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Planning the Vegetable Garden

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Planning Guidelines

When planning your garden, it is important to ask a few basic questions:

- How much time will you be able to devote to your garden on a regular basis? The answer to this question will dictate the size of your garden. You must remember that, once planted, the garden will have to be weeded once a week, irrigated during droughts, and vegetables harvested when ripe. Depending on the type of vegetables, you may also need to undertake pest control measures.

- What vegetables do you like to eat and how do you plan to use the harvested produce? The answer to these questions will dictate what vegetables to plant and how many seeds/transplants of each vegetable to plant. In addition to eating freshly harvested vegetables, you will want to determine how much produce you want to can, freeze, dry, or store. Successive plantings of certain crops, such as beans, will give a longer harvest period and increase your yield. Make a list of recommended varieties and their planting dates. Use care in choosing the seeds, making sure the varieties you select are adapted to your area and intended use.

- How much space is available? That is, how much area can be converted into usable garden space, not simply how much empty ground is available.

Some additional planning hints

- Summer is the best time to plan next year's garden so you have the fall to prepare the soil and winter to order the seed.

- Plan the garden on paper first. Draw a map showing the arrangement and spacing of your crops. To keep the garden growing all season, make a spring, summer, and fall garden plan. (See *Intensive Gardening Methods*, Virginia Cooperative Extension publication 426-335.)

- Plan the garden and order seeds by January or February. Some plants may be started indoors as early as mid-February.

- In your plan, place tall and trellised crops on the north side of the garden so they won't shade the shorter vegetables.

- Group plants by the length of their growing period. Plant spring crops together so later crops can be planted in these areas when the early crops mature. Consider the length of harvest as well as time to

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maturity. Place perennial crops to the side of the garden where they will not be disturbed by any tillage that is needed.

Locating the Garden

- Vegetables grow best in a level area with loose, well-drained soil and at least six hours of sun (eight to ten hours is ideal).
- Use contour rows, terraces, or raised beds on sloped or hillside sites to avoid erosion. South-facing slopes are warmer and less subject to damaging frosts.
- Avoid placing the garden in a low spot, at the base of a hill, or at the foot of a slope bordered by a solid fence. Such areas are slow to warm up in the spring, and frost settles in these places since cold air naturally drains into low areas.
- Avoid windy locations; if you must plant in a windy spot, build or grow a windbreak.
- Locate the garden near a good and easily accessible supply of water.
- Choose a garden location near your home so it is convenient to work in the garden when you have a few minutes.
- Avoid planting near trees and shrubs; they compete for nutrients and water and may cause excessive shading.
- Sites too close to buildings may result in plants not receiving enough sunlight. Observe shading patterns through the growing season, if possible, before starting the garden. If you have a shaded area you wish to use anyway, plant shade-tolerant crops. If needed, increase effective light by providing reflective surfaces around the plants.
- Try not to plant vegetables from the same family (peas and beans or squash and pumpkin) in exactly the same location in the garden more often than once in three years. Rotation prevents the buildup of insects and disease. Use your previous years' plans as guides for rotating crops.
- Avoid locating the garden on a site where buildings with lead paint have stood; lead may be present in the soil in toxic amounts. If you are unsure about your chosen location, have the soil tested for lead content, or have tissue analyses done on some leafy vegetables.
- Gardening where sod has long been established, whether converted pastures or lawns, requires a great deal of preparation to eliminate sod, weeds, and soil insects.

Many factors influence the growth of plants: water, light, air, temperature, humidity, nutrients, and soil. Growth depends on a favorable combination of these factors. Any one of them out of balance with the others can reduce or even entirely prevent the growth of plants. Thus, the factor that is least available (e.g., eight hours full sun, adequate water) will inhibit plant growth.

Top 15 Vegetables in Economic Value

Beans (pole, bush)	Leaf lettuce
Beets	Onion storage bulbs, shallot
Broccoli	Peppers
Carrots	Summer squash
Cucumbers	Swiss chard
Edible pod peas	Tomatoes
Green bunching onions	Turnip (greens + roots)
Head lettuce	

Values based on pounds produced per square foot, retail value per pound at harvest time, and length of time in the garden.

Require Bright Sunlight

(8-hours full sun)

Beans	Eggplant	Pumpkin
Broccoli	Okra	Squash
Cantaloupes	Onions	Strawberry
Cauliflower	Peanuts	Sweet Potato
Corn	Peppers	Tomatoes
Cucumbers	Potatoes	Watermelons

Tolerate Partial Shade

(6-hours full sun)

Beets	Chard	Parsley
Brussels sprouts	Collards	Radish
Cabbage	Spinach	Kale
Carrots	Lettuce	Turnips
Celery	Mustard	

Plant Growth Factors			
Growth Factor	**Optimum**	**Excess**	**Deficiency**
Water	Amount of water varies with other factors. Vegetables need 1 in. per week. Sandy soil or rubble may need 2 in. per week (including rainfall). Soil should be moist all the way down to 6 inches after watering.	Plant is yellowed, has soft rot, no flowers or fruit; becomes disease-prone.	Plant grows slowly or is stunted, has leaf drop, wilting, bears early but small flowers and fruit.
Light	Varies with other factors. Generally, fruit and seed crops need at least 8 hrs. direct sun. Leafy crops and some root crops need at least 6 hrs. of sun.	Leaf becomes scorched; plant has no flowers or fruit.	Plant has elongated, pale growth (etiolation), no flowers or fruit.
Temperature	Varies with specific crop.	Plant has soft rapid growth, shows leaf scorch, has poor or no flowers and fruit.	Plant grows slowly or is stunted, shows leaf scorch, has poor or no flowers and fruit.
Humidity	Limited data available for field crops. In humid regions, allow adequate spacing for air circulation.	Plant is disease-prone, has soft growth, and poor flowers and fruit.	Plant grows slowly; wilts, drops leaves, bears no flowers or fruit.
Fertilizer	High nitrogen for foliage only.	Plant has rapid, soft growth; leaves and roots burn; has no flowers or fruit.	Plant is stunted, yellowing, has small or no flowers or fruits.
Soil	If the soil is well-aerated, well-drained, loose, and friable, growth will be optimum. If the soil is hard-packed, poorly drained and aerated, the plant will be stunted with poor flowers and fruit		

Adapted from: Pierce, J. H. 1977. *Greenhouse Growhow, Plants Alive*, Washington, D.C.

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