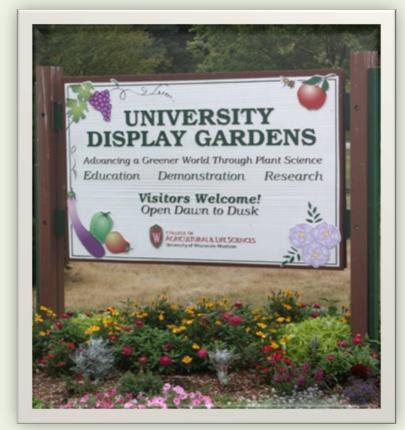
# WMARS University Display Gardens -2012 Vegetable Trials-



Brian Emerson- Garden Manager

## **2012 Vegetable Trial Specifics**

- Total of 127 Varieties
- 6 Seed companies participating:
   Burpee, Pan AM, Grimes, Johnny's,
   Rupp, and Seed Savers
- Planted out May 28-Jun 6
- Evaluation notes recorded through season and aggregated in Sept.

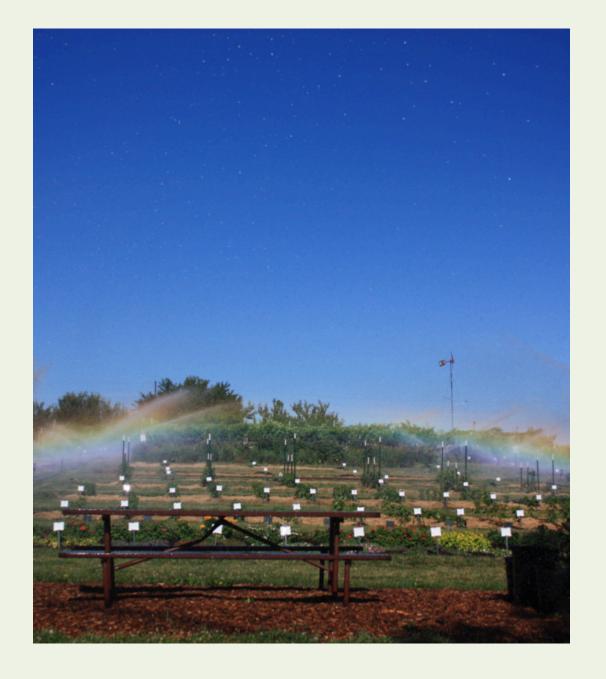
# WMARS University Display Gardens – Site Specifics

- Season started with a severe deficit in subsoil moisture
- 2.87 inches of rain in April
- Very little frost in the soil
- Warmest March on record
   High Temp of 83F
   Average high Temp of 60F
   Average low Temp of 38F
- Early high soil temps
- Early budding of perennials
- Hard freeze Apr 11
- Light frosts Apr 23 and 27
- Damage to perennials



# WMARS University Display Gardens – Site Specifics

- Planted veggies around
   June 1
- Driest June on record .31 inches
- High Temp of 98F
- 9 days above 90F
- 25 days of clear sunny skies
- Required 3weeks of irrigation to build up subsoil moisture into root zone
- Irrigation every 6-10 days
   with equivalent
   1.5-2inches of water



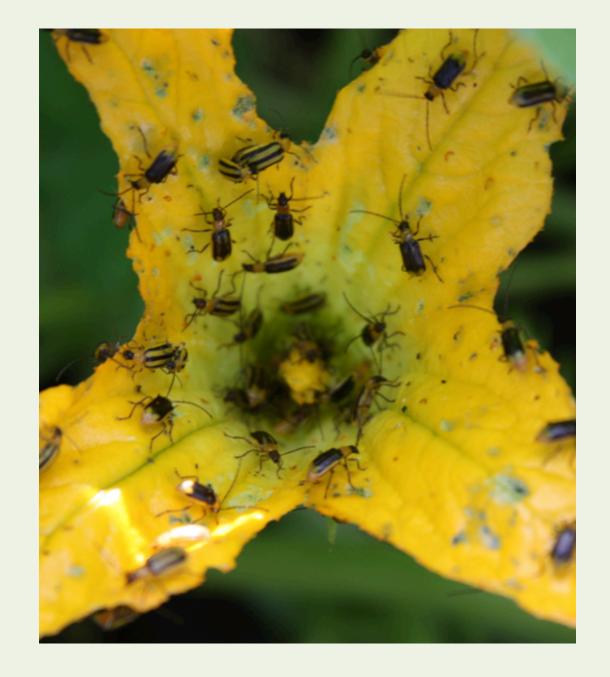
# WMARS University Display Gardens – Site Specifics

- Rest of season was an extreme drought
- From Jun 1- Sept 30:
  - 36 days +90F
  - High of 104F
  - 95 Clear sunny days
  - 7.22 inches of rain
- Most crops maturing 2-3 weeks ahead of normal
- Very high soil temperatures
- Stressed plants



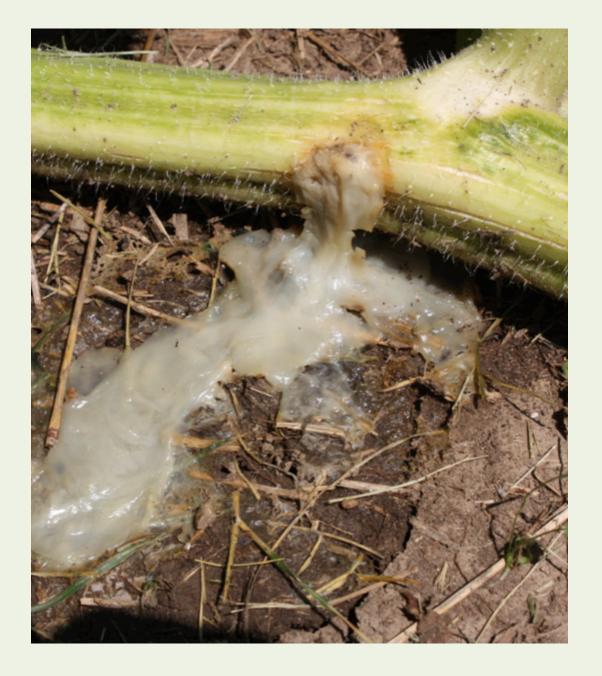
# WMARS University Display Gardens - Insects

- Insect pressure was extremely early
- Spider Mites
- Spotted Wing Drosophila- fruit fly
- Cucumber and Corn rootworm beetle
  - Early/near record populations
  - High infection rate of bacterial wilt
- Squash vine borer moth
  - Early/persisting/high populations
- Colorado potato beetle
  - Early/Low populations
- Imported cabbageworm moth
  - Little/no pressure
- Japanese Beetle
  - Late/Low populations



# WMARS University Display Gardens - Disease

- Low fungal issues
- Bacterial Wilt
- Aster yellows
  - Leaf hopper transmitted
  - Large early flight on SW winds
  - High infection rate



## 2012 Vegetable Evaluations

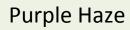


**UW-WMARS** Display Gardens



**Carrots** 

Nectar





Caracas

Jungseed.com

#### Beets



#### Garden Leader 'Tasty Red Bull'

- Tender at baseball size
- Flavorful greens
- Excellent heat tolerance

#### Lettuce



'Mantilia'- Butterhead

## Onion



Long Red Florence

Onion

Ruby Ring

Onion -Red



11b 10oz



22lbs from 5 plants

## **Peppers**



28lbs from 5plants Unique savory flavor



**Evaluator Favorite- Flavor** 



25lbs from 5 plants Superb flavor and aroma



**Hot Tasty Salsa** 

#### Peppers

#### Other Top Performers

- Andy (Cayenne)
- EZ Gro Jalapeno Lite
- X3R Red Knight (Bell)
- Peppino
- Mellow Star

Peppino



Squash



Pinnacle F1- Spaghetti
99lbs from 3 plants

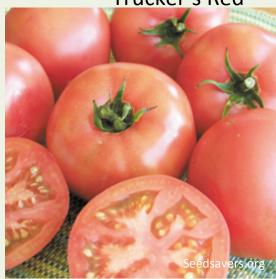


German Johnson

#### **Tomatoes**

- 'Paisano' San Marzano/Paste 140lbs from 3 plants
- 'German Johnson' Heirloom Beefsteak- 106lbs from 3 plants Flavor Favorite
- 'Mighty Sweet' Grape Type- Mounding habit
- 'Truckers Red'- 61lbs from 3plants

Trucker's Red





Mighty Sweet



'Shiny Boy'-AAS

#### Watermelon

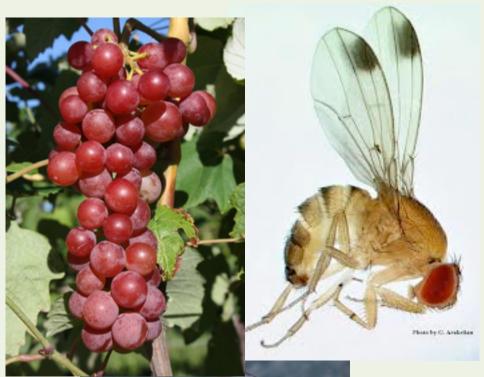


'Oh So Sweet' 236lbs from 3 plants

'Orange Crisp'- Evaluator Favorite 15lbs

#### Perennial Fruits

- Poor fruit set on apples due to freeze of blossoms
- Early freeze of emerging grape buds/ varietal differences
- Poor raspberry production due to heat/dry blossom drop
  - Shallow root systems
  - Spider mites
- Poor production on blueberries due to dry 2011 and high soil temps
- New Pest: Spotted Wing Drosophila
- Remaining fruit had higher sugar content because of dry (sugar concentration) and heat (sugar production)



#### Lessons from 2012

- Be very aware of the cold air flow on your site.
  - Where are the slight depressions on the landscape?
- Subsoil moisture is critical and difficult to replenish
- Warm weather crops (watermelons) that have been bred for cold hardiness struggled in trials
- Varietal differences in heat tolerance of peppers and tomatoes (blossom drop)
- Heat produces sweeter and more flavorful produce.
  - Increased potency of onions
  - Increased heat in hot peppers
- Plants stressed early in their life cycle can take weeks to recover.
- Are insects with overwintering larvae equally effected by dry as low temps?
- High soil temps are detrimental to many plants
  - Know the depth of your root systems
  - Mulch if possible
- Cover Crops provide excellent plant nutrition





## Contact

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