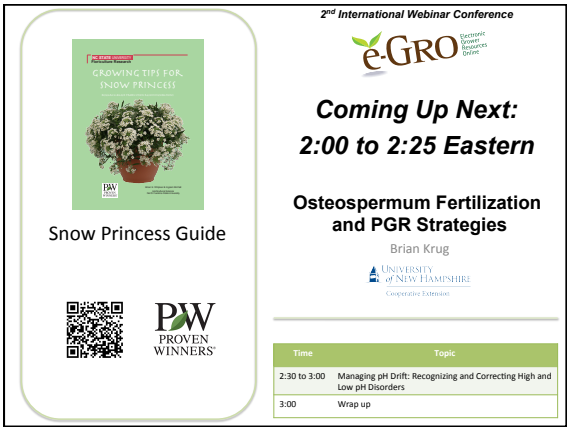
2nd International Webinar Conference

Osteospermum Fertilization and PGR Strategies

Brian Krug, UNH

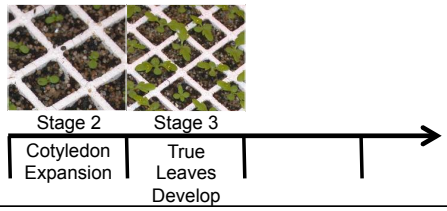


Osteospermum Nutrition

- Produced from seed
- Produced from vegetative cuttings

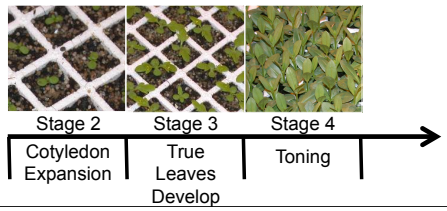
Osteospermum – Seed Grown

- Stage 2 – 50 to 75 ppm using a low P fertilizer
- Stage 3 – 100 to 150 ppm using a general/low P fertilizer



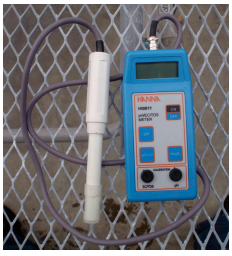
Osteospermum – Seed Grown

- Stage 4 – 100-150 ppm using a low P fertilizer



Osteospermum – Seed Grown

- pH
  - 5.8 – 6.2
- Electrical Conductivity
  - 1.0-1.5 (PourThru)



Osteospermum – Seed Grown

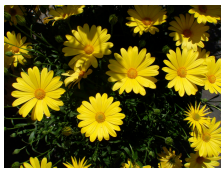
- Finishing
  - Constant liquid feed
  - Nitrate based fertilizer
  - Substrate EC
    - 2.5 – 3.0 (PourThru)
  - Substrate pH
    - 5.8-6.2

Osteospermum - Vegetative

- When roots visible
  - 75-100 ppm N
- As more developed
  - 150 ppm N

Osteospermum - Vegetative

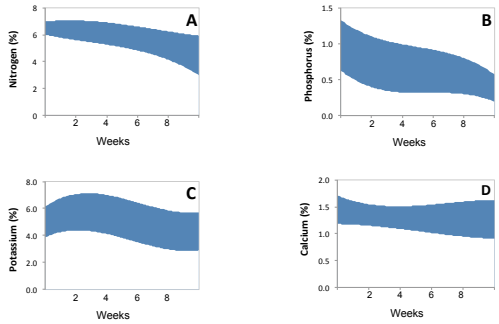
- Finishing
  - 200-250 ppm N
  - 5.8 to 6.2 substrate pH
  - 2.6 to 3.0 mS/cm E.C. (PourThru)



Tissue Values

Element	Young	Mature
Nitrogen (%)	6.00 - 6.98	3.00 - 5.93
Phosphorus (%)	0.63 - 1.33	0.19 - 0.57
Potassium (%)	3.87 - 6.15	2.91 - 5.73
Calcium (%)	1.18 - 1.71	0.90 - 1.63
Magnesium (%)	0.80 - 1.31	0.40 - 0.92
Sulfur (%)	0.34 - 0.62	0.17 - 0.27
Iron (ppm	28.72 - 45.97	40.43 - 78.13
Manganese	7.68 - 14.88	6.39 - 15.50
Boron (ppm)	27.16 - 57.90	24.87 - 81.66
Molybdenum (ppm)	0.61 - 13.17	4.84 - 32.14

Tissue Values – over time



Success with Osteospermum

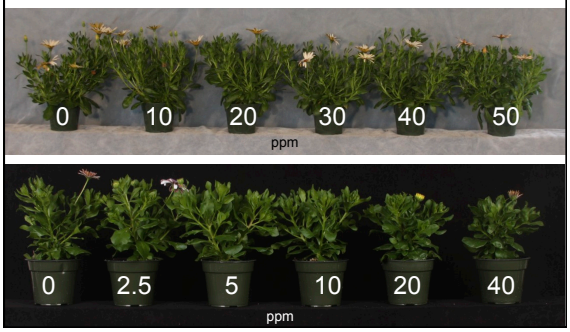
- Target the right fertility with stage of crop
- Test substrate
  - pH
  - E.C.
- Tissue samples as needed

Osteospermum - PGRs

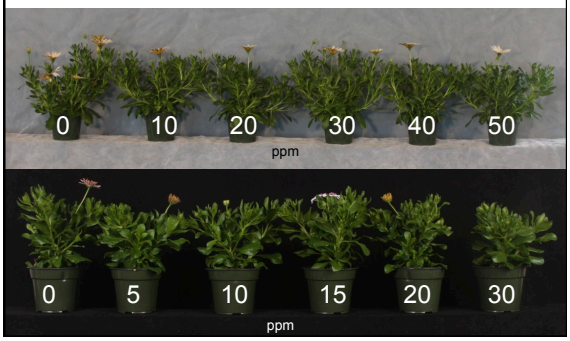
Height Control - PGRs

- Summary of PGR trials at UNH over 2 different years
- Foliar Sprays
  - Uniconazole
  - Paclobutrazol
  - Florprimidol
  - Chlormequat Chloride
- Substrate Drenches
  - Uniconazole
  - Paclobutrazol
  - Florprimidol
  - Chlormequate Chloride

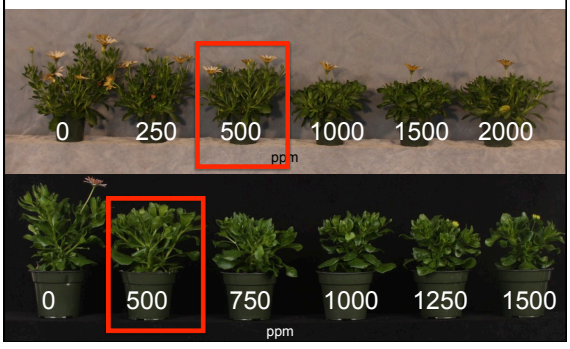
Uniconazole – Foliar Sprays



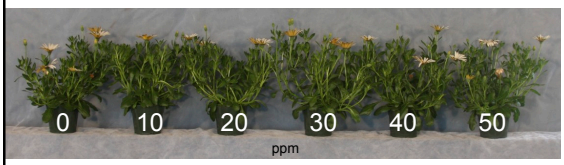
Flurprimdol – Foliar Sprays



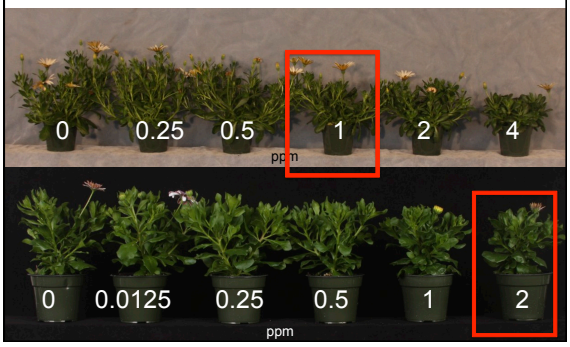
Chlormequat – Foliar Sprays



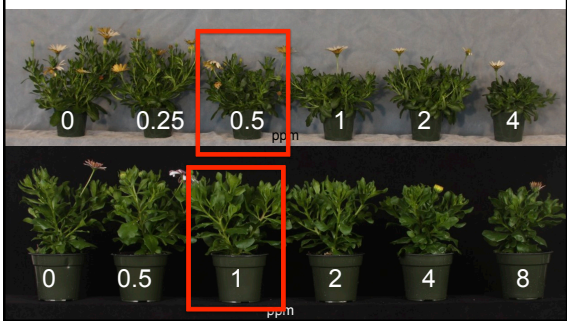
Paclobutrazol – Foliar Sprays



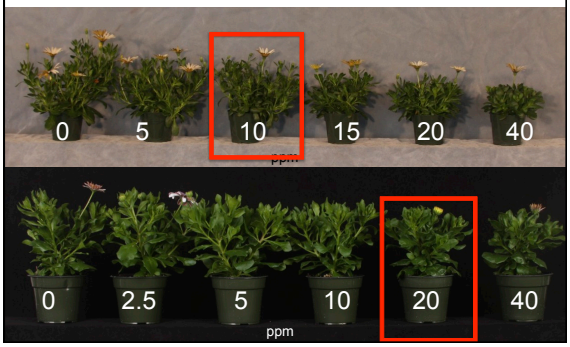
Uniconazole – Substrate Drenches



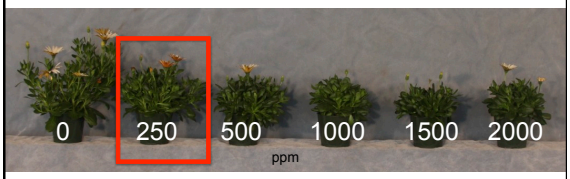
Flurprimidol – Substrate Drenches



Paclobutrazol – Substrate Drenches



Chlormequat – Substrate Drenches



Summary

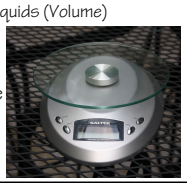
- Foliar Spray
  - Chlormequat @ 500 ppm
- Substrate Drenches
  - Uniconazol @ 1-2 ppm
  - Flurprimidol @ 0.5-1 ppm
  - Paclobutrazol @ 10-20 ppm
  - Chlormequat @ 250 ppm
- Apply ~ 2 weeks after transplant

Guidelines

- Always preform on-site trials
- Foliar Sprays
  - Water volume = 0.5 gal/100 ft^2
  - Allow longer drying times
  - Any run off will give added "drench" effect
- Substrate Drenches
  - Volume
    - 2 oz / 4 inch pot
    - 4 oz / 6 inch pot
  - Do not water immediately after application

Mixing PGR's

- Be Accurate!
- Be Precise!
- Good measuring equipment
  - Solids (Weight)
  - Liquids (Volume)
- Take



Precision and Accuracy

- Starts with good math skills!

PGR MixMaster

University of New Hampshire
Cooperative Extension

Questions?