

# Planning and Designing a Home Vegetable Garden

## LESSON THREE

### What's Ahead

In this lesson, you'll learn:

- what to consider when you choose a garden site;
- how to create a garden plan;
- about different types of gardens;
- why rotating your garden is important; and
- how to learn from your gardens, year to year.

Do special gardens catch your attention on your way to the post office, grocery store or town hall? Some people have beautiful gardens that are picture perfect. Wow, what a feeling of pride to be the gardener of such a planting!

Gardening is not easy, but it can be very rewarding. A good first step for the beginner or experienced gardener is planning your garden. Garden planning is fun, and the time spent planning pays off. Winter time is a good time to plan.

### Site Selection and Garden Layout: What to Consider

First, consider location. Is your garden located in the best place possible? The location can make or break an energetic gardener. When you choose a garden site, consider:

- soil type;
- levelness of the ground;
- sunlight;
- water sources;
- convenience;
- size;
- the growing season;
- family likes and dislikes; and
- varieties.

Let's look at these factors one by one.

**Soil Type.** Is the soil clay, silt, sand — or a



mixture? You can improve the soil by adding organic matter, lime and nutrients, but it takes time, money and energy, especially if the soil is poor. Select a garden site with soil that is well-drained and rich in organic matter.

**Levelness.** Does the ground slope, swell or have lots of gullies? A level garden is not necessary, but it sure makes gardening easier. If the site is sloped, rain can wash soil to lower areas. You don't want all your hard work to wash away over time. This can happen slowly or quickly. Choose a site that can be leveled by adding or removing soil. A level site will be less likely to have soil erosion problems.

**Sunlight.** All vegetable plants need light. The best source of light is the sun. The sun also warms the air and the soil. Choose a site that gets at least six hours of sunlight each day during the growing season. More sunlight will

**Location of Vegetables in the Garden**

Arrange vegetables for better use of space and light. Group tall-growing vegetables such as corn and tomatoes, together on the north or west side of the garden. This reduces shading of smaller vegetables, such as bush beans. Group vegetables according to maturity. This makes it easier to replant after removing an early crop, such as lettuce or beans. Plant perennials at the garden's edge.

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### KEY POINT 1:

Factors to consider when planning your garden: soil type, levelness, sunlight, water, convenience, size, growing season, family likes and dislikes, varieties.

help crops grow even faster. Avoid placing your garden too close to a building or tree that might shade plants. Tree roots can compete with plants for nutrients and water.

**Water.** Water is a must for plants. It's especially important at transplanting time or when a plant is making fruit. At these times, plants may need more water than usual. Locate your garden near a water source. It could make the difference during a "dry spell."

**Convenience.** Plant your garden at a site that is convenient for you. A garden that takes time to get to usually doesn't succeed. The need for weeding, watering, pest control and harvest means frequent visits to the garden. Choose a site that is close to home, even right outside the kitchen door.

**Size.** How large a garden do you want? Consider the site, your family size and your appetite for gardening when you plan your garden. The chart on this page can help you decide how much garden space you need.

How Much to Plant Per Person		
Vegetables	Fresh Use	Preserve
Beets	10 feet	20 feet
Broccoli	4 plants	8 plants
Bush green beans	15 feet	20 feet
Pole green beans	3 poles	6 poles
Carrots	10 feet	15 feet
Corn	15 feet	50 feet
Cucumbers	2 hills	5 hills
Greens	10 feet	10 feet
Leaf lettuce	10 feet	—
Onions	5 feet	30 feet
Peppers	3 plants	5 plants
Radishes	5 feet	—
Squash, summer	2 hills	3 hills
Tomatoes	3 plants	5 plants
Turnips	10 feet	10 feet

**The Growing Season.** The growing season in Maine varies from the South to the North and from the coast to the mountains. Wherever you live in Maine, you can expect approximately 100 days to grow vegetables. This is a "small window" for success. However, you can extend the season (spring and fall) using transplants, plastic covers, row covers, mulches and other techniques.

**Family Likes and Dislikes.** Choose vegetables that your family will enjoy eating. Eating the produce from your garden is one of the best rewards for your work. Don't plant more than you will eat, unless you plan to preserve some of the crop. If this is the case, choose plants that can be easily processed, preserved or frozen to eat during the winter months.

**Variety Selection.** Select varieties that are known to grow well in your area. Choose those that fit the growing season; check the days to maturity on the seed packet. Consider the variety's resistance to common plant diseases, listed on the seed packet.

### Start on Paper

Plan your garden on paper before you plant one seed or transplant. Your garden plan will save time and increase your chances of success.

Here's how you might create a plan:

1. Make a list of all the vegetables you plan to grow. List them by plant family. (Nightshades = tomatoes, peppers, eggplants; cole crops = broccoli, cauliflower, cabbage, radish, turnip, Brussel sprouts, etc. See chart on page 16.) Knowing the vegetable families will help you plan rotations.

**KEY POINT 2:**

Row gardens are quick and efficient, but may have more weeds and yield less than other types of gardens.

**KEY POINT 3:**

Raised beds are easy to manage, but take more time to set up.

**KEY POINT 4:**

Container gardens save space, but need more frequent watering and fertilizer.



**Temperature Classification of Some Vegetables**

Cool Season	Warm Season
Beets	Com
Greens	Squash
Carrots	Beans
Radishes	Cucumbers
Cabbage	Tomatoes
Turnips	Eggplant
Broccoli	Peppers
Lettuce	
Onions	

2. Sketch your garden site, to scale, if possible.
3. Divide your garden into sections by plant family. Label the sections by family and by specific crop.
4. Mark the crops with "S" or "T" to show which plants will be directly seeded (S) or transplanted (T).
5. Figure out the days to maturity for each crop. (Check the seed packet.) Count off the days on your calendar from planting to harvest. Sometimes, working backwards from an expected harvest date makes planning easier.
6. Mark the estimated planting and harvest dates on your garden plan. You want to set up your planting so that the crops are ready when you are. Some gardeners want certain crops to "come in" all at once for easy processing. Others like a continuous supply of vegetables all season. If you're such a gardener, you may want to stagger some plantings.

**Choose a Garden Type**

There are at least three different types of gardens. They include: conventional; raised bed; and container gardens.

You're probably very familiar with the conventional, or row garden. A site is selected, the boundaries are marked and the soil is plowed or tilled. Rows are marked and vegetables are planted. Row gardens are easy to organize and plant. They are quick and efficient for large plantings of crops, such as beans, corn and potatoes. However, they may not be the best in terms of space. They also can have more weeds and yield less per area than more intensely planted gardens.

The raised bed garden is more work, at first. Beds are created from garden-frames, often made of wood, stone or other materials or beds are made by simply mounding soil. Raised beds let you plant a lot more vegetables in a limited space by reducing pathways. They're also easier to manage. Raised beds drain better and warm faster. Try them if space, drainage or soil temperatures are a problem.

People who are short on space often opt for container gardens. Vegetables can be grown successfully in pots, buckets, boxes, tires, bags and the like. Container gardens need special attention. They often need more frequent watering and fertilizing than other types of gardens. If you create a container garden, use soil that's a mix of potting soil, vermiculite, perlite and peat moss. Add drainage holes to the container.

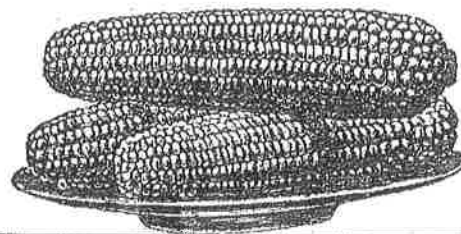
**How About Next Year? Garden Rotation**

Rotating your garden means moving vegetable families around from year to year — or moving the entire garden. Rotating your garden will:

- Allow you to build up the soil with a green manure crop.
- Prevent pest infestation (weeds, insects, diseases).

## Lesson 3

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#### Plant Families

**Nightshade or Solanaceous Family:** Tomatoes, peppers, eggplant

**Cole Crop or Crucifer Family:** Broccoli, cauliflower, cabbage, radish, turnip, Brussels sprouts

**Cucurbit or Melon Family:** Squash, pumpkin, gourds, cucumber, melons

**Legume Family:** Beans, peas

**Other:** Lettuce, chard, carrots, beets, corn

- Give different crops a chance to use different nutrients in the garden soil.
- Allow the soil to rest so it can sustain future gardens.

Make rotating your garden a part of your planning.

#### Record Keeping

The best way to learn from your garden year to year is to keep records. Draw a map of your garden, in addition to the garden plan. Record the crops sown, varieties, seed sources, insect or pest problems and the techniques you used to control them. Use your records to improve your garden each year. Record keeping is a good way to learn from mistakes and accomplishments.

#### Summary

In this lesson, you've learned about planning your garden. Now try to answer the **Study Questions**. They'll help you remember what you've learned. The **Study Activities** will give you a chance to put your new knowledge into use. In the next lesson, you'll learn about seeds, seedlings and transplants.

#### Study Questions

1. List the factors in planning a home vegetable garden. Evaluate your garden site using these factors.
2. What are the advantages and disadvantages of a raised bed garden? Conventional garden? Container garden?  
(See answers on bottom of page 17.)

#### Study Activities

##### Who Likes What?

Survey your family to find out vegetable likes and dislikes. Use the survey on page 17.

##### Garden Design

Design your vegetable garden using the sample garden grid on page 18. (See example.)

##### Garden Field Trip

Visit three gardens in your community. Look for new ideas.

##### Get Ready for Records

Design a record sheet that you can use this season.

#### Other Resources

Check with your county Extension office for these publications:

Bulletin #2078, Home Vegetable Gardening

Bulletin #2106, Natural Gardening

Bulletin #2242, Plant Hardiness Zone

Map of Maine

Bulletin #8039, Vegetable Gardening

Bulletin #2190, Vegetable Varieties for Maine

# Garden Planning Helper: Family Survey

Use this handy chart to find out what vegetables each family member likes so you can plan what to plant. Check off the vegetables that are family favorites.

VEGETABLE	NAME							Estimated amount to plant (see chart on page 14.)
ASPARAGUS								
BASIL								
BEANS								
BEETS								
BROCCOLI								
BRUSSELS SPROUTS								
CABBAGE								
CHINESE CABBAGE								
CARROTS								
CAULIFLOWER								
CORN								
CUCUMBER								
EGGPLANT								
KALE								
KOHLRABI								
LEEKs								
LETTUCE								
MELON								
ONIONS								
PARSLEY								
PEAS								
SNAP PEA								
SNOW PEA								
PEPPERS								
POTATOES								
PUMPKIN								
RADISH								
RUTABAGA								
SCALLIONS								
SPINACH								
SUMMER SQUASH								
WINTER SQUASH								
SWISS CHARD								
TOMATOES								
TURNIP								
WATERMELON								
OTHER								

mix; need drainage holes.

space-saver; containers can be from recycled materials; cons — need more frequent watering, fertilizer and a soil.

Conventional pros — common, easy to set up. Cons — weeds, cooler soils, drainage problems. Containers: pros —

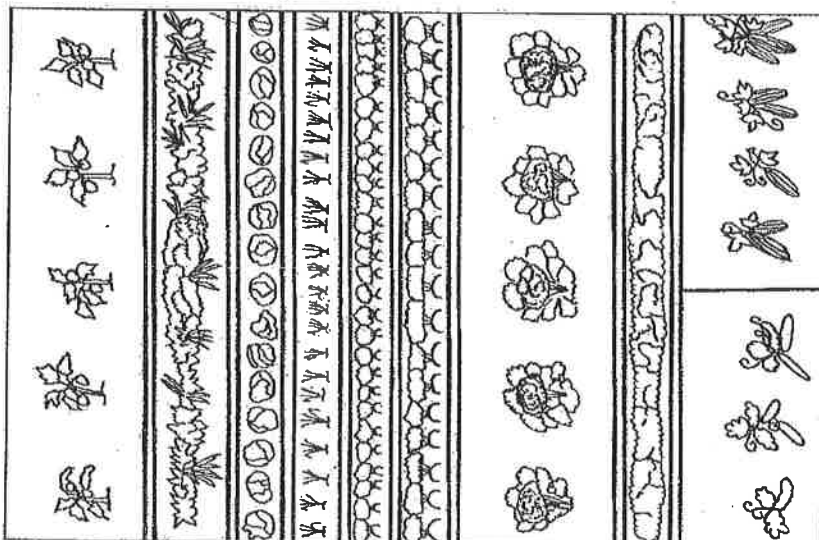
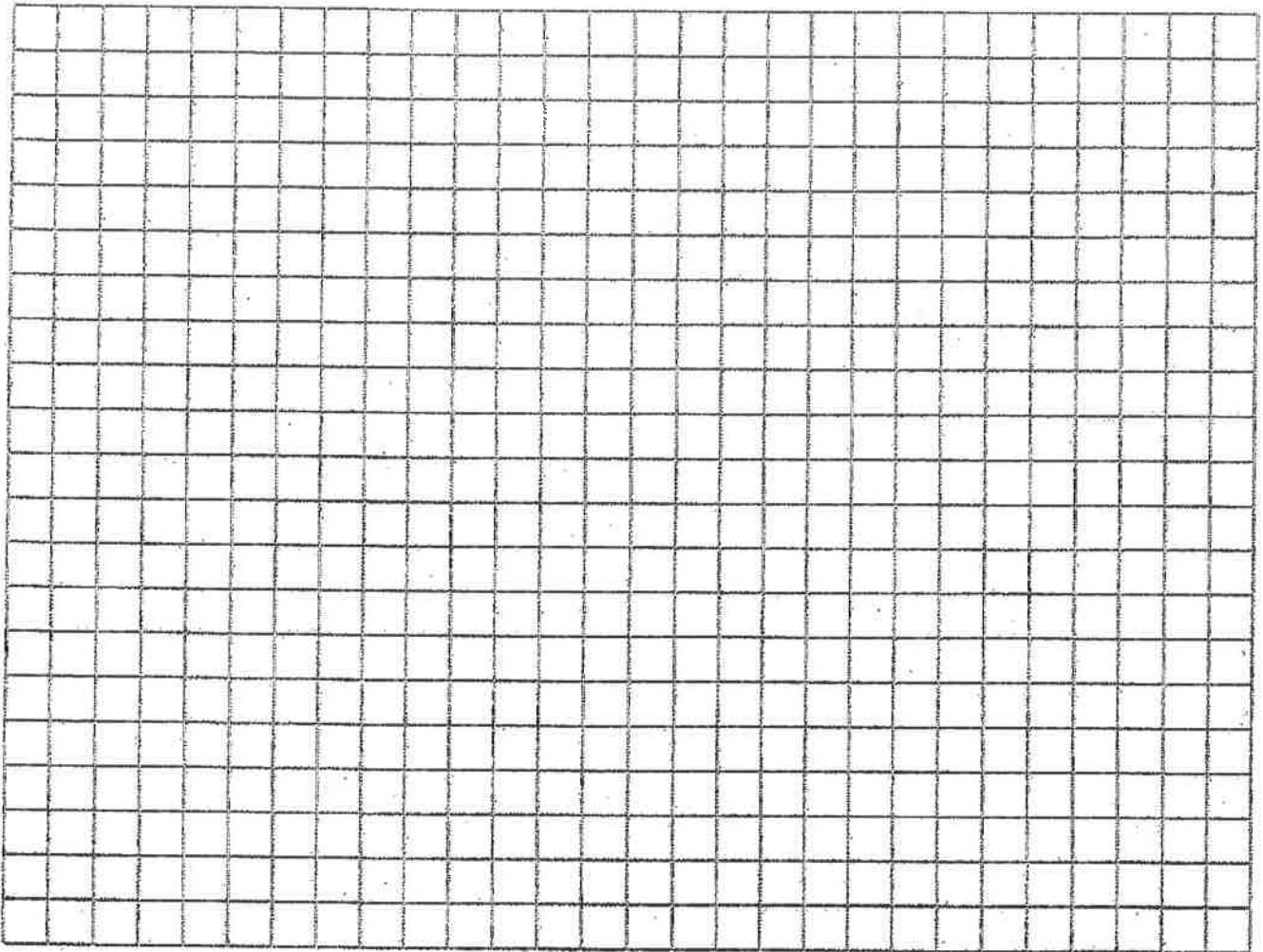
2. Raised Beds: pros — easy to manage, more intensive gardening; cons — take more time to set up.

Study Question Answers

# Your Garden Plan

Year: \_\_\_\_\_ Scale: \_\_\_\_\_

Use the grid below to sketch your garden site to scale. Use the step-by-step process on page 14.



**Sample Vegetable Garden (10 x 20 feet)**  
 Rows from left to right: tomatoes (5 plants, plant 24 inches apart); snap beans (sow about 60 seeds); lettuce (sow 100 seeds, thin to 2 to 4 inches apart); onions (100 sets); radishes (100 to 150 seeds); beets (sow 100 seeds, thin to 2 to 3 inches apart); broccoli (5 to 6 plants, plant 18 to 24 inches apart); Swiss chard (sow 80 to 100 seeds, thin to 4 to 6 inches apart); zucchini (2 to 3 plants, plant in hills 24 inches apart); cucumbers (sow 10 to 50 seeds, thin to best 4 plants, 12 inches apart).

From: *Vegetable Gardening for Illinois*, circular 1150, by J.S. Vandemark and J.W. Courter, University of Illinois at Urbana-Champaign, College of Agriculture, Cooperative Extension Service, 1978.