N from Proven Winners Professional 14-3-14 with minors
  - low alkalinity formula with FeEDDHA  
(Greencare Fertilizers, Kankakee, IL)

### Nitrogen Rate (ppm)

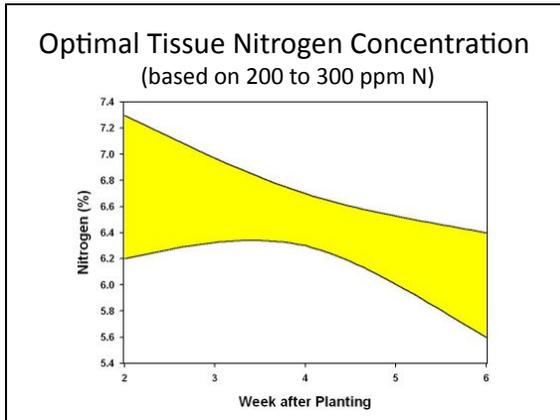



### Observations

- Nitrogen deficiency symptoms (lower leaf yellowing) occurred with  $\leq 100$  ppm N.
- Plant growth was maximized with 200 to 300 ppm N.
  - Growth was less with 400 ppm N.
- Target Fertilization Rate: 132 to 250 ppm N**

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### How can growth be managed?

Optimizing PGR rates

### PGR Experiment Details

Chemical	Liner Soaks (ppm)	Foliar Sprays (ppm)	Substrate Drenches (mg ai)
<b>Piccolo</b> (Paclobutrazol)	2, 4, 8, 16	50, 75, 100, 125	0.0625, 0.125, 0.25, 0.5 (1.06, 2.11, 4.23, 8.45 ppm)
<b>Concise</b> (Uniconazole)	0.25, 0.5, 1, 2	15, 20, 25, 30	0.03125, 0.0625, 0.125, 0.25 (0.53, 1.06, 2.11, 4.23 ppm)
<b>Notes:</b>	Slightly dry liners, 2 min. soak time	Applied at 0.5 gal per 100 sq ft, 2 weeks after transplanting	Applied 2 ounces per pot, 2 weeks after transplanting
All plants grown in a peat-based substrate			

### Liner Root Soaks (ppm)

**Liner soaks on unpinched plants worked well.**

Rates based on North Carolina conditions, adjust for other locations.

### Foliar Sprays (ppm)

**Sprays suitable, but not as effective as liner soaks or drenches.**

Rates based on North Carolina conditions, adjust for other locations.

### Substrate Drenches (ppm)

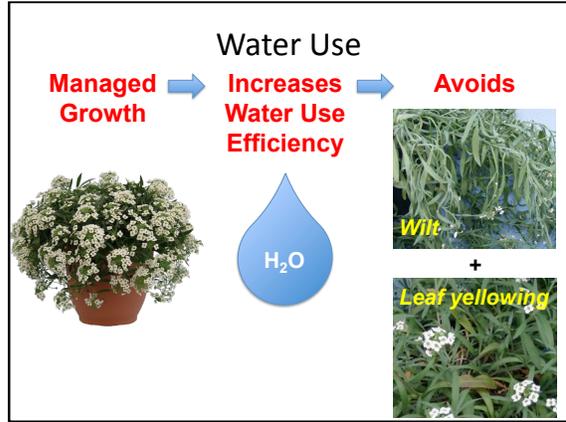
**Drenches very effective and can be used as an alternative to liner soaks.**

Rates based on North Carolina conditions, adjust for other locations.

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Can irrigation efficiency be improved?

Snow Princess Lobularia



Thus the use of a PGR is key to improving plant quality:  
*1 management change solves all 3 challenges*

What are the other disorders to scout for?



Phyto with Judo®

Initial → Advanced



Symptoms appear 2 days (hot temps) to 2 weeks (cool temps) after application.

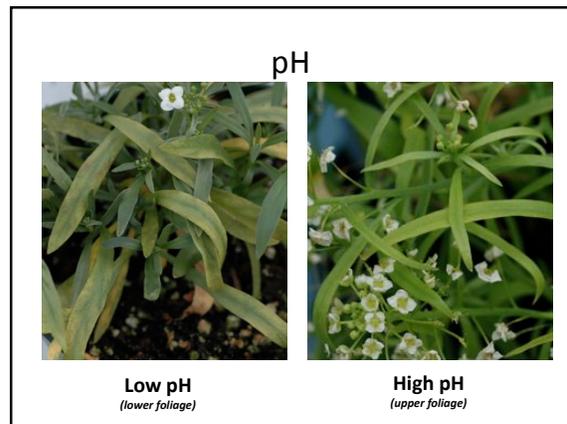
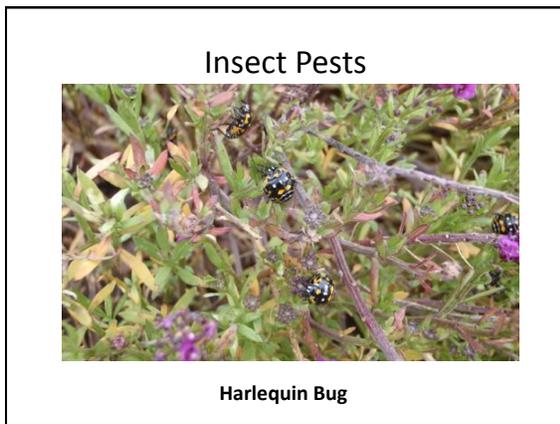
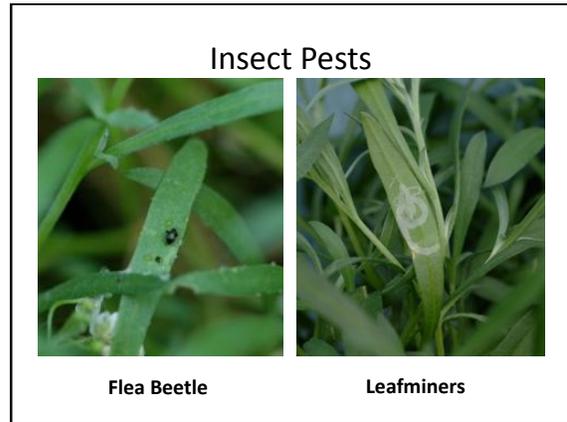
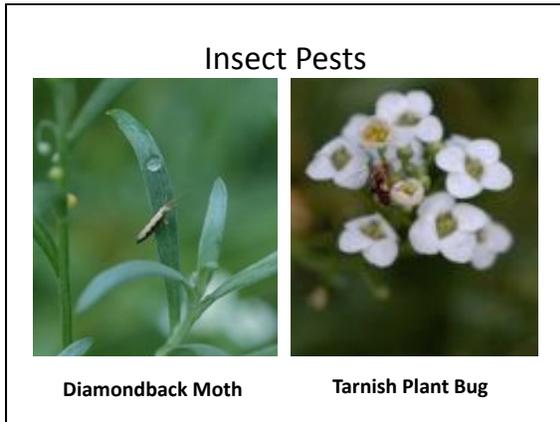
Physiological Disorder



Fasciation

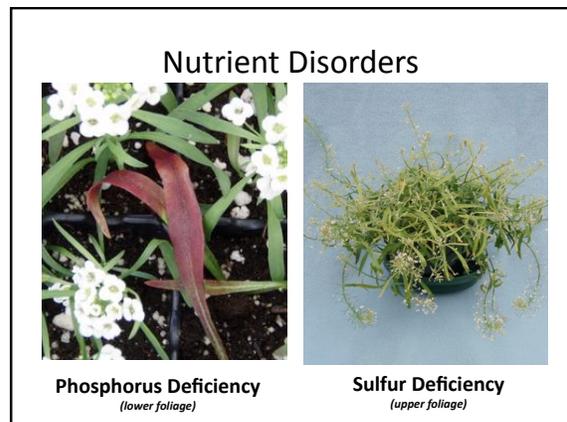
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**Recommended pH Range**

- Target Range:
  - pH 5.8 to 7.0
  - *PW Cultural Info Guide: 6.0 to 6.5*
  - Below 5.0 too low
  - Above 7.0 Fe deficiency appears.



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### Questions?

- Key Resources  
<http://www.pwcertified.com/pdf/NCSULobulariaGrowingGuideA.pdf>



Thanks to:

