

1999 Pumpkin Cultivar Evaluation

Columbus And Hillsboro

Bob Precheur, Thom Harker, Mac Riedel, Duane Taylor, Becky Lyon, Gretchen Sutton, Karen Magnasen, Celeste Welty, Brad Bergefurd.
Dept. of Horticulture and Crop Sci., Pl. Pathology, Entomology and Enterprise Center,

The Ohio State University, Columbus.

Supported in part by The Ohio Vegetable and Small Fruit Research and Development Program

Summary of Results

In Columbus, the cultivars were divided into 2 experiments or size categories. In each experiment, half of the 4 replications were sprayed with a standard chemical disease control program and all plots received standard insecticide applications during the season. Each plot was 40 ft long and replicated 4 times. Because of the late arrival and lower severity of powdery mildew this year, there was no significant difference in yield between sprayed and unsprayed plots. There was a significant increase in powdery mildew on handles in late August in large pumpkins in unsprayed plots compared to fungicide applied plots. Varieties in unsprayed plots with good powdery mildew tolerance were: HMX 6689, HMX 9697 and HMX 6688. Another highlight was the excellent tolerance of cultivar EXT 1854 to watermelon mosaic virus (WMV).

The best large sized varieties in terms of tons per acre were: RWS 5668, Gold Rush, and Pro Gold 510. Yield and average fruit size was much lower than previous years. All plots were trickle irrigated but water was not available at critical times due to breakdown of the farm's main pump and water lines. Three small varieties were in the large pumpkin field location and produced good fruit numbers and yield for their size category. HMX 6688 is a powdery mildew tolerant version of Mystic. HMX 5682 is a very productive, cute, small type with an average fruit size of about 0.75 lbs.

The medium and small varieties of merit were EXT 1854, Gold Fever, Gold Standard, REX 38041 and RWS 6260. Yields were generally around 10 tons per acre or much greater. Average fruit size usually runs around 10 to 15 lbs but again was much lower this year. Many of these varieties have the shape of a medium Gold Rush type. This size category is becoming much more popular and used for table decorations and painting. Pic-A-Pie is an attractive and productive pie pumpkin.

At Hillsboro, 22 cultivars from different size categories were evaluated. Cultivar RWS 5668 had the highest yield of 19 tons /A with an average fruit size near 20 pounds. The only other varieties, in the large size category, producing more than 7 tons/A were: Appalachian, Gold Rush, and Gold Fever. Vine growth and fruit set were severely limited by drought conditions at Hillsboro.

For a complete set of pictures and results, visit the VegNet website at:

<http://www.ag.ohio-state.edu/~vegnet>

Table 1. 1999 Large to Medium Size Fruited Pumpkins, Columbus, OH

No Fungicide		Marketable Orange Fruit		Average Fruit Size	Powdery Mildew Rating*	Powdery Mildew on Handle**		
Variety	Source	No./A	Tons/A	lbs	23 Aug	At Rating	At Harvest	Virus
1. Appalachian	Peto	762	4.5	10.6	4.0	1.5	1.0	2.0
2. Pro Gold 510	AC	1144	5.5	9.4	3.5	1.0	1.0	2.0
3. Gold Rush	Rupp	847	6.3	15.0	3.0	1.5	1.0	2.0
4. OI' Zeb	Rupp	708	2.7	8.5	2.0	1.0	1.5	2.0
5. RWS 5668	NV	1361	6.5	9.9	3.5	1.0	1.0	2.75
6. Gold Strike	Rupp	817	5.0	10.1	4.0	1.0	1.0	2.0
7. HMX 6689	HM	1089	7.4	12.8	2.0	1.0	1.0	1.75
8. HMX 8693	HM	708	2.6	7.0	3.0	1.0	0	2.0
9. HMX 9697	HM	1416	4.1	5.2	2.0	1.0	0.5	2.0
Small and Medium Types								
10. HMX 5682	HM	7460	2.9	0.8	4.5	1.0	1.0	2.0
11. HMX 6688	HM	1525	2.7	3.4	2.5	1.5	0	2.0
12. Mystic	HM	545	1.0	2.9	3.5	1.0	0	1.5
LSD 0.05		1299.7	3.55	3.01	1.9	0.70	0.60	0.78

Fungicide		Marketable Orange Fruit		Average Fruit Size	Powdery Mildew Rating*	Powdery Mildew on Handle**		
Variety	Source	No./A	Tons/A	Lbs	23 Aug	At Rating	At Harvest	Virus
1. Appalachian	Peto	1361	7.6	10.6	1.0	1.0	1.5	2.0
2. Pro Gold 510	AC	1252	6.6	10.4	1.0	1.0	1.0	2.0
3. Gold Rush	Rupp	653	6.8	16.0	1.0	1.0	1.0	2.0
4. OI' Zeb	Rupp	926	4.7	8.1	1.0	1.0	1.5	2.0
5. RWS 5668	NV	1198	9.1	13.5	1.0	1.0	1.0	2.0
6. Gold Strike	Rupp	653	4.5	11.8	1.0	1.0	1.0	2.0
7. HMX 6689	HM	980	6.0	11.5	1.0	1.0	1.0	2.0
8. HMX 8693	HM	1252	4.5	6.9	1.0	1.0	0.5	2.0
9. HMX 9697	HM	1579	5.6	6.7	1.0	1.0	0	2.0
Small and Medium Types								
10. HMX 5682	HM	6970	2.7	0.8	1.0	1.0	0.5	2.0
11. HMX 6688	HM	2069	3.7	3.4	1.0	1.0	0.5	2.0
12. Mystic	HM	762	1.3	3.1	0.5	0.5	0	1.0
LSD 0.05		802.9	5.2	2.98	4.9	0.44	1.04	0.89

* 1 = no trace of mildew, 2=1-25%, 3=26-80%, 4=51-75%, 5=76-100% foliage with fungal colonies and 6= necrotic leaves.

** 1= no mildew on handle, or virus on foliage; 2= presence of mildew on handle; or virus on foliage.

Table 2. 1999 Small to Medium Fruited Pumpkin Cultivar Evaluation, Columbus, OH

No Fungicide		Marketable Orange Fruit		Average Fruit Size	Powdery Mildew Rating*	Powdery Mildew on Handle**		
Variety	Source	No./A	Tons/A	lbs	23 Aug	At Rating	At Harvest	Virus
13. Pro Gold 200	AC	1579	11.2	13.6	4.0	1.0	1.0	2.0
14. EXT 1854	AS	5445	13.9	5.1	3.5	1.0	1.5	1.0
15. Gold Fever	Rupp	2396	10.2	8.3	4.0	1.0	0.5	2.0
16. Gold Standard	Rupp	1634	7.9	10.0	4.0	1.0	1.0	2.0
17. REX 38041	Rupp	2178	9.8	8.7	2.5	1.0	1.0	1.5
18. RWS 6260	NV	1742	14.7	16.0	3.5	1.0	1.0	2.0
19. Pic-A-Pie	Rupp	2886	6.0	4.1	4.0	1.0	1.0	2.0
20. EX 1853	AS	3049	8.4	5.2	3.5	1.5	0.5	1.5
LSD 0.05		1401	8.9	8.43	1.72	0.54	1.63	0.71

** 1= no mildew on handle, or virus on foliage; 2= presence of mildew on handle, or virus on foliage.

Fungicide	Marketable Orange Fruit	Average Fruit Size	Powdery Mildew	Powdery Mildew on
-----------	-------------------------	--------------------	----------------	-------------------

Variety	Source	Marketable Orange Fruit		lbs	Rating*	Handle**		
		No./A	Tons/A		23 Aug	At Rating	At Harvest	Virus
13. Pro Gold 200	AC	1144	5.6	8.5	1.0	1.0	0.5	2.0
14. EXT 1854	AS	4356	9.3	4.3	1.5	1.0	0	1.0
15. Gold Fever	Rupp	1851	9.6	9.7	1.0	1.0	1.0	2.0
16. Gold Standard	Rupp	2178	8.3	7.7	1.0	1.0	1.0	2.0
17. REX 38041	Rupp	2287	11.2	9.0	1.0	1.0	0.5	2.0
18. RWS 6260	NV	1579	6.3	7.7	1.0	1.0	1.0	2.0
19. Pic-A-Pie	Rupp	3376	7.1	4.1	1.0	1.0	1.0	2.0
20. EX 1853	AS	3375	9.8	5.8	1.0	1.0	1.0	2.0
LSD 0.05		1711	7.60	3.27	0.54	0	0.81	0.54

* 1 = no trace of mildew, 2=1-25%, 3=26-80%, 4=51-75%, 5=76-100% foliage with fungal colonies and 6= necrotic leaves.

** 1= no mildew or virus on foliage, 2= presence of mildew on handle; or virus on foliage.

Table 3, 1999 Pumpkin Cultivar Evaluation, Hillsboro, OH

Variety	Source	Marketable Orange Fruit		Average Fruit Size
		No./A	Tons/A	lbs
1. Appalachian	Peto	926	7.4	16.1
2. Pro Gold 510	AC	817	4.3	10.3
3. Pro Gold 200	AC	980	6.1	10.6
4. Pro Gold 100	AC	2831	2.2	1.5
5 Merlin	HM	1089	5.4	9.8
6. Gold Rush	Rupp	817	7.5	16.0
7. Ol' Zeb	Rupp	653	4.8	14.0
8. HMX 6689	HM	871	6.5	13.7
9. HMX 8693	HM	1525	5.7	7.4
10. HMX 9697	HM	1797	5.9	7.0
11. HMX 5682	HM	4683	2.5	0.9
12. HMX 6688	HM	2233	4.7	4.0
13. Mystic	HM	2450	5.8	4.5
14. EX 1853	AS	1579	5.0	5.7
15. EXT 1854	AS	2233	4.4	4.0
16. Gold Standard	Rupp	1470	6.1	7.7
17. Gold Fever	Rupp	1307	7.4	11.3
18. REX 38041	Rupp	1089	6.6	11.8
19. Peek-A-Boo	NV	4900	4.7	2.0
20. RWS 6260	NV	3213	3.2	2.0
21. Pic-A-Pie	Rupp	1906	4.5	4.5
22. RWS 5668	NV	817	9.0	19.1
LSD 0.05%		1106	3.84	2.87

Table 4, 1999 Small and Large Fruited Pumpkin Spray Program Evaluation, Columbus, OH

Small and Medium Fruited Pump