

FRANKLIN COUNTY MASTER GARDENERS VEGETABLE VARIETIES RESEARCH PROJECT REPORT

Welcome to the Franklin County Master Gardeners Vegetable Varieties Research Project Report. First you will find a complete list of all the vegetable varieties we have grown through the 13 years we have been conducting our research. The asterisks indicate our favorites and thus those particular cultivars we especially recommend to our fellow Central Ohio vegetable gardeners. Beyond the list is a description of all the aspects of our research, particularly the important things we have learned over the years and resulting improvements in our methods.

MASTER GARDENER TRIAL VEGETABLE CULTIVARS 1996-2009 OSU Extension – Franklin County

ARUGULA

Roquette

ASPARAGUS

Jersey Giant
Purple Passion

BEANS

Anellino Mix
Benchmark
Derby
Early Contender
Florence
Tenderpick

BEETS

Chioggia *
Forono*
Burpee's Golden
Red Ace
Touchstone gold

BROCCOLI RAAB

Spring
Zamboni

BRUSSELS SPROUTS

Bubbles F1 1

CABBAGE

Alcosa *
Atlantis
Arrowhead
Caraflex
Dynamo
Gonzales Mini *
Gunma
January King
Jazz
Melissa
Minuet
Pak Choi
Parel *
Pyramid F1
Red Acre
Red Express
Red Jewel
Ruby Perfection
Salad Delight
Savoy Express
Savoy King
Super Red
Sweet Surprise *
Toy Choi Hyb.
Two Seasons Hyb.

CARROTS

Ingot
Kaleidoscope
Kinko 4"
Red Corded-Chantenay
Tokitas's Scarlet
Touchon Deluxe
Thumbelina *

CANTALOUPE

Sensation Hyb.

CAULIFLOWER

Snowball

CELERIAC

Brilliant

CORN

Illini Xtra Sweet
Silver Queen
Super Sweet Jubilee

CUCUMBERS

Babylon
Country Fair
Diva
Fanfare Hyb.
Fountain
Kidma Marketmore *
Salad Bush
Southern Delight Hyb.
Straight 8
Sugar Crunch Hyb. *
Summer Dance
Sweet Slice
Sweet Success
Tamre
Tasty Jade *

EDAMAME

Butterbeans

EGGPLANT

Beatrice
Black Bell
Bride Hybrid
Casper
Cloud Nine
Crescent Moon
Fengyuan Purple
Fond Long *
Green Goddess
Gretel
Hansel Hyb
Millionaire

Ichiban
Orient Express
Purple Rain
Rosa Bianca
Snowy
Violeta Lunga Precoce

ENDIVE

Neos
Tres Fine

GARLIC

Musik
Kettle River Giant
Persian Star *
Romanian Red
Spanish Roja

KALE

Redboro
Toscano *
Tuscan Lacinato
Winterbor F1

LEEKs

Albinstar
Autumn Giant
Giant Musselburgh
Otina
Prizetaker or Lyon

LETTUCE

Baby Star
Concarde
Curly Ruffles Mix
Delta Dawn *
Freckles
Frisee
Galactic
Heatwave
Italienischer
Jericho
Loma
Mighty Red Oak
Merlot
Outredgeous
Paris Baby Mix
Red Butterworth
Revolution
Sierra Batavia
Rouge de Hiver
Tom Thumb
Tropicana
Valmaine

OKRA

Burgundy
Cajun Delight *
Clemson's Spineless

ONIONS

Ailsa Craig
Candy
Cipollini
Copra
Ebenezer
First Edition
Ishikuro *
Purplette
Red Burgermaster
Red Weathersfield
Ringmaster
Super Star
Sweet Sandwich
Walla Walla
Yellow Spanish

PARSNIPS

Hollow Crown Improved

PEPPERS

Ace
Anaheim
Ariane
Aruba Hyb.
Bananarama
Baby bell
Bell Boy
Big Chili
Big Red Hyb.
Blushing Beauty
Carmen Hyb.
Crispy
CrispyBell *
Fat 'N' Sassy
Flavorburst Hyb.
Fooled You
Garden Salsa
Giant Aconcagua
Giant Marconi Hyb. *
Godfather
Gold Bar *
Gourmet
Great Stuffed Hyb.
Gypsy
Healthy
Holy Mole
Hungarian Hot Wax
Hungarian Semi-Hot
Islander
Lilac Hyb.
Mariachi Hyb.
North Star
NuMex
Peto Wonder Hyb.
Quadrato D'Asti Giallo *
Giallo Bell *
Revolution

Sahuaro Hyb.
Senorita
Sugarchile
Super Heavyweight
Super Red
Sweet Pickle *
Sweet Spot X3R *
Valencia
Yankee Bell *

POTATOES-SWEET

Beauregarde
Bush Porto Rico
Carolina Ruby
Centennials
Georgia Jets *
Darby
Hernandez
Japanese
Jewell
Nancy Hall
New Jewell *
O'Henry
Vardaman
White Yams

POTATOES-WHITE

Austrian Crescent Fingerling
Butte
Caribe
Corola
Daisy Gold
Katahdin
Kennebec
Langlade
German Butterball
Reddale
Red Pontiac
Russian Banana
Yukon Gold

RADICCHIO

Early Treviso*
Indigo
Palla Rossa Special

RHUBARB

Chipman's Canada Red
Valentine

SCALLIONS

Red Beard
Santa Claus

SHALLOTS

Dutch Yellow
Frog Legs
Grey Shallots
Holland Red

SPINACH

Bloomsdale
Catalina
Correnta

Emu
Olympia
Orient Giant
Space
Teton
Tyree
Wale

SQUASH-SUMMER

Butter Scallop
Burpee Butterbush
Costata Romanesco *
Elite
Early Prolific Straightneck
Fancycrook
Flying Saucer
Gadzukes
Goldbar
Gold Nugget
Horn of Plenty
Italiano Largo
Magda
Papaya Pear
Partenon
Peter Pan
Raven
Roly Poly
Ronde de Nice
Sable Beauty
Sebring
Striato d'Italia
Success PM
Summer Crookneck
Sunburst
Sundance
Sunny Delight *
Surething *
Sweet Gourmet
Table Gold
Tivoli
Whitaker
Yellow Crookneck
Zephyr *

SQUASH-WINTER

Ambercup
Autumn Glow
Baby Blue Hubbard
Buttercup
Butternut JWS
Cinderella
Cornell's Bush Delicata *
Gold Bar
Gold Nugget
Hasta La Pasta *
Orange Smoothie *
Rouge D'Etampes
Sunshine
Winter Waltham Butternut

SWISS CHARD

Perpetual

TOMATOES

Applause Hyb.
Arkansas Traveler
Black from Tula *
Big Beef **
Brandy Boy *
Brandywine *
Bucks County *
Bush Early Girl *
Caspian Pink
Celebrity *
Cherokee Purple
Classica
Container Choice
Country Taste Hyb.
Daybreak F1
Dona
Dr. Wyche's Yellow
Garden Peach *
German Giant
German Red Strawberry
Golden Queen
Health Kick
Henderson's Winsall
Husky Gold
Husky Red
Keepsake
Kellogg's Breakfast
Long Keeper
Manyel
Margherita
Martina
Mortgage Lifter *
Mountain Gold
New Girl
Pilgrim
Polish Linguisa
Porterhouse Beefsteak
Quick Pic
Red Lightening Hyb
Rose *
San Marzano
Siletz
Steak Sandwich Hyb. *
Sungold
Sweet Cluster
Sweet Million
Sweet Tangerine *

TOMATILLO

Pineapple
Toma Verda

WATERMELON

Bush Sugar Baby
Garden Baby
Sunshine
Yellow Doll

* indicates that cultivar was a favorite in the trials for both flavor and performance



VEGETABLE VARIETIES TRIALS RESEARCH PROJECT

Each growing season the Franklin County Vegetable Varieties Trials Research Project grows several varieties of popular vegetables at our research plot at Waterman Farm. We evaluate all crops weekly and also record harvest data in addition to rating each variety for taste/ flavor. For more details, see our results posted at the end of each growing season on the Franklin County Extension website: www.franklin.osu.edu.

About 25 Franklin County Master Gardeners participate on the team. Our work runs year-round. In the fall, we thoroughly review the previous growing season and determine the pluses and minuses of our work, making notes for the coming year. We then begin the planning process for the next year and work in subcommittees to come up with recommended varieties. We start most of our vegetables in the Howlett greenhouse on campus and direct seed a few of the cool season types. In addition to our main research, we also have several smaller plots where we experiment with growing techniques and other varieties. These

include a square foot garden, an herb garden and 3 sisters garden. We also devote space for several rows of tomatoes, peppers and white potatoes in conjunction with the Plant-A-Row for the Hungry national project. Our excess produce is donated to a local food pantry and to the Mid-Ohio Food Pantry. Maintenance of both our crops and the various aspects of the plot (such as the microirrigation system, raised beds, storage shed, etc.) takes place during our regular work sessions (3 times weekly) during the growing season.

Outreach for our project focuses on the annual report of our research so that fellow amateur backyard vegetable gardeners can learn which varieties will grow well here in central Ohio and which varieties are not recommended based on our experience. We have also trialed various growing techniques for crops such as tomatoes and cucurbits (squashes and cucumbers) and these are explained in detail in our online report. Other outreach includes various events to which we invite the public to our research plot and host several talks and tours on vegetables and related topics (such as vegetable pests and diseases).

Members of the team share our vegetable expertise by speaking to a wide range of groups throughout the year and working with local community gardens and charitable groups to raise awareness of local food growing opportunities and resources.

Join us at our major fund raising events each year: our vegetable transplant booth at the Chadwick Arboretum plant sale held each spring on the OSU campus and at our annual fall homemade Buckeye salsa sales event.



Soil

Our plot is 80' by 200' on level ground with good soil that has been amended a number of times with dairy manure and mulch. Each growing season we allow one half of the plot to lie fallow with a cover crop of sorghum sudangrass. The biomass produced is then tilled back into the soil which has raised the organic matter percentage of our soil significantly. We've experimented with various types of mulch over the years and have settled on a system of newspapers spread out with a thick layer of straw on top. This is a biodegradable system that lasts all season and does an excellent job of weed suppression. Our two compost bins get a lot of use during the growing season. At clean up time in the fall, the compost is spread over the plot and plowed under.

Raised Beds

We have 2 kinds of raised beds in our plot. Two 70' mounded soil beds for growing our potato and sweet potato varieties and a 4' x 50' cedar raised bed for our cool season vegetables. The cedar bed was constructed in 2007 and filled with 10 inches of a soil mixture from a local company. In 2008 we added worm castings and mushroom compost to this bed.

Every three or four years, the mounded beds require renovation. A custom mix of topsoil, compost and sharp sand is worked into the existing soil and the whole bed is mounded up again to a height of 2 ft.

Tomato Growing Techniques

Our research team undertook an extensive study of various tomato growing techniques several years ago. We investigated growing the same common tomato hybrid, 'Celebrity,' on straw mulch, black plastic mulch, red plastic mulch (all three methods involved allowing the plants to sprawl on the mulch without support), in wire cages, Florida trellis system and tied up to stakes. As a control, plants were also allowed to grow freely on the soil with no mulch nor support. We found, at the time, that growing in wire cages seemed to result in the best overall yield of quality fruits with the advantage of ease of care and harvest throughout the growing season.

Since this early trial, we have adopted another technique which we much prefer: that of growing a number of tomato plants in a row along which several steel fenceposts are installed. Six foot wire fencing is lashed to the posts. The tomato plants are then tied to the fencing and allowed to grow up along the fence as the season progresses. The plants are also pruned to 2 or 3 main vines and suckers are removed. In essence, the plants are espaliered to the fence which makes maintenance and harvest much easier.

In our rows of tomato plants we grow for donation for the Plant-A-Row for the Hungry project, we simply install several stakes or fence posts along the row and then run a few rows of lightweight wire along the rows, securing the wire to the fence posts. The tomato plants are then tied to the wire and again are pruned and suckered several times throughout the season.

Eggplants, Peppers and Greens

Two or more cultivars of each vegetable are selected every year for evaluation. Some are seeded in the Howlett greenhouse and transplanted to the plot while others are direct seeded in April. Cool season crops such as cabbage are started in the greenhouse at the end of February and transplanted in early April to the long raised cedar beds that warm up faster than the rest of the plot. The warm season vegetables are started inside in April and planted out late May. Lettuce and beets are direct seeded in April in the long raised beds and there are successive seedings throughout the growing season.

Cucurbits

In 2005, we began covering the cucurbits with a light weight remay cloth at the time of planting. This has helped give the squash and cucumbers a good start before the arrival of the squash beetles. We use hoops over the squash and secure the bottom of the cloth with soil, so there are no openings for insects to enter. When the first female blossoms appear, the cloth is removed.

The Square Foot Demonstration Garden

Here we have chosen to demonstrate a method easily adapted for the home garden.

We utilize raised beds made of 2" x 10" red cedar planks fastened at the corners with stainless steel dick screws. Each 4' by 4' bed is sectioned into 1' by 1' squares by string laced through eyelet screws. The soil is never stepped on or compacted in any way. These contain mushroom compost amended with peat moss and home garden compost. As in the main plot, the vegetables and ornamentals are started from seed and/or grown in an OSU greenhouse.

We loosely follow the Sq. Ft. guidelines originated by Mel Bartholomew in his book, *Square Foot Gardening*. A variety of different plants are used. Sometimes several squares are planted with the same vegetable; consequently, vegetables seem tightly planted. Because of space limitations, we do not grow anything in the cucurbit family. In years past, we have had themed beds, using certain colors or types of vegetables. We avoid using any kind of pesticide or herbicide (Bt, or Dipel dust, has been used on Cruciferous vegetables). We enjoy intensive gardening at its best!

Some of our favorite varieties have been:

All bush beans, 'Mini Gonzales' cabbage, 'Nantes' carrots, all lettuces, 'Alaska' nasturtium edible flower, all onions, 'Snowbird' snow peas, 'Patio' and 'Roma' tomatoes. A trellised favorite is 'Scarlet Runner' beans.



Herb Garden

Our herb garden consists of two semi-circles on either side of the square foot beds. They are made of recycled bricks donated to us. The bricks also make a design within the semicircle and can be used as stepping stones.

The diameter is 10 feet which allows space for many herbs. We have planted both annual and perennial types including: borage, chervil, chives, dill, various types of thyme and sage, lavender, lemon grass, nasturtiums, oregano, geranium, savory, basil, marjoram, marigolds, rosemary, parsley, tarragon, and others.

3 Sisters Specialty Garden

This garden is based on an Indian Legend where 3 sisters/3 crops support each other. It is grown in an 8 foot in diameter circle with a circle of corn in the middle, a circle of pole beans outside the corn circle and a circle of squash outside that. Bamboo poles in the shape of a teepee protect the corn while supporting the beans and squash. We grew this garden in 2009 and plan to keep it in our future garden plans.

Microirrigation System

We have used a microirrigation system for the past six years. The original design was created as a student project in Dr. Larry Brown's ag engineering class. Since then we have modified the system a bit over time.

The microirrigation system at our main site uses T-tape plastic drip lines to deliver water to the row crops and a hose with nozzle for the other planting beds. Water is provided to the T-tape lines from a ¾ inch mainline which connects to the water source via a timer, filter and pressure regulator. Each T-tape line connects to the mainline through a shut off valve. The T-tape lines are spaced every 7 feet along the mainline, providing individual control for each planting row. The timer allows continuous water flow or can be set for up to four hours with automatic shutoff. The hose connects to the flush side of the filter and it is used for the 4' x 50' raised bed and the herb, square foot and 3 sisters' gardens. The microirrigation system is maintained by volunteers.

PAR (Plant-a-Row For the Hungry) Garden

This project was started in 2004 with a 16' x 56' garden that was part of the Trial Vegetable plot. The vegetables grown in the PAR garden were taken to local food pantries by the volunteers. In 2009, the project had grown to two 40' vegetable rows on site and three 50' vegetable rows off site. A total of 1300 pounds of tomatoes, peppers, white and sweet potatoes, squash, and eggplant were donated to Columbus area food pantries in 2009.