When beginning your garden, the following information will get you started. There are many books and websites that can further explain specific situations. Matter of fact, the amount of information can be overwhelming! Your fellow gardeners will be your best resource of information!

# Take into consideration:

When to plant

Planning: Seed vs seedlings

What to plant – what grows well in Eden Prairie (see Master Gardeners Vegetables Growing Basics)

**Tools** 

Watering

Fertilizing

Weeds

Pests (Bugs & Wildlife)

....

# When to Plant

Minnesota on average has approximately 145 days between the last and first frost. Follow the planting schedules below for when to plant tomatoes, peppers and other vegetables.

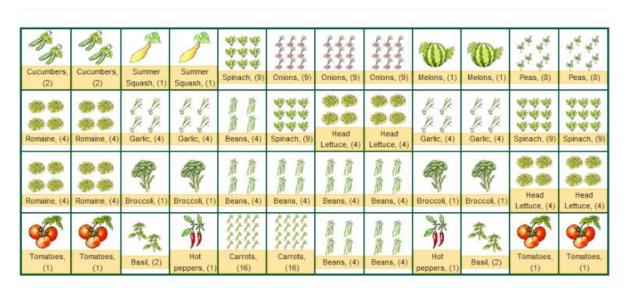
Plant Seed/Transplant Start Seeds Indoors Harvest MAY JUN JUL AUG OCT NOV DEC JAN FEB MAR APR SEP Beans Beets Broccoli **Brussel Sprouts** Cabbage Carrots Cauliflower Cucumber Kale Lettuce Peas Peppers Spinach Tomato

Zone 3 Planting Schedule

# **Planning**

When determining if you should plant <u>seeds or seedling plants</u>, refer to the length of the gardening season. Some plants will grow quickly from seeds, others need more time than our Minnesota summer allows, so it is better to start from plants.

Create a garden layout, to plan for spacing and so you remember what is planted where. Use plant markers to identify each row/section.



Sample Planning Garden Layout

# **Companion Plants**

Organic gardeners know that a diverse mix of plants makes for a healthy and beautiful garden. Many believe that certain plant combinations have extraordinary (even mysterious) powers to help each other grow. Scientific study of the process, called companion planting, has confirmed that some combinations have real benefits unique to those combinations—and practical experience has demonstrated to many gardeners how to mate certain plants for their mutual benefit.

Companions help each other grow—tall plants, for example, provide shade for sun-sensitive shorter plants. And the technique uses garden space efficiently. Vining plants cover the ground, upright plants grow up, allowing for two plants in the same patch. Companions also prevent pest problems. Plants like onions repel pests and other plants can lure pests away from more delicate plants; or one plant may even attract the predators of another plant's pests.

# **Companion Plants**

## **Basil**

Plant near: most garden crops

Keep away from: rue

Comments: improves the flavor and growth of garden crops, especially tomatoes and lettuce. Repels mosquitoes.

# Beans, Bush

Plant near: beets, cabbage, carrots, catnip, cauliflower, corn, cucumbers, marigolds, potatoes, savory, strawberries

Keep away from: fennel, garlic, leeks, onions, shallots Comments: potatoes and marigolds repel Mexican bean beetles. Catnip repels flea beetles.

# Beans, Pole

Plant near: corn, marigolds, potatoes, radishes Keep away from: beets, garlic, kohlrabi, leeks, onions,

Comments: same as for bush beans.

## **Beets**

Plant near: broccoli, brussels sprouts, bush beans, cabbage, cauliflower, chard, kohlrabi, onions Keep away from: charlock, field mustard, pole beans

# **Borage**

Plant near: squash, strawberries, tomatoes

Comments: repels tomato worms. Improves flavor and

growth of companions.

## **Broccoli and Brussels Sprouts**

Plant near: beets, buckwheat, calendula, carrots, chamomile, dill, hyssop, marigolds, mints, nasturtiums, onions, rosemary, sage, thyme, wormwood.

Keep away from: strawberries

Comments: marigolds repel cabbage moths. Nasturtiums

repel aphids.

# **Cabbage and Cauliflower**

Plant near: broccoli, brussels sprouts, celery, chard, spinach, tomatoes.

Keep away from: strawberries

Comments: tomatoes and celery repel cabbage worms.

## **Cantaloupe**

Plant near: corn

## **Carrots**

Plant near: cabbage, chives, early potatoes, leeks, lettuce, onions, peas, radishes, rosemary, sage, salsify, wormwood.

Comments: onions, leeks, and wormwood repel flies

#### Chives

Plant near: apples, berries, carrots, grapes, peas, roses,

tomatoes.

Comments: Improves flavor and growth of companions.

Deters aphids and Japanese beetles.

## Corn

Plant near: beans, cucumbers, early potatoes, melons,

peas, pumpkins, soybeans, squash. Comments: soybeans deter chinch bugs.

# **Cucumbers**

Plant near: beans, cabbage, corn, early potatoes,

radishes, sunflowers.

Keep away from: late potatoes

Comments: Radishes deter cucumber beetles. Cucumbers encourage blight in late potatoes.

# Dill

Plant near: broccoli, brussels sprouts, cabbage,

cauliflower, cucumber, lettuce, onions

Keep away from: carrots

Comments: Improves flavor and growth of cabbage

family plants.

# **Epplant**

Plant near: green beans, peppers, potatoes, tomatoes Comments: green beans deter Colorado potato beetles.

#### Garlic

Plant near: cabbage, cane fruits, fruit trees, roses,

tomatoes

Keep away from: peas, beans

Comments: deters Japanese beetles and aphids. A garlic oil spray deters onion flies, aphids, and ermine moths. A garlic tea helps repel late potato blight.

### Kale

Plant near: aromatic herbs, buckwheat, cabbage family,

marigolds, nasturtiums

Keep away from: pole beans, strawberries

# Kohlrabi

Plant near: cabbage/cauliflower companions (except

tomatoes)

Keep away from: fennel, pole beans, tomatoes

Comments: kohlrabi stunts tomatoes

## Lettuce

Plant near: beets, carrotsparsnips, radishes, strawberries

Keep away from: cabbage family

Comments: lettuce tenderizes summer radishes.

# **Marigolds**

Plant near: all garden crops

Comments: stimulates vegetable growth and deters bean beetles, aphids, potato bugs, squash bugs, nematodes, and maggots.

# **Companion Plants**

# **Marjoram**

Plant near: all garden crops

Comments: stimulates vegetable growth.

#### Mustard

Plant near: alfalfa cover crops, fruit trees, grapes,

Comments: stimulates growth of companion plants.

## **Nasturtiums**

Plant near: apples, beans, cabbage family, greenhouse crops, potatoes, pumpkins, radishes, squash

Comments: repels aphids, potato bugs, squash bugs, striped pumpkin beetles, and Mexican bean beetles and destroys white flies in greenhouses.

#### **Onions**

Plant near: beets, cabbage family, carrots, chamomile,

lettuce, parsnips

Keep away from: beans, peas

Comments: deters most pests, especially maggots.

# Oregano

Plant near: all garden crops

Comments: deters many insect pests.

# **Parslev**

Plant near: corn, roses, tomatoes

## **Parsnips**

Plant near: onions, radishes, wormwood

Comments: onions and wormwood help keep root

maggots from parsnips.

## **Peas**

Plant near: beans, carrots, corn, cucumbers, early

potatoes, radishes, turnips

Keep away from: garlic leeks, onions, shallots

Comments:

## **Peppers**

Plant near: basil, carrots, eggplant, onions, parsley,

Keep away from: fennel, kohlrabi

#### **Potatoes**

Plant near: basil, beans, cabbage family, corn, eggplant,

flax, hemp, marigolds, peas, squash

Keep away from: apples, birch, cherries, cucumbers, pumpkins, raspberries, sunflowers, tomatoes, walnuts Comments: hemp deters phytophthora infestans. Basil deters potato beetles. Marigolds (dug into crop soil) deter nematodes.

# **Rosemary**

Plant near: beans, cabbage, carrots

Comments: repels bean beetles, cabbage moths, and carrot flies.

#### Radishes

Plant near: chervil, cucumbers, lettuce, melons, peas,

nasturtiums, root crops Keep away from: hyssop

Comments: radishes deter cucumber beetles. Chervil makes radishes hot. Lettuce helps make radishes tender.

Nasturtiums improve radishes' flavor.

# Sage

Plant near: cabbage family, carrots, tomatoes

Keep away from: cucumbers

Comments: deters cabbage moths and carrot flies.

Invigorates tomato plants.

# Soybeans

Plant near: corn, potatoes

Comments: chokes weeds and enriches soil.

# **Spinach**

Plant near: celery, cauliflower, eggplant, strawberries

#### **Strawberries**

Plant near: borage, bush beans, lettuce, pyrethrum,

spinach

Keep away from: cabbage family

#### **Sunflowers**

Plant near: cucumbers Keep away from: potatoes

Comments: can provide a trellis and shelter for shade-

loving cucumbers.

## **Swiss Chard**

Plant near: bush beans, kohlrabi, onions

Keep away from: pole beans

# **Tarragon**

Plant near: all garden crops

Comments: improves vegetables' flavor and growth.

## **Thyme**

Plant near: all garden crops

Comments: deters cabbage moths.

#### **Tomatoes**

Plant near: asparagus, basil, cabbage family, carrots, gooseberries, mustard, parsley, onions, rosemary, sage, stinging nettles

Keep away from: fennel, kohlrabi, potatoes, walnuts

# **Turnips and Rutabagas**

Plant near: peas

Keep away from: knotweed, mustard

Comments: mustard and knotweed inhibit the growth of

turnips and rutabagas.

# What to Plant

Your biggest challenge will be narrowing down your choices. Let <u>All-America Selections</u> (AAS) winners help. This nonprofit organization tests new edible and ornamental varieties nationally for their suitability to home gardens and containers.

See the Vegetable Growing Basics provided by the University of Minnesota Extension Program Master Gardeners.

See the Companion Plants.

## Tools

Gardening gloves

Watering can/buckets

Metal gardening hand trowel

Spade (shovel)

Pitch Fork (loosens the soil)

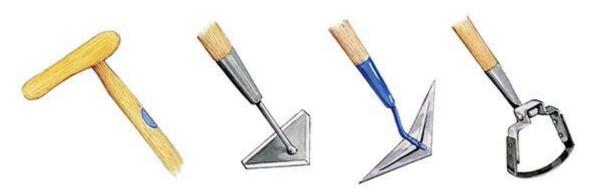
Ruler (how deep to plant seeds)

Knee Pad (anything that protects you knees/legs from the dirt

Cart / Wagon (moving plants, water and equipment from your car to your plot)

Hoe





Depending on the job, garden hoes come with multiple head shapes. From left: a pistol grip allows for more push-pull power when using a scuffle hoe; this triangle shaped scuffle hoe is sharp on all edges; the Winged Weeder comes in several sizes; stirrup hoes can quickly cultivate large areas.

# Watering

When you first start the garden, those tiny seeds and/or seedlings don't need much water. A few cups every few days and they're good to go. But remember, these plants are going to grow and you need to keep up with their water intake.

Water only the plants, not the entire garden; otherwise you are providing the weeds an opportunity to grow.

# Fertilizing

Plants need three main nutrients to thrive: nitrogen, phosphorus and potassium. Plants can get these nutrients through the planting soil and sometimes neighboring plants, but once it's gone, it's gone!

Feed your plants by preparing the soil before you even plant anything, and fertilize the plants throughout the season. You can choose store-bought fertilizers, organic, or make-it-yourself fertilizers.

## Weeds

Weeds are inevitable! Weeds take away valuable nutrients and water from your gardening plants. Be proactive and keep ahead of the weeds before they take over your garden.

For weed control, use mulch, newspapers, landscaping fabric, etc. Anything that is not biodegradable needs to be removed in the fall. I've even seen carpet used in the garden walkways!

In the Eden Prairie Community Gardens, you cannot use weedicides. This type of spray will kill weeds and any other plants; and the overspray can affect your neighbor's garden.

FYI. As an Eden Prairie Community Gardener, you are required to maintain (keep weeds under control) your entire plot, during the entire season.

This site will help determine what kind of weed might be growing.

https://www.extension.umn.edu/garden/diagnose/weed/

Expert Gardener Tip: When watering, only water the exact spot where the plants are growing. Areas that are dry will not grow anything, including weeds!

# Pests – Bugs & Animals

Here's a great site for "What Insect Is This?"

extension.umn.edu/garden/diagnose/insect

Check out this site when you don't know "What's Wrong With My Plant?"

apps.extension.umn.edu/garden/diagnose/plant

#### To Fence or Not to Fence

Most gardeners choose to fence their plot. They fence to keep out rabbits and other rodents. The fence should be made of 1 inch galvanized steel mesh or hardware cloth 18 to 24 inches high. The stakes don't need to be permanently set, but the mesh should reach the ground or be buried several inches deep to prevent the rabbits from digging underneath.

Talk to your garden neighbor, so that you can coordinate on the amount of fencing.

# **Fencing Out Deer**

Deer deterrence can include many other methods in addition to fencing (such as growing catnip and daffodils in deer access paths, or hanging dirty dog blankets from trees). But when you get to the ultimate solution — an effective fence — set aside the notion you may have that height is what counts most. Height certainly helps, but it turns out that depth (as in two fences) is the critical factor. Deer are great jumpers, but their depth perception is poor. Here are two ways to create a three-dimensional fence to keep them out of your garden.

# Expert Gardener Tip 1

If you already have a fence that's not keeping out deer, you could install a second fence about 3 feet inside the outer fence. The two fences — one inside the other — will deter deer from jumping in because of their limited depth perception.

# Expert Gardener Tip 2

When you install your fence, angle the fence 30° outward. The deer will not jump a fence that appears to be coming at them.

# Things Every First Time Gardener Should Know

## START SMALL.

Gardens require on-going attention on a near daily basis and even a small garden can take 20-30 minutes each day for upkeep, pruning, feeding, watering, de-bugging, troubleshooting problems, preventative maintenance, harvesting and general upkeep.

FYI. As an Eden Prairie Community Gardener, you are required to maintain (keep weeds under control) your entire plot, during the entire season.

EXPERT GARDEN TIP: If you have space in your garden that you are not using, plant a cover crop to improve the soil and reduce the open space for weeds. If you want to add nitrogen to the soil, consider planting legumes as a cover crop. Examples of legume cover crops are alfalfa, fava beans, and crimson clover

# YOUR NEIGHBOR'S GARDEN WILL BE BETTER THAN YOURS.

"Don't worry, it's your first year!" This little note of encouragement was cute at first, but after dealing with grey flesh fruit flies in my tomatoes, ant-infested spinach, squash bugs, spider mites, powdery mildew and squash that won't grow no matter what I do, I'm over it. Yes, it's my first year, but I want my garden to be as nice and produce as much produce as theirs!

Reality check: It won't. My neighbor's garden is better because it's NOT their first year. They've suffered through all mildew, aphids and breeds of plants that don't thrive where they live. They learned those lessons *their* first year and now have better gardens because of them.

You, my first-time-gardening friend, unfortunately need to learn those lessons the hard way. When this first year is over, you'll know where your garden struggled and where it thrived, and next year's garden will be that much better for it.

# LISTEN TO THE EXPERIENCED GARDENERS.

As tempting as it may be to ignore the well-intended advice to bury 3/4 of your tomato plant and to bury your potatoes in straw, *listen to them*. They are the ones who have done this before, right? They're the ones with the beautiful garden and more zucchini than they know what to do with, right? Exactly. Eat a slice of humble pie, listen to what they say and take their advice.

If they say a certain breed of tomato doesn't grow in your mild climate, then don't bother trying it. If they say to give zucchini two feet of space, don't cram three plants into one pot! Consider these advice-giving friends and neighbors gardening mentors instead of a know-it-alls and your garden will reap the rewards.

# CONSIDER STARTING WITH SEEDLINGS INSTEAD OF SEEDS.

Starting a garden from the very, very beginning is very rewarding. Watching the seed sprout and then grow more leaves is really a lot of fun! But then there's transplanting, potential weather shock and the fact that you should have planted those seeds six weeks earlier so you're not going into winter with green tomatoes and mini-squash.

For the first year, start with seedlings that have already been weather-proofed. Plant them after the last frost and you'll have a greater chance of survival in the first place, which will boost your confidence as a first-time gardener. It will also help your crops to be right on target when it comes time to harvest!

# LEARN FROM THE PROBLEMS

When the garden is infiltrated with bugs and disease, it's tempting to throw in the towel and give up completely. Instead, take the opportunity to find a solution to the problem and test it out. Yellow leaves might mean too little water... or it could mean too much... or it could mean the plant is diverting energy to the fruit... or it could be a sign of something more serious like spider mite infestation. It might be overwhelming, but it's these trial and errors that will help you garden look like your neighbor's next year!