The Garden Spade

"Reliable, Responsive and Relevant Information for the Missouri Gardener"

Plant an Extra Row (or Two) for the Hungry

Donna Aufdenberg, MU Extension Field Specialist in Horticulture

As you begin (or continue) planting your vegetable garden, consider dedicating a section of that garden to feed others outside your family or donating it to the local food pantry. During COVID-19 pandemic, there is a nation-wide movement to plant extra crops and plant Victory Gardens to help those in need. Many gardeners already grow more than they can use. If you don't usually have extras, we are encouraging gardeners to go above and beyond their typical production so they can help the local community.

What is needed? As of May 1st, we should be focusing on the warm season crops since most of the potatoes, onions, cole crops, lettuce and radishes have been planted. Cool season crops do not grow as well with the onset of warmer temperatures in May, June and July. Warm season crops include tomatoes, peppers, eggplants, cucumbers, summer squash, winter squash, green beans,

n	Beans, snap (pole)	1/2 pound seed	After harvesting beans, follow with 3 rows of turnips; 1 ounce seed.
1	Beans, snap (pole)	1/2 pound seed	"
:-	Beans, lima (pole)	1/2 pound seed	"
20	Beans, lima (pole)	1/2 pound seed	
•	Tomatoes (staked)	2 dozen plants	
•	Tomatoes (staked)	2 dozen plants	
No.	Carrots	2 packets seed	After harvesting, follow with late plantings of beans, beets, lettuce, turnips.
8	Beets	I ounce seed	
b	Kale	I packet seed	" 1
4	Turnips	I packet seed	"
	Cabbage	30 plants	"
	Onions	I pint sets	"
總	Radishes	I ounce seed; 2 half-row plantings, 10 days apart	
*	Spinach, New Zealand	1/4 ounce seed	

okra, cantaloupe, sweet corn, watermelon and sweet potatoes.

I was fascinated to look at the old victory garden plans. One (left) recommends planting 1 pound of pole bean seed, 24 tomatoes, 2 packets of carrot seeds, 1 ounce of beets, 30 cabbage plants, 1 pint

of onions and so on. It is a 1,500 square feet garden. In my estimations, a 1,000 square feet garden will allow fresh eating, canning and

Continued to page 2

Subscribe Now!

Receive a monthly email with a direct link to "The Garden Spade". Send email to kammlerk@missouri.edu

In This Issue

- Plant an Extra row for the Hungry
- Summer Bulbs to Plant in your Yard
- Kids Ask Dr. Bug
- How to Read a Pesticide Label
- Spring Wildflower Walks
- Mammy Croton
- Victory Garden Tips
- Kids Gardening Activity



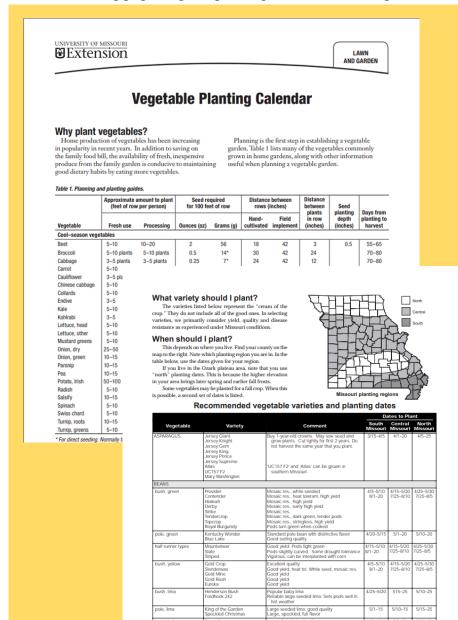
AN EQUAL OPPORTUNITY/ACCESS/ AFFIRMATIVE ACTION/PRO-DISABLED AND VETERAN EMPLOYER

Plant an Extra Row (or Two) for the Hungry

Donna Aufdenberg, MU Extension Field Specialist in Horticulture

Continued from page 1 freezing for a family of 4. So if this garden was feeding *my family of 4*, this garden would allow approximately 500 square feet to be donated to the local food pantry. If it was my garden, I would choose bush green beans, add another 12 tomatoes plus add peppers, sweet corn and zucchini. That is what I love about these plans, they are so flexible.

So how do I figure out how much I need to plant? You are lucky because the University of Missouri Extension has a guide for that! MU Guide G6201 Vegetable Planting Calendar is a wonderful tool that can help you determine how much to grow. It can be found at https://extension2.missouri.edu/g6201 On the first two pages, it gives the amount to plant per person, plant and seed spacing, planting depth and days to harvest. On the following pages it gives planting dates for each crop and varieties that grow well in Missouri. This is



one of our main "go-to" guides for every type of gardener. I have laminated sheets I keep handy can take out the garden with me. That is how much I refer to this guide.

If you are fretting because you don't have enough space or you have limited ability, no worries. I know many gardeners that can produce quite sizable amounts of produce from container gardening and raised bed gardening. It is just a more intensive way to garden without the waste of walkways between rows.

We urge you to share the produce with as many needy people as possible or donate to a food pantry to reach a larger population in need. To find the closest food pantries, check out https://feedingmissouri.org/ to see where the food pantries are in your area.

University of Missouri Extension has 14 Field Specialists in Horticulture located around the state ready to assist you if you have questions during the garden season. A map of specialists with contact information is located on page 8 of this newsletter.

May Gardening Calendar

Donna Aufdenberg, MU Extension Field Specialist in Horticulture

Outdoor Flowering Plants and Ornamentals

- Pinch azaleas and rhododendron blossoms as they fade. Fertilize plants after bloom and use a fertilizer that will acidify the soil.
- Do not remove spring bulb foliage prematurely or next year's flower production will decline. Foliage should be left to feed the bulb. Do not tie up.
- Pinch back mums to promote bushy growth.
- Some common ground covers suitable for sunny locations include ajuga, creeping phlox, and creeping juniper.
- Lightly side-dress perennials and spring bulbs with a 5-10-10 or 10-10-10 fertilizer, being careful to avoid the center or crown of the plant.
- If you love to garden, but don't have a lot of time, choose plants that are easy to maintain. Plants that do not need "deadheading" include begonia, impatiens, coleus, alyssum, ageratum, lobelia, vinca and salvia.
- Prune blooming shrubs right after flowers have faded if needed.

Vegetable Gardening

- Growing lettuce under screening/shading materials will slow bolting and extend harvests into hot weather.
- Place cutworm collars around young transplants. Collars are easily made from cardboard strips.
- Set tomatoes in warm soils after May 1st. Place support stakes or cages at planting time in addition to mulching the plants.
- Control caterpillars on broccoli and cabbage plants by handpicking or use biological sprays such as Bt (Bacillus thuringensis).
- Place a stake by seeds of squash and cucumbers when planting in hills to locate the root zone watering site after the vines have run.
- Watch for striped and spotted cucumber beetles now. Both may spread wilt and mosaic diseases to young squash and cucumber plants.
- Plant sweet corn and beans every two weeks through June for an extended harvest.

Fruits and Nuts

- Prune unwanted water sprouts as they appear on fruit trees.
- Consult <u>G6010 Fruit Spray Schedules for the Homeowner</u> for information on what to spray for particular fruits and timing of sprays.
- Thinning fruit may be needed as fruits develop and start to increase in size.
- Keep on top of weeds in the strawberry patch. They can quickly get out of hand.

Miscellaneous

- Herbs planted in average soils need no extra fertilizer. Too much may reduce flavor and pungency at harvest.
- Four to five layers of newspaper will serve as an effective mulch in the garden. Cover it with sawdust or straw to reduce the white glare and prevent it from blowing away.

Summer Bulbs to Plant in Your Yard This Year

Asiatic Lilies

Cannas

Caladiums

Calla Lilies

Crinum

Crocosmia

Dahlias

Elephant Ears

Freesia

Gladioli

Gloriosa Vine

Iris

Lycoris radiata

Oriental Lilies

Rain Lilies

Surprise Lilies

Tiger Lilies

Tuberous Begonias

Kids Ask Dr. Bug

Dr. Tamra Reall, MU Extension Field Specialist in Horticulture

What kinds of bugs are in my backyard? Martin, 6

So. Many. Different. Insects! Honey bees, ants, beetles, mosquitoes, praying mantises, hover flies, wasps, squash bugs, flea beetles, bumble bees, stink bugs, green lacewings, brown lacewings, dragonflies, damselflies, springtails, scale, aphids, . . . I could go on and on. There are millions of different species of insects, and many of those can be found in your yard. Quick facts: How many of the insects listed are true bugs? Two: squash bugs and stink bugs! Guess how many of those insects listed are dangerous? One:

mosquitoes or maybe 3: honey bees and wasps, if you are allergic to their venom. Most insects are beneficial, including the honey bees and wasps.

If I plant a tomato, will it grow into a plant? Isela, 9

Under the right circumstances, yes! The seeds in tomatoes are fully developed. However, the gel around the seeds has a chemical that keeps the seeds from germinating. This gel inhibitor helps the seeds wait until the fruit is eaten and moved away from the mother plant so it has a better chance at surviving. However, you can open the tomato and put it in well-drained soil. Keep the soil moist and warm. Tomato plants may emerge in about 2 weeks. Try growing seedlings from an heirloom tomato from a farmers market!



Tomato slice with seeds sprouting inside it. Picture courtesy of University of Connecticut, J. Copes.

Do insects have homes? Tani, 7

Yes and no. Some insects have a constructed home, like bees in a beehive. Other insects make their own home and carry it with them – bagworms and caddisfly larvae are good examples. Organisms that live with ants in their colonies are called myrmecophiles. Some insect live inside other insects, and many of these are

what we call beneficials because they kill insects that harm our plants. Many other insects just rest in a protected spot when they need to, such as the underside of a leaf.

Is it true that if you cut a worm in half, you get two worms? Steve, 13

No, that will kill the worm. If a worm loses its tail, however, it can grow a new one. If the tail gets damaged, another one can grow and you might end up with a two-tailed worm! It would be hard to move in the soil with two tails, though. Did you know that worms don't have teeth? They have a crop and gizzard, like birds, and need sand or grit in the gizzard to grind up the food. Earthworms help decompose dead plant and animal materials in the soil. Bacteria and fungi growing on the decomposing organic matter are what provide nutrition to worms.



Dr. Bug's springtime reminder: Spring rain leaves puddles where mosquitoes lay eggs. Empty any standing water in your yard. Remember to look for buckets, old tires, tire swings, gutters, etc. More places to lay eggs means more mosquitoes and more mosquito bites. Long sleeves and repellent are important to reduce the risk of mosquito-borne diseases.

How to Read a Pesticide Label

Katie Kammler, MU Extension Field Specialist in Horticulture

Pesticide labels can be confusing with all the information that they contain. Here are some tips for understanding and finding the information that you need. The label is a legal document providing directions on how to mix, apply, store and dispose of a pesticide product. This means using a pesticide in a manner inconsistent with its label is a violation of federal law. Pesticide is a board term that can be broken down into categories. Common pesticides classifications include herbicides to control weeds, insecticides to control insects, and fungicides to prevent diseases.

Brand or trade names (A) are the most prominent on the label. These are names used by manufacturers to market their products. Different manufacturers may have products with the same active ingredients but a different brand name.

Product type will be listed. Examples include insect killer, disease control, weed control.

EPA registration number and establishment number indicates that the product and label were approved by the EPA for sale along with the facility that manufactured the product. The manufacturer's contact information is also provided (B).

Ingredient statement includes common and/or chemical name and percentage of the active ingredient (the chemical responsible for controlling the pest) and the percentage of inert ingredients.

Signal words indicate the relative acute toxicity to the product to humans and animals.

- DANGER -- POISON -- Highly toxic by any route of entry into the body.
- DANGER -- Can cause severe eye damage or skin irritation.
- WARNING -- Moderately toxic either orally, dermally, or through inhalation; causes moderate eye or skin irritation.
- CAUTION -- Slightly toxic either orally, dermally, or through inhalation; causes slight eye or skin irritation.

Precautionary statements (C.) spell out possible hazards including those to humans and domestic animals, environmental, physical and chemical. First aid or statement of practical treatment is included along with the National Poison center Hotline if someone is accidentally poisoned.

Directions for Use —remember the label is the LAW!

Labels answer the following questions (D):

- What pests the product is registered to control
- Where the product can be used







Continued to page 6

How to Read a Pesticide Label

Katie Kammler, MU Extension Field Specialist in Horticulture

Continued from page 5

- How to apply the product
- How much of the product to use
- When the product should be applied
- How often to apply the product
- How soon the crop can be used or eaten after application—Preharvest Interval (PHI)
- When people and animals can re-enter a treated area after application



Storage and disposal directions are also included on the label. Pesticides should always be kept in their original containers, out of reach of children and look for specific temperature requirements for storage.

Labels can be lost or become unreadable on original containers so all labels are available online along with Material Safety Data Sheets (MSDS) that contain more detailed information on toxicity if an accident would happen.

Spring Wildflower Walks

Kelly McGowan, MU Extension Field Specialist in Horticulture

Spring is the perfect time for a wildflower walk on your favorite trail, park, or even in your own yard. Flowers are blooming and this is a great time to not only appreciate nature, but to put wildflower identification skills to use.

One of my favorite pastimes is hiking and photographing wildflowers and critters. However, I am always





A.) Wild Hyacinth; B.) Woodland Violet; C.) Redbud; D.) Mayapple

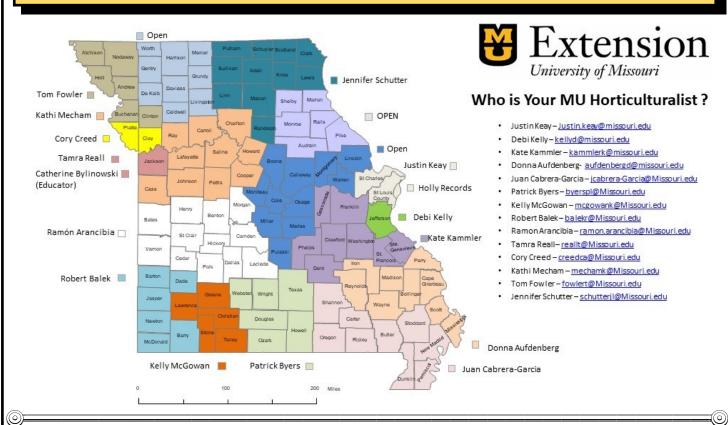
amazed at the amount of wildflowers blooming in my own yard. Before mowing, take a few minutes to explore your lawn. There are many species of small flowers that you may have never noticed before that are blooming now and blend in well with your lawn grass. While many consider these weeds, I don't tend to mind them and pollinators love visiting them. It's also nice to imagine that my yard was once part of a vast prairie or forest and these wildflowers have lived here much longer than I have.

Once you have found some wildflowers, try your hand at identifying them. Gardeners usually have many plant books, but there are also apps you can download to your phone. Google images can also be used and is free and easy. It works like this – take a photo of the flower with your phone. Pull up Google and click on the camera icon in the search box. It will give you the option of uploading a picture from your phone's camera roll. It will then do a 'Google search', compare it to the pictures in its database, and give you a closest match. While not always 100% accurate, it can be a good place to start.

Of course, your local MU Extension Horticulture Specialist can help with identification, as well. Be sure to take several clear photos of both the entire plant and blooms and email them. We are happy to help and usually enjoy the challenge!

Who is Your MU Horticulturist?

MU Extension Field Specialists in Horticulture



Plants of Merit:

Mammy Croton

Codiaeum 'Mammy'

Type: Broadleaf evergreen, houseplant

Zone: 9 to 12

Height: 2 to 3.5 feet Spread: 1.5 to 2 feet Flower: Insignificant

Comments: Indoor house plant or outdoor seasonal accent plant. Like high humidity. Crotons are known for their colorful foliage. 'Mammy' has curling, twisting, upright foliage, 1" wide by 8" long in a kaleidoscope of reds, yellows, and greens.



Plants of Merit are plants selected for their outstanding quality and dependable performance for the lower Midwest. They grow consistently well in Missouri, central and southern Illinois, and the Kansas City Metro area. It is a program of Missouri Botanical Garden. Plant review submitted by Katie Kammler

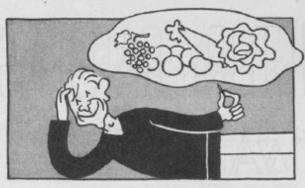


Photos source: Missouri Botanical Garden

Victory Garden Leader's Handbook Garden Tips

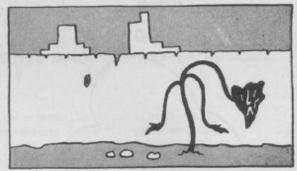
Victory Garden Leader's Handbook, United States Department of Agriculture, Copyright 1942

A dozen dont's for gardeners



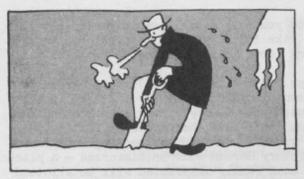
1. Don't start what you can't finish

Before you plant a garden, count the work involved even before seedtime and through to harvest. Abandoned gardens are a waste of seed, fertilizer, tools, insecticides, and labor.



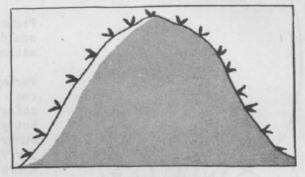
2. Don't waste good seed on bad soil

Gardens need good, well-drained soil, not the usual kind of city lots where soil is mostly cinders and rubbish. Places where weeds flourish are promising garden spots.



3. Don't work ground too soon

Starting too early will spoil the soil. When a piece of earth will crumble apart as you hold or press it between your fingers, the soil is dry enough to cultivate. Make sure yours is.



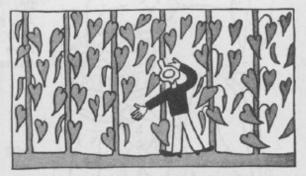
4. Don't run rows up and down a hill

If you must plant your garden on a hillside, make sure that the rows are horizontal along the side of the hill. If you plant them up and down, rain will wash off seed and topsoil.



5. Don't use too much seed

Crops seeded too thick will come up close together, they will need lots of thinning. Learn how to space the seed you use. Overseeding wastes seed and labor. Waste won't win.



6. Don't plant too much of one thing

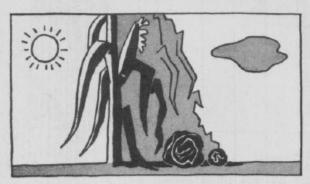
Too much of any vegetable, even if it comes from your own garden, is hard to take unless you are sure someone else can use the surplus you can't use. Plant a variety of things.

CONSUMERS' GUIDE

14

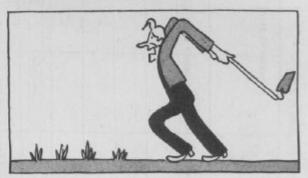
Victory Garden Leader's Handbook Garden Tips

Victory Garden Leader's Handbook, United States Department of Agriculture, Copyright 1942



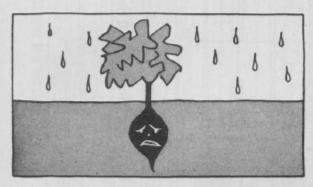
7. Don't let the pole beans black out the beets

In fact, don't let any of the tall crops shade the short ones, whatever they are. Growing things must get sun. Plant climbers, like beans, to the north; short ones, to the south.



8. Don't wield too heavy a hoe

Vegetable roots grow near the surface. They are tender, too. When you cultivate them deeply, you injure the roots and slow up growth. Shallow cultivation is the rule for gardens.



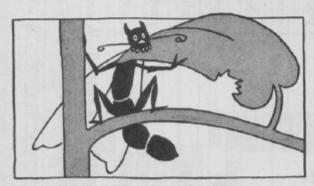
9. Don't spare the water

Light sprinkling brings roots up to the surface. That's bad. Thorough soaking pushes down to the roots, and keeps themdown where they belong. Soak only when the ground is dry.



10. Don't let the weed crop win

Amateur gardeners often dream about dishes full of luscious fresh vegetables the moment they put their seed in. While they dream the weeds sometimes become the major crop.

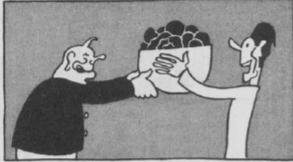


11. Don't let the bugs beat you to it

Gardeners must be on the alert from beginning to end for insect armies and the onset of disease. Be ready with spray gun and duster and the proper death-dealing ammunition.

12. Don't let anything go to waste If your garden yields too much for you to eat or store or preserve for yourself, see that someone else gets the leftovers. Tell your local Civilian Defense office about your surpluses.

MARCH 1, 1942



Upcoming Events

As we monitor the national, state and university response to contain the spread of COVID-19 and keep public health top priority, all face to face MU Extension programming has been suspended through May 15, 2020. This also includes all Extension Master Gardener Program project meetings, programs, and events.

University of Missouri Extension Offices have also been temporarily closed, however Extension Specialists are teleworking from home. You may contact any of them by phone or email. You may also visit your local MU Extension County Facebook page to find out what is occurring locally in regards to posts, web trainings and opportunities, and Extension newsletters.

May 2020

Town Hall Meetings - Wednesdays going forward until further notice. It is a great opportunity to ask your gardening questions and learn from others. **To register, go to ipm.missouri.edu/TownHalls**

11:00 Home Horticulture Town Hall Meeting12:00 Commercial Horticulture Town Hall Meeting

April 29 thru May 21, 2020 Ozark Ag 101 - Zoom Sessions. Topics covered: Soils, Livestock, Forages, Vegetable Production, Fruits and Berries, Structure Facilities and equipment, and Growing Your Farm Business. https://extension2.missouri.edu/events/ozark-ag-101-zoom-sessions

May 18 thru June 12, 2020 Healthy Yards for Clear Streams, Online. Cost: \$25. Extension Master Gardeners can get 10 hours of advanced training for this course. For information, https://extension2.missouri.edu/healthy-yards-for-clear-streams-2020

There is an upcoming commercial fruit webinar series later in May. If you are interested in the webinar, email Katie Kammler at kammlerk@missouri.edu



The Garden Spade

Published monthly by University of Missouri Extension Faculty for individuals and families living state-wide in Missouri. This newsletter is provided by your local Extension Specialists and Extension Office.

Newsletter Editors:



Donna AufdenbergField Specialist in Horticulture
Jackson, MO
573-243-3581
aufdenbergd@missouri.edu



Katie Kammler Field Specialist in Horticulture Ste. Genevieve, MO 573-883-3548 kammlerk@missouri.edu

Newsletter Contributors:



Kelly McGowan
Field Specialist in Horticulture
Springfield, MO
417-874-2965
mcgowank@missouri.edu



Tamra Reall
Field Specialist in Horticulture
Blue Springs, MO
816-252-5051
reallt@missouri.edu

Each month there is a title picture on the front cover of the newsletter. This month: Gerber Daisy

Kids Gardening Activity

Seed Starting in Pots

By Donna Aufdenberg Horticulture Specialist MU Extension, 573-243-3851 aufdenbergd@missouri.edu

Directions:

- 1. Pour potting mix in pan and moisten it. It should slightly clump when squeezed but no water should come out. Fill pots 1/4 to 1/2 inch from the top.
- 2. Read the seed packet. How deep should the seeds be planted?
- 3. Use a ruler to measure how deep to plant. (A pencil can be used to make a hole for the seed).
- 4. Place 2 seeds in the hole and then cover the seed carefully with soil.
- Place pot(s) in a pan with no holes (aluminum pans work great).
 Water seeds gently from the top.
 Let the pots drain and sit in the water for an hour and then dump the water. Do not let them sit in water for long amounts of time.
- 6. Place pots in a warm place for good germination (south or west window, on top of the refrigerator or on a heat mat).
- 7. Once seedlings start to emerge, seedlings need good light. Use a bright west/south window or a fluorescent light placed 1 to 2 inches from the seedlings.
- If seedlings get long and lanky, increase light and reduce water.
- Check need for water daily. Do not let seedlings dry completely out but do not overwater.













Supplies

- Pots
- ◊ Potting mix
- ♦ Water
- ⋄ Ruler
- ◊ Pencil
- ♦ Label
- Waterproof tray without holes
- ♦ Light source
- Vegetable or flower seeds

Planting into the garden

- ⇒ Before planting seedlings in the garden, plants need to adjust to the outdoors. Place plants on the back porch or under a shade tree for a week prior to planting outside.
- ⇒ If using a peat pot, it is best to remove the peat pot from the plant prior to planting. If you want to leave it on, tear the top lip off the peat pot to keep the top of the pot UNDER ground level.
- ⇒ Plant seedlings in the garden at the same depth they were in the pot.
- ⇒ Water plant after planting in the garden.

Common plant spacing in the garden

2" apart - peas, radish

3" apart - spinach, beets, carrots, lettuce, onion sets and slips, bush beans

18" apart - pepper, cabbage

24" apart - broccoli, cauliflower

48" apart - cucumber, summer squash

60" apart - winter squash, melons, pumpkin

