



OKLAHOMA PUMPKIN TRIALS: A LOOK AT HYBRIDS AND OPEN POLLINATED TYPES

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First, a Little Pumpkin History

Pumpkins

- Originated in Americas
- Important food source for Native Americans
- Popular for Halloween mrkt.

Technically

- Winter squash

Characteristics

- Store long periods
- Nutritious
 - Good source of Vitamins A, C potassium, & fiber





Squash and Pumpkin Production

- Production Requirements
- Varieties
- Fertility
- Spacing & planting
- Weed control
- Pest management
- Harvest

Growing Conditions

Establishment

- Direct seed 3rd wk. of June
 - 6-20 through 24
- Soil temp > 70°F
- Direct seed
 - 3-5' in-row, 6-15' between rows

Fertility

- 90-120 lbs. N/acre
- 100 lbs. P/acre
- 200 lbs. K/acre

Irrigation & pollinators needed

Bare soil or plasticulture

Hay-grazer windbreaks

- Every 2-3 rows

Regular sprays for pests

- Weed control use pre @ plnt.
- 10-14 days for insect/disease



End of Season

End of season

- Indicator of
 - Disease resistance
 - How well you
 - Watered, fertilized
 - Controlled other pests

Harvest

- 100-120 days
- Depends on variety

Post harvest

- Cure 10 days @ 80-85°F, 80% relative humidity.
- Store @ 50-55°F, 75% relative humidity



A Word About Sprayers

If you're going to spray

- Do a good job
 - Calibrate sprayer
 - Don't spray for insects & disease with sprayer used for weed control
- A tractor mounted sprayer reduces your exposure to pesticides
- Read & follow labels
- Invest in adequate sprayer



2010 & 2011 Pumpkin Trial Bixby then Perkins

Purpose

- Performance
 - Hybrid & O.P.
- Disease resistance
- Conventional production
 - Open soil growing system @ Bixby
 - Plasticulture @ Perkins
 - Fertility & pest management

14 varieties

- 5 size groups



Group 1: Very Small <2 lbs

Baby Pam-O.P.

1.8 lbs/frt. 6,272 & 6,816lbs/acre

Poor early vigor



Touch of Autumn-Hybrid

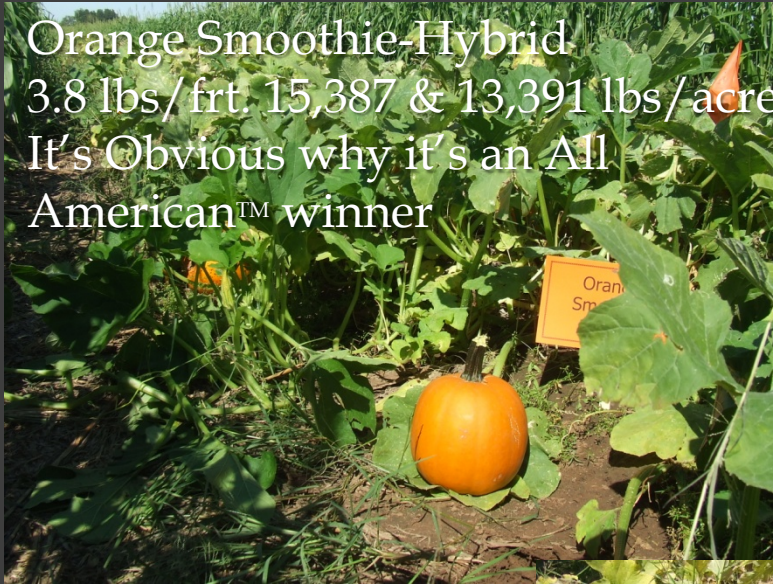
1.9 lbs/frt. 10,346 & 14,359 lbs/acre

Nice green handle on uniformly orange fruit, high fruit numbers



Group 2: Small 3-4.5 lbs

Orange Smoothie-Hybrid
3.8 lbs/frt. 15,387 & 13,391 lbs/acre
It's Obvious why it's an All
American™ winner



Winter Luxury-O.P.
4.3 lbs/frt. 10,918 & 12,503 lbs/acre
Unique white netting, more
pickleworm damage



Small Sugar-O.P.
3.0 lbs/frt. 11,261 & 10,446
lbs/acre
Classic pie pumpkin



Group 3: Small Medium 8-9 lbs

Orange Bulldog-O.P.
8.1 lbs/frt. 22,199 & 21,982 lbs/acre
Still segregating *C. maxima*



Tom Fox-O.P.
8.5 lbs/frt. 11,115 & 7,908 lbs/acre
Not impressive



Charisma-Hybrid PMR
9.0 lbs/frt. 25,483 & 17,989 lbs/acre
Best performer of group highest
yield in 2010



Group 4: Medium 10-14 lbs

Magician-Hybrid

10.5 lbs/frt. 23,135 & 15,549 lbs/acre

Good fruit uniformity



Howden-O.P.

12.2 lbs/frt. 14,226 & 15,811 lbs/acre

Good uniformity



Wolf-O.P.

12.7 lbs/frt. 6,179 & 9,196 lbs/acre

Late poor performer-Mega handles



Trojan-O.P.

13.3 lbs/frt. 19,320 & 12,463 lbs/acre

Good uniformity & yield



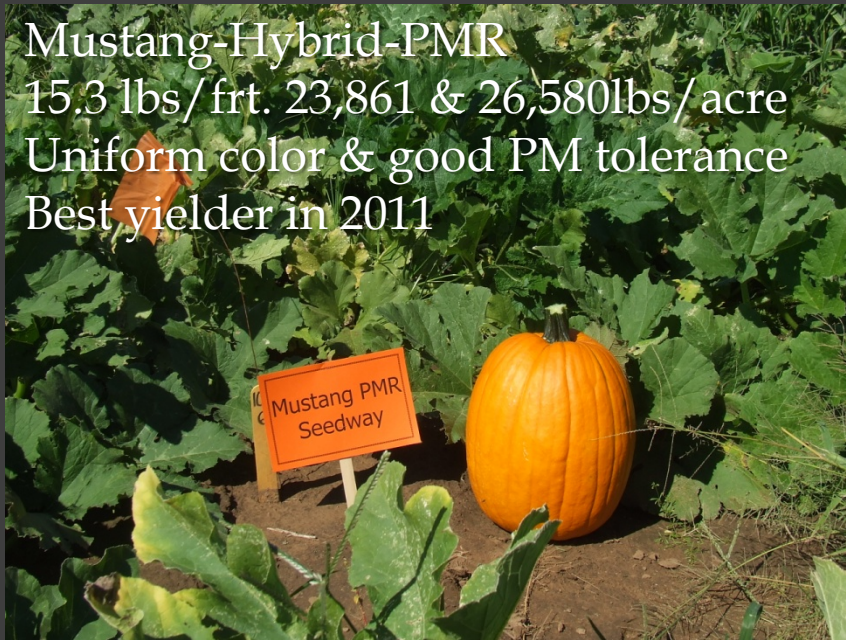
Group 5: Larger Medium 15-20 lbs

Mustang-Hybrid-PMR

15.3 lbs/ft. 23,861 & 26,580lbs/acre

Uniform color & good PM tolerance

Best yielder in 2011



Gold Rush-O.P.

19.2 lbs/ft. 15,117 & 6,937 lbs/acre

Largest fruit in trial, possibly
susceptible to virus



The background of the slide is a close-up photograph of numerous pumpkins. The pumpkins are a vibrant orange color with prominent vertical ridges. They are piled together, creating a textured, organic background. The lighting is warm, highlighting the natural curves and colors of the pumpkins.

Summary

PMR varieties

Top yielders

Hybrid vs. O.P.

Hybrids performed best

But... Several O.P.s worked fine

Cultural system

Windbreaks worked well

Weed control was ok

Disease control so-so

Detailed Results Available



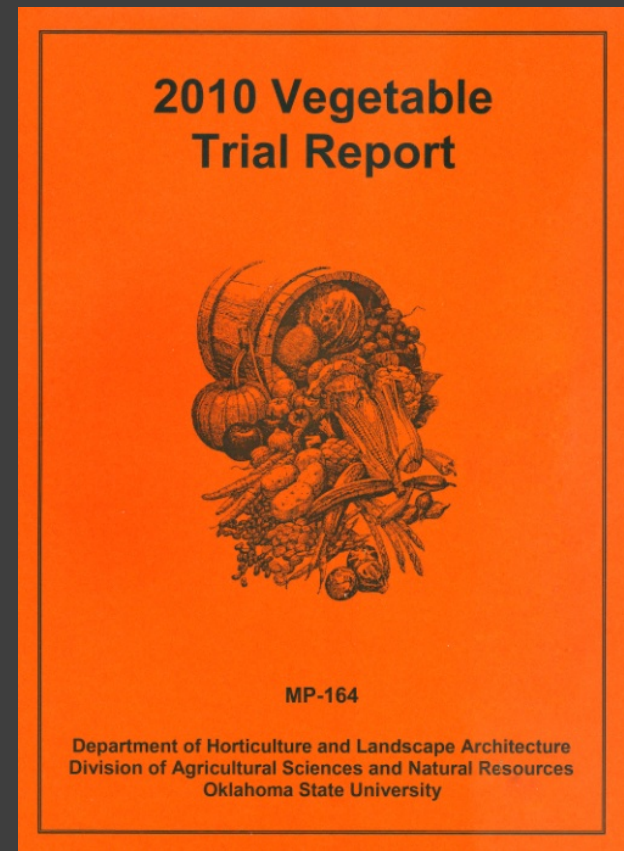
HORTICULTURE AND LANDSCAPE ARCHITECTURE

2010 & 2011 results available
on-line at:

- <http://www.hortla.okstate.edu/industry/vegetables/index.htm>

MP-164: Oklahoma Vegetable Trial Report

- On-line at website above



References

- Peirce L.C. 1987. Vegetables, characteristics, production, and marketing. Wiley, NY.
- Nutritive values of pumpkin. From website at: <http://www.nal.usda.gov/fnic/foodcomp/search/>
- E-995 “Oklahoman’s Guide to Growing Fruits, Nuts, and Vegetables
- <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-1023/HLA-6026web.pdf>