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## 2013 Home Demonstration Garden

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## 2013 Home Demonstration Garden

### RFR-A1357

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#### Introduction

Themes for the 2013 Home Demonstration Garden Field Days included: 1) grafted tomatoes, 2) tomatoes in raised beds and bags, 3) colored bell pepper cultivar trials, 4) evening or moon garden, and 5) garden of giants.

#### Materials and Methods

Seeds of vegetable and annual flowers were sown in late February and March 2013 at the ISU Horticulture greenhouses in Ames, Iowa. Approximately one month later, seedlings were transplanted into cell packs. Plants were distributed to each research farm in early May for planting in late May or early June. A few species (sunflowers, corn, and moon vine) were directly seeded into the garden plots. Plants were hardened or acclimated to growing conditions at each farm for a week or more prior to planting. The ISU Research Farms participating in the 2013 Home Demonstration Garden trial and display included: Armstrong (Lewis), Horticulture Research Station (Ames), Muscatine Island (Fruitland), Northern (Kanawha), Northeast (Nashua), and the Lyon County Fairgrounds (Rock Rapids). Transplants were watered at planting and as needed throughout the growing season. The amount of water and fertilizer applied at each garden varied considerably due to soil and weather conditions.

#### Results and Discussion

Many of the plants in the 2013 Home Demonstration Garden performed surprisingly well at all farms across the state. In general, the weather was wet in the spring, delaying

planting at some of the research farm sites. The summer proved to be dry at several gardens requiring frequent watering in July and August.

The evening garden consisted of *Datura*, moonvine, flowering tobacco, petunia, 4 o'clocks, scented phlox, white dill or Ammi, and night scented stock. Almost all cultivars of petunia, flowering tobacco, and 4 o'clocks performed well at each garden. Germination was poor on the moonvine and the stock and phlox performed poorly in the summer heat at most gardens.

The garden of giants consisted of plants noted for their large habits and/or flowers. Cultivars of sunflowers, cabbage, corn, marigold, bell pepper, tomato, vinca, salvia, and zinnia were included. Almost all performed well at most gardens.

Tomatoes and peppers were featured in the 2013 Home Demonstration Garden. Yield of two cultivars of grafted tomatoes were compared with their non-grafted counterparts (Table 1). The cultivars selected were Cherokee Purple (an heirloom) and Mountain Fresh (a determinate hybrid). At the Armstrong Research Farm, grafted Cherokee Purple plants produced the most tomatoes. At the Muscatine Island Research Farm and the Northern Research Farm, Cherokee Purple plants seemed to perform poorly, regardless of being grafted or not. Grafted Mountain Fresh plants produced more tomatoes at Armstrong and Muscatine Island compared with non-grafted plants. At Northern, the non-grafted Mountain Fresh plants produced more than twice as many fruits as grafted plants.

Celebrity tomatoes were grown in soil bags, raised beds, and ground beds. A comparison of yield from the different methods is

presented in Table 2. In all locations, fewer tomatoes were produced when grown in soil bags as compared with raised beds. Soil bags were 20 gallon woven *Grow Bags* from High Caliper of Oklahoma. Tomatoes grown in raised beds produced as many tomatoes or more compared with ground beds.

Table 3 presents yield from several cultivars of colored peppers trialed at the Home Demonstration Garden. All cultivars were

productive with Bianca, Flavor Burst, Lulton, and Tequila the first to produce peppers that changed colors. The largest peppers were produced on Archimedes and Summer Sweet at Armstrong and Muscatine Island farms.

### Acknowledgements

Thanks to the farm superintendents, staff, and Master Gardeners at each research farm for growing the garden, collecting data, and hosting a field day at each farm.

**Table 1. Comparison of yield (pounds and number of marketable fruit) from grafted and non-grafted Cherokee Purple and Mountain Fresh tomatoes at three ISU Research Farms.**

ISU Research Farm	Cherokee Purple non-grafted	Cherokee Purple grafted	Mountain Fresh non-grafted	Mountain Fresh grafted
Armstrong	141.1 (316)	170.1 (336)	150.1 (284)	172.1 (342)
Muscatine Island	9.2 (18)	5.3 (10)	28.0 (51)	59.8 (110)
Northern	6.6 (12)	3.1 (6)	62.4 (141)	33.2 (59)

**Table 2. Yield (pounds and number of marketable fruit) of Celebrity tomatoes grown in soil bags, raised beds, or ground beds at three ISU Research Farms.**

ISU Research Farm	Ground bed	Soil bag	Raised bed (no sides)	Raised bed (with sides)
Armstrong	213.6 (507)	96.8 (238)	214.2 (490)	259.5 (627)
Muscatine Island	52.2 (96)	4.8 (11)	-----	51.6 (105)
Northern	1.7 (4)	2.0 (8)	96.0 (215)	52.3 (103)

**Table 3. Yield (pounds and number of fruits) from nine different cultivars of colored peppers grown at two ISU Home Demonstration Gardens.**

Cultivar	Armstrong			Muscatine		
	Lb	No. fruit	Avg. wt. (lb/fruit)	Lb	No. fruit	Avg. wt. (lb/fruit)
Archimedes	25.9	32	0.81	25.8	53	0.49
Bianca	64.3	222	0.29	16.4	49	0.33
Delirio	40.9	83	0.49	7.4	19	0.39
Flavor Burst	65.3	205	0.32	13.5	27	0.50
Lulton	42.3	98	0.43	14.9	42	0.35
Red Knight	37.3	58	0.64	17.9	49	0.37
Summer Sweet	30.5	47	0.65	10.6	25	0.42
Tango	15.1	30	0.50	6.2	18	0.34
Tequila	47.5	170	0.28	8.6	27	0.32