

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



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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



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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



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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



Purple Haze



Deep Purple



Caracas

Beets



Garden Leader 'Tasty Red Bull'

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

Lettuce



'Mantilia' - Butterhead

Onion



Long Red Florence

Onion



Pontiac

Onion -Yellow

1lb 8oz



Ruby Ring

Onion -Red



Candy

Onion -Sweet

1lb 10oz

Peppers



22lbs from 5 plants



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

Tomatoes



German Johnson

- **'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

Watermelon



'Shiny Boy'-AAS



'Oh So Sweet'
236lbs from 3 plants



'Orange Crisp'- Evaluator Favorite 15/lbs

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





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