# The Triumphs and Tribulations of Trialing: All-America Selections and Beyond

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Mark Konlock, Director of Horticulture, Green Bay Botanical Garden

# Panel Overview

- Our gardens and trials
- Trial programs options
- Positives of trialing
- Difficulties of trialing
- Our favorite intros!



# Reiman Gardens



## Reiman Gardens

- Ames, lowa
- Botanic Gardens of Iowa State University
- Opened in 1995
- Third site for horticulture garden at Iowa State University
- Approximately 15,000 square feet of formal trials (17.1 acres of informal trials!)



# Reiman Gardens (& ISU) Trial History



- Horticulture crop evaluations – 1877
  - Several hundred introductions from ISU
- All-America RoseSelections trial site late1930s
- Involved in preintroductory test program of All-America Selections

ISU Trial Successes

- 'Jonadel,' 'Chieftain' apples
- 'Pink Princess,' 'Red Prince,' 'White Knight' Weigela
- 'September Sun' seaside alder
- 'Carefree Beauty' rose
- 'Ames' rugosa rose
- 'Bantam,' 'Redspike' indiangrasses
- 'Crimson Sweet' watermelon

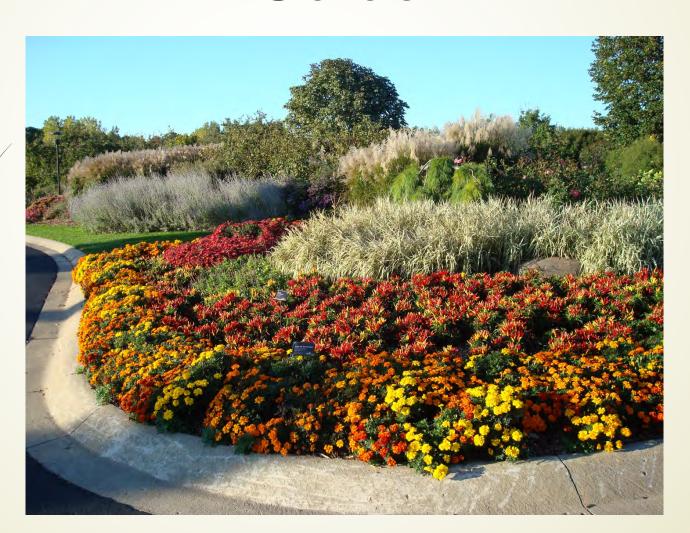


## Current Trials at Reiman Gardens













- Green Bay, Wisconsin
- Non profit 501(c)(3)
- Lease land from Northeast Wisconsin Technical College
- Opened in 1996
- With Grand Garden addition 23.5 developed acres – largest botanic garden in Wisconsin





- Trialing started in 2011
- Earth-Kind® 2011
  - Observational Rose
  - Now Only Northern
     Earth-Kind® Modern
     Rose trial site in United
     States 2015
- A.R.T.S.® 2015



- ► AAS 2013
- Ball Horticultural Company – 2014
- Callicarpa ChicagoBotanic Garden 2015

### What Can You Trial?



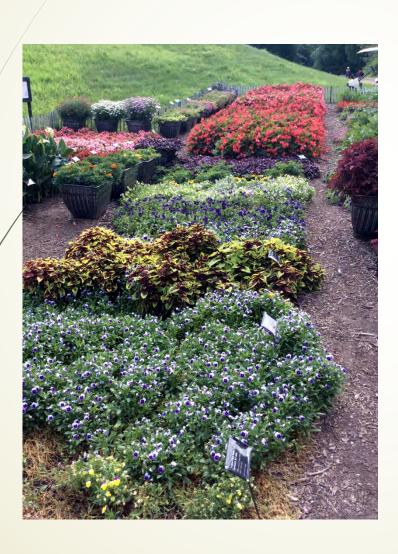






- New introductions
- New lines
- Improved genetics in previous introductions
- Collect data on performance on site
- Verify or refute their trialing
- Get visitors excited about new plants—on site marketing







### Top Nine Annuals Selected in the Ball. Horticultural Trial

### Whopper® Experimental 1630-5T2 Begonia

Begonla '1630-572'
Large habit, bronze leaf, pink flower,
very floriferous
helaht 34" x width 24"; full sun or shade



### Purple Prince Joyweed

Alternanthera brasiliana "Purple Prince" Deep purple follage, great "splilling" habit, Heat resistant height 14" x width 20"; full sun



### French Quarter Coleus

Plectranthus scutellarlodes 'French Quarter' Green, magenta, burgundy follage, Vlgorous, low maintenance height 36" x width 28"; full sun or shade



### Whopper® Experimental 1620-8T1 Begonia

Begonia `1620-8T1'
Large habit, green leaf, rose flower,
Very floriferous
helaht 34" x width 24": full sun or shade



### Inferno Coleus

Plectranthus scutellatiodes 'Inferno' Flery orange-red follage, low maintenance, Consistent growth habit height 28" x width 24"; full sun or shade



### Rose Bronze Foliage Whopper® Wax Begonia

Begonia semperflorens-cultarum 'Rose Bronze Follage' Large halbit, bronze leaf, rose flower, Consistent halbit, very floriferous helght 34" x width 24"; full sun or shade



### Whopper Experimental 1630-13T1 Begonia

Begonia '1630-13T1'
Large habit, bronze leaf, red flower,
very floriferous
helaht 34" x width 24", full sun or shade



### Red Green Foliage Whopper® Wax Begonia

Begonia semperflorens-cultorum 'Red Green Follage' Large habit, green leaf, red flower, Very flortferous helaht 34" x width 24"; full sun or shade



### Double Pink 17 MiniFamous™ Calibrachoa

Callbrachoa 'Double Pink 17'
Consistent spilling habit, green foliage,
Pink double flowers, very floriferous
height 6" x width 12"; full sun



# Trialing with AAS

- All-America Selections
  - 501(c)5 non-profit with the goal of promoting new garden varieties and conducting impartial trials in North America
  - 85 years of trials



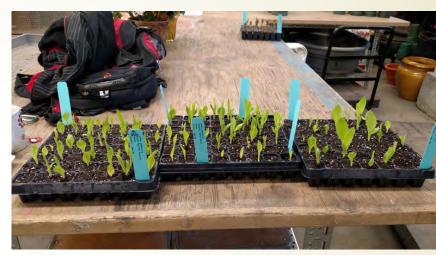
# Trialing with AAS

- AAS Trial Types
  - Ornamental from Seed
  - Ornamental from Vegetative Cuttings
  - Edibles (fruits, vegetables, and herbs)
  - Herbaceous perennials (three winter trial, first winners announced 2019)



# AAS Trialing Protocol

- Entries are submitted to AAS, then the comparison committee selects 1-3 comparison plants donated by competing breeding companies
- Entries are judged against the industry standards with similar traits





# AAS Trialing Protocol



- Entry and comparisons are grown exactly the same (seeding, transplanting, PGRs, etc.)
- Trial entry and comparisons are planted side-by-side
- Trials are evaluated through the season and results are submitted to AAS office in mid-fall

# AAS Trialing Protocol



- Scores are tabulated and winners are announced in three rounds (November, January, and July)
- Staggered announcements allow breeders to prepare publicity, seed supply, germination test results and other award requirements

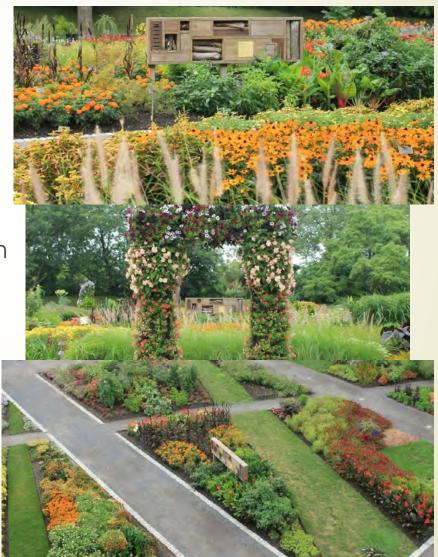
# Trialing with AAS



- Approximately 80 judges
- Unbiased, unpaid horticulture professionals
- Sites include colleges and universities, breeders, public gardens, wholesale nurseries

# AAS Display Gardens

- Looking for gardens willing to display AAS Winners and narrate the AAS Story
- Option to chose flowers, edibles, or both
- Long-term partnerships with gardens dedicated to community outreach and education



# AAS Display Gardens

- Display space for 5
   years of winners—either
   spread throughout
   displays or in one
   garden
- Signs, variety markers, and seed all provided
- No judging required, just visitor engagement
- Publicity through AAS website



## Rose Trialing with AGRS

- American Garden Rose Selections
  - One of two rose trialing programs introduced after AARS
  - First award winners announced in 2015
  - Revisiting previously introduced cultivars that may have not been recognized
  - Rules and protocols based on ADR trials



### Rose Trialing with AGRS



- Regional awards
  - Allows entries to earn awards without being perfect for every climate
- Fragrance award
- Approximately 12 trial sites
  - Public gardens, universities, municipal parks

### Rose Trialing with A.R.T.S.



- American Rose Trials for Sustainability™
  - Second rose trialing program in North America
  - First regional winners announced this year
  - Highest scoring weights given to seasonal flowering and attractive floral attributes, as well as foliage health and quality.

### Rose Trialing with A.R.T.S.®







- Awards A.R.T.S.® Local Artist designation, 4 or more Local Artist awards earns a Master Rose title
- Approximately 15 test sites
  - Public Gardens, universities, and municipal parks

### Rose Trialing with A.R.T.S.®



### Rose Trialing with A.R.T.S.®



# Earth-Kind® Trials: Roses and Beyond



Texas AgriLife Extension Service



- Roses and other plants hydrangeas, ninebark
- Observational feeds into replicated and randomized evaluations
- Modern Rose Trial (hybrid tea and floribunda)
  - Green Bay Botanical Garden – Northern Site
  - Houston, Texas –Southern Site

# Earth-Kind® Trials: Roses and Beyond

### Top Nine Roses, Selected in the Earth-Kind® Rose Trial

**Icy Drift™** shrub rose *Rosa `MElliplcdevoj'* Repeat bloomer, great border plant Helght 1' x Wldth 4'



Carefree Beauty™ shrub rose

Rosa 'BUCbl'

Fragrant blooms with orange-red hips

Height 5' x Width 5'



Cloud 10<sup>™</sup> climbing floribunda rose Rosa 'RADclean' Fragrant, English rose-like flowers Helght 4' x Width 5'



Sunshine Daydream grandiflora rose Rosa 'MElkokan' 2012 All-America Rose Selection Winner Helpit 4' x Width 5'



Sigrid™ shrub rose

Rosa 'UMNsigrid'

Northern Accents™ shrub rose collection

Height 2' x Width 3'



Pomponella® floribunda rose Rosa 'KORpompon' Cottage garden or specimen plant Helght 4' x Width 5'



Radler Yellow shrub rose

Rosa 'CP034131' (Has not been re-leased to the public.)

Yellow flowers turning pink as they mature

Helght 3' x Width 3'



Salmon Crossover shrub rose
Rosa 'CPV81537' (Has not been re-leased to the public.)
Unique salmon colored flowers
Height 3' x Width 3'



Summer Memories shrub rose Rosa 'KORutell' Upright, arching, compact growth Height 3' x Width 4'

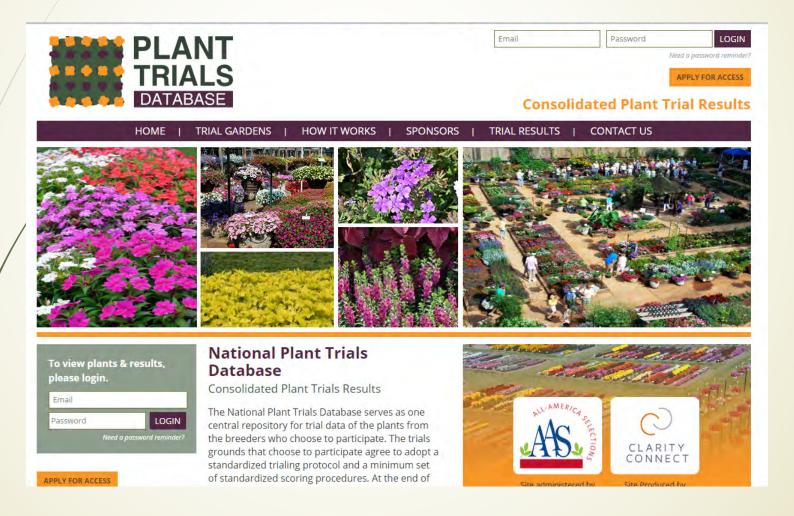


### Other trials...

- Callicarpa
  - Chicago Botanic Garden
  - Early fruit coloration for colder climates
  - Leaf drop so visible fruit
  - Winter hardiness
  - Form
  - Fruit production and size



# "Ok, what do I do with all my data and evaluations?"



#### Plant Trials Database



Welcome back Iowa State University - Reiman Gardens!

<u>Trial Garden Logout</u> | <u>Trial Garden Center</u>

#### Consolidated Plant Trial Results

HOME | TRIAL GARDENS | HOW IT WORKS | SPONSORS | TRIAL RESULTS | CONTACT US

#### Welcome back, Iowa State University - Reiman Gardens!

Trial Gardens Main Post Login Landing Page

Tuesday, June 06, 2017

Select Any of the links below to access the corresponding functionality.

- Submit Trial Results
- Modify Contact Info
- View All Trial Results
- Professionals Receiving Access to Plant Trials
- Download Plant Trials Logo
- View Trial Statistics

- NEW My Region Filters
- Logout

Select Specific Trial Gardens to Create Your Own

#### Custom Region

and view the results only from the trial gardens in your custom region.

#### **Additional Trial Garden Options**

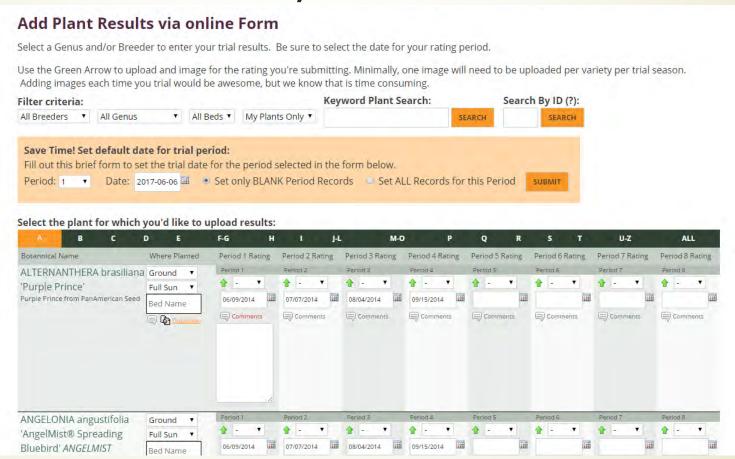
Submit Trial Results | Modify Contact Info | View All Trial Results | Professionals Receiving Access to Plant Trials

Download Plant Trials Logo | View Trial Statistics | NEW - My Region Filters | Logout

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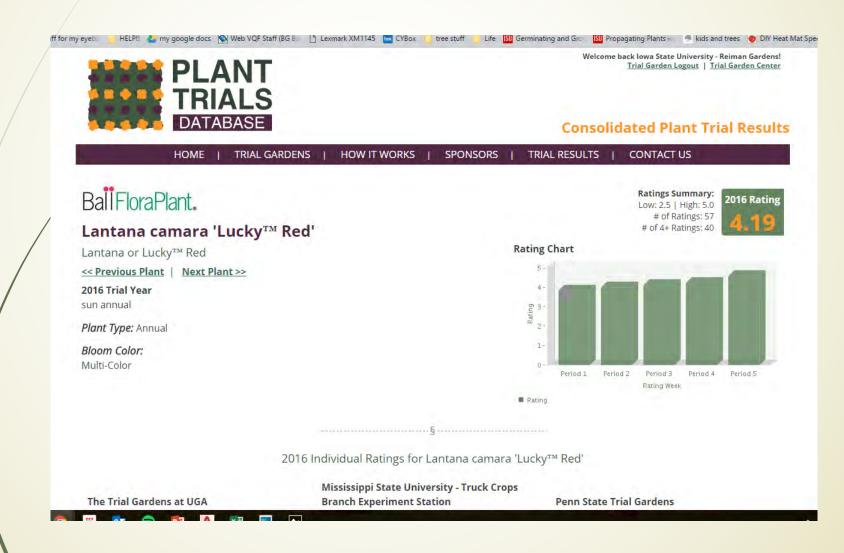
# Plant Trials Database: Add your results



#### Plant Trials Database: See Averages—Results at a Glance

ariety	Score	variety	Score
amium maculatum Dead Nettle (Pink Chablis) from Proven Winners	3.41	Lobelia erinus 'Techno® Heat Electric Blue' Techno® Heat Lobelia	3.00
amium maculatum 'Purple Chablis™ Dead Nettle from Proven	3.28	from Syngenta Flowers	
Vinners		Lobelia erinus 'Techno® Heat Light Blue' Techno® Heat Lobelia from	3.50
intana 'Evita Compact Yellow' Evita from Dummen Orange	4.53	Syngenta Flowers	
ntana 'Evita Yellow' Evita from Dummen Orange	4.50	Lobelia erinus 'Techno® Heat Upright Dark Blue' Techno® Heat Upright Lobelia from Syngenta Flowers	5.00
ntana camara 'Lucky™ Red' Lantana from Ball FloraPlant	4.19		
antana camara 'Bandana® Réd Imp' Bandana® Lantana from	3.97	Lobelia erinus 'Techno® Heat Upright Light Blue' Techno® Heat Upright Lobelia from Syngenta Flowers	5.00
yngenta Flowers		Lobelia erinus 'Techno® Heat Upright Purple' Techno® Heat Upright	2.80
antana camara 'Landscape Bandana® Lemon Zest' Landscape Jandana® Lantana from Syngenta Flowers	3,82	Lobelia from Syngenta Flowers	2.00
		Lobelia erinus 'Techno® Heat Upright White Imp.' Techno® Heat	4.50
antana camara 'Landscape Bandana® Red Imp' Landscape andana® Lantana from Syngenta Flowers	3.71	Upright Lobelia from Syngenta Flowers	
		Lobelia erinus 'Techno® Heat Violet' Techno® Heat Lobelia from	4.00
antana camara 'Berry Blend' Lantana from Proven Winners	4.20	Syngenta Flowers	
antana camara 'Citrus Blend' Lantana from Proven Winners	4.20	Lobelia erinus 'Techno® Heat White' Techno® Heat Lobelia from Syngenta Flowers	3.00
antana camara 'Pinkberry Blend' Lantana from Proven Winners	3.50		
antana camara 'Landscape Bandana® Yellow' Landscape Bandana®	4.38	Lobelia hybrid 'Suntory Lobelia® Compact Blue' Lobelia from Suntory	3.38
antana from Syngenta Flowers		Flowers Ltd.	
intana camara 'Landscape Bandana® Pink' Landscape Bandana®	4.33	Lobelia hybrid 'Suntory Lobelia® Compact Pink' Lobelia from Suntory	3.07
ntana from Syngenta Flowers		Flowers Ltd.	
intana camara 'Landscape Bandana® Gold' Landscape Bandana®	4.25	Suntory Flowers Ltd.	4.49
ntana from Syngenta Flowers			
ntana camara 'Bandana® White' Bandana® Lantana from Syngenta owers	3.30	Lobelia hybrid 'Suntory Lobelia® Trailing Blue with Eye' Lobelia from Suntory Flowers Ltd.	4.02
antana camara 'Bandana® Rose' Bandana® Lantana from Syngenta	3.00	Lobelia hybrid 'Suntory Lobelia® Trailing Pink' Lobelia from Suntory	3.63

# Plant Trials Database: Look at Specific Plants and Individual Ratings



# Plant Trials Database: See Scores and Images from Each Site (that submits data!)



Sneak peak at new materials





- Helping our industry
  - Anecdotal information about new introductions

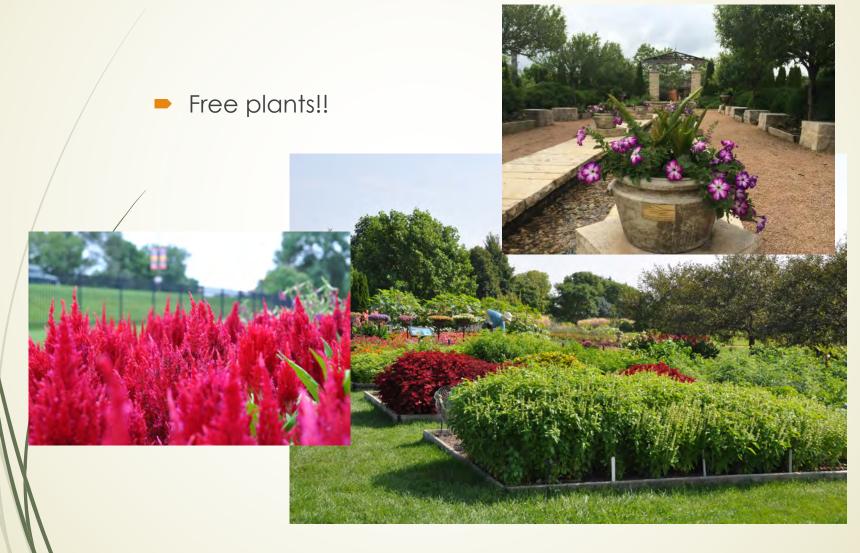




 Helps our gardens with missions, guides outreach, furthers our institutions







- Involve Board Members
- Learn new skills iPad data collection



Educational opportunity for interns



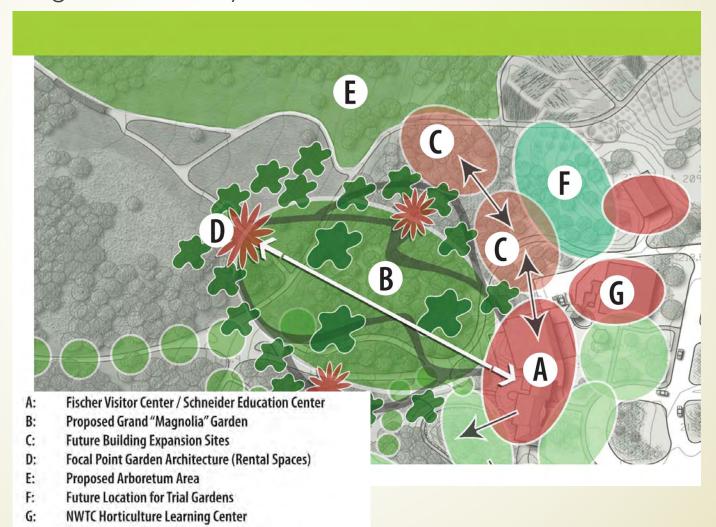
Educational opportunity for interns



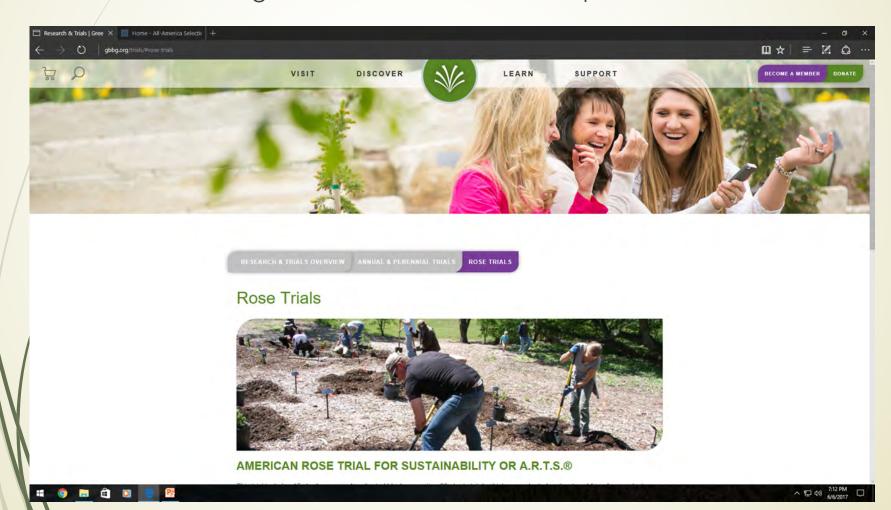
- Community involvement
- Cross campus education



Organizational Buy In



Sharing results with visitors and the public



# What Don't We Love About Trials?

- Big time investment!
  - Seeding, transplanting, scheduling, planting, maintaining, evaluating, data entry
  - Reiman Gardens: approximately 200 entries



# What Don't We Love About Trials?

Time Management



### What Don't We Love About Trials?

Space Management



### What Don't We Love About Trials?

Poor germination



# What Don't We Love About Trials?

Bad things happen to good plants





### What Don't We Love About Trials?

Trialing our least favorites...





Territorial Seed, Burpee Seed

# What Don't We Love About Trials?

Failure



## Any questions yet?

Salvia coccinea Summer Jewel series



'Escamillo' cornito di toro pepper



'Cornito Giallo' cornito di toro pepper



Canna Cannova series







American Takii, Ball Seed

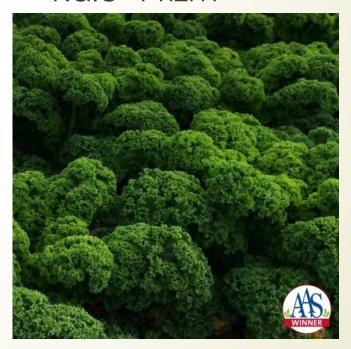




Tomato 'Patio Choice Yellow'



Kale 'Prizm'



Petunia Tidal Wave Red Velour





Begonia Whopper series



Alternanthera Purple Prince





Rose Look-A-Likes® BougainFeelYa



### Thank You!

