

AMBASSADOR COLLEGE

BIG SANDY, TEXAS 75755

HERBERT W. ARMSTRONG, *Chairman*

AGRICULTURE DEPARTMENT

SPRINGTIME IS GARDEN TIME

Delicious, nutritious - home grown vegetables - yours for the "growing." Let fresh, golden yellow, hot buttered roasting ears from your own garden tantalize and fulfill the desires of your delicate taste buds and those of your family. Crisp, fresh cut greens, firm juicy vine-ripened tomatoes - salad delight. Here are basic guidelines to help you "cultivate" a family food factory.

Successful gardening can be a very satisfying and rewarding experience for the whole family -- not only from the produce that is harvested, but also from the principles learned in applying basic laws of plants and soil. When applied properly, persistently, and effectively these principles will bring forth abundant, delicious benefits.

Gardening provides an exciting and "fruitful" family hobby. It presents an opportunity to strengthen family ties and for each member to enjoy the fruits of his labor. The germination and growth of a single seed portrays the wonder of Creation. Gardening is an engrossing pursuit, and you need not guess and depend on the proverbial "green thumb". Success comes from proper planning, timing, management, and following laws of Nature (Prov. 12:11).

Most people spend a large portion of their budget for food. Where available, many pay premiums for "home grown" vegetables. Why? Because of flavor and quality.

"Today, by train, truck, and plane we draw on the riches of half the world for food. This gain in variety has not been all gain, however, for in reaching afar we have lost freshness. We no longer have a ring of truck farmers around our major cities: today's lettuce, tomatoes, cabbage and celery must travel thousands of miles to market. Most important has been the loss in flavor" (Vegetables for Today's Gardens, Carleton, p. 2). A loss in flavor confirms a loss in nutrients.

Proper Planning

Fresh, tender, flavorful produce can be within close proximity of your back door if you take the time to plan a family garden. One of the first

things to consider is the size garden needed for your family. Allow plenty of vegetables for daily use for canning, freezing and storing to fit your needs. Do not overplant items which the family will not eat or too much of any one at a time.

Select a well drained soil on a gentle slope if possible. A southern slope is warmer and will enable you to plant 2 to 3 weeks earlier and encourage faster growth. The site should not be close to trees. Tree roots reach out many feet in all directions and will rob moisture and soil nutrients from your garden.

Timing is very important for a successful garden. There is a time to plant, and a time to pluck. There is an early harvest and a later harvest exemplified by the feasts of Pentecost and Tabernacles (Ingathering). The early garden is generally more profitable.

Planting and harvest times vary considerably in different parts of the country. In many areas, especially southern states, a year-around garden is possible. Northerly areas, high or mountainous regions, etc. usually have later and shorter seasons. Easily acquired gardening pamphlets (USDA Bulletin #9 "Suburban and Farm Vegetable Gardens" is one) give guidelines as to which vegetables can withstand light freezing. If needed you can check with your local county agricultural extension agent for information concerning the last and first freezing trends for your area. A general guide for last frosts in the spring is to notice the little wild flowers when in full bloom in your area. If it froze after they are in full bloom they would not make seed and the species would die. Although the dates vary from year to year, these wild flowers do not blossom too early or too late. Many guidelines can be learned from these little "miracles" around us.

The basic factors that determine the proper times for planting and harvesting include: soil condition, temperature, fertility, available moisture, seed quality and variety, and amount of light. These factors control seed germination, plant growth, and maturation. Ground cover and good soil fertility will modify and lessen extremes of temperature and moisture.

Soil Preparation and Fertilization

Having selected the best possible location, it should not change from year to year. This practice allows the soil to be developed to a high state of fertility and productivity by the addition of organic matter, mineral fertilizers, mulching and cover-cropping. If enough land is available, garden crops may be alternated between two plots. Soil-improving crops (legumes, rye, beans, peas, etc.) may be grown in one of the plots for cultivating into the soil while the other is producing.

Fertile soil is living soil. An important factor to look for in soil is the amount of microbial life it will support. The pH range and amount of organic matter generally determine the amount of life your soil will support. The pH is merely the degree of acidity (0-7) or alkalinity (7-14). 7 is neutral. Plants and soil life produce best in a pH range

of 6.0 to 7.5. Good organic material will help bring your pH to 7. The key to fertility is soil balance. Proper soil balance simply means all soil nutrients are available in a usable form for the desired crop. Balance is achieved by restoration of organic matter, soil life, and needed minerals. A soil test can assist in determining basic needs.

Plenty of compost, manure and a good cover crop worked into the soil will help keep the nitrogen and humus content high. Humus is the substance which gives the soil its dark color. It is an indication of the soil's fertility. Manure used to be carefully preserved and composted when people understood its value. All too often, for many today, it is little more than a pollutant. Manure and compost feed bacteria and earthworms which reproduce to keep soil in a more healthy and productive state. In applying manure or compost, work it into the soil with a disc or roto-tiller. (If you desire, you may write for further information on "Soil Fertility".)

The lack of major elements may be determined generally by plant growth.

Hunger Signs in Plants

Not Enough Nitrogen:

1. A sickly yellowish-green color.
2. A distinctly slow and dwarfed growth.
3. Drying up or "firing" of leaves which starts at the bottom of the plant, proceeding upward. In plants like grains and grasses, the firing starts at the tip of the bottom leaves and goes down the center or along the midrib.

Not Enough Phosphorus:

1. Purplish leaves, stems and branches.
2. Slow growth and maturity.
3. Small, slender stalk in grass; in small grains, lack of stooling.
4. Low yields.

Not Enough Potash:

1. Mottling, spotting, streaking or curling of leaves, starting on the lower levels.
2. Lower leaves scorched or burned on margins and tips. These dead areas may fall out, leaving ragged edges. In grains and grasses, firing starts at the tip of the leaf and proceeds down from the edge, usually leaving the midrib green.
3. Premature loss of leaves.
4. Plants falling down before mature due to poor root development.

Choose Good Seed

Another important item to consider initially is your choice of seed. Often good seed can be acquired from local gardeners or seed stores you know. Three major U.S. seed companies which carry good seed are Burgess, Burpee and Henry Field. Most companies advertize both hybrid and non-hybrid varieties and you will need to specify you want open pollinated

varieties when placing an order. Non-hybrid seeds produce a much higher quality product, both in flavor and nutritional value. Proper seed selection is of utmost importance to successful gardening.

When selecting your vegetables, carefully read the seed catalogue. The old name varieties for home gardens have more flavor than the commercial varieties which are bred for good looks, storage and shipping qualities. Flavor is a measure of quality and will bring rich dividends if considered in planning and selecting vegetables. A good booklet, "Care of the Home Garden" by the Joseph Harris Company, Rochester, N.Y., lists many proper varieties.

Cultivation, Planting and Care

A garden can and should be beautiful as well as useful. A variety of flowers can be planted for borders and interspersed in rows throughout the garden to add color and beauty. Some flowers such as marigolds, chrysanthemums, pyrethrums, and mums have helpful insect repellent characteristics.

When cultivating, strive to loosen and aerate the soil. A rake or garden harrow is fine to assist in preparing the seedbed for planting and sowing. Remember, your object is to loosen, not invert the topsoil, which in some cases may be quite shallow.

You may plant in any artistic form that meets your taste. However, if you desire nice straight rows, stretch a heavy cord or rope taut along the ground and walk on it. It leaves a good indentation in soft earth. The corner of a hoe or a pointed stake will make a suitable furrow for most seeds.

Start on one side of the garden, planting 30- to 45-day crops. When you harvest these crops, you could replant. Next to 30-day crops plant 45- to 75-day crops. Then plant your 75- to 100-day crops. This method of planting produces a continual vegetable harvest. If possible, plan your rows to run north and south for better utilization of sunlight by each plant. The previously mentioned USDA booklet #9 gives planting dates, depths, distances as well as many other specific helpful gardening details. (The "rule of thumb" is to cover three times the diameter of the seeds).

When planting certain seeds pollinated by wind, you may need to leave about 6-8 rows between types. This applies to garden seeds such as squash, cucumbers, pumpkins and watermelon. These should not be planted next to each other. These vegetables will cross-pollinate and produce inferior quality, flavor, and mingled seed. You can plant squash on one side or end and cucumbers on the other, but not together. Cantaloupe will not mix so it may be planted next to most any vegetable.

Take care in cultivating your garden properly. Do not hoe or cultivate too deep, too often or too close to the plants. Excessive cultivation does not conserve moisture.

After the plants are well established and you have cultivated a few times, it would be wise to mulch your garden. This will save labor and

conserve moisture. Earthworms have an ideal place to work under a mulch. This type cover helps maintain constant temperature and side moisture retention. Good mulch material is hay, straw, leaves, or any composted organic matter.

Keep weeds out of the garden. They rob your soil of moisture. A few inches of good mulch works well between rows to control weeds.

Keep a close check for insects in your garden. If you have properly selected seeds and have a rich fertile soil, the plants should be for the most part insect and disease resistant. In a garden that is properly fertilized, beneficial insects such as ladybugs, praying mantises, lacewing flies, and orange and black spotted beetles will take care of destructive insects that present themselves. However, to assist in insect control until proper soil and plant health is established, an inexpensive grade of wheat flour or diatomaceous earth dusted on plants when dew is on is helpful. If the insects have gotten out of control, add one part of Rotenone or Pyrethrum powder to ten parts of dust.

Do not water too much. Excessive watering retards root growth because the roots do not have to search for moisture. Also, the larger the root system, the more plant food becomes available to the plant and the better the production. Irrigation is a substitute when the blessing of rain is lacking. Many plants cannot take too much water, especially tomatoes. Too much moisture may contribute to unwanted fungus growth. One can easily tell when a plant needs water, not because the surface soil looks dry, but rather when plants begin to show a dark bluish green color or begin signs of wilting, or both. Much more good is derived from a real good gentle soaking (perhaps once a week in dry weather) rather than from daily wetting the ground. Also, it is best to not apply the water directly on plant foliage during the hottest part of the day. This can encourage "burning" rather than "cooling".

Harvest Time

When the time for ingathering has fully come -- here is what to do. Harvest your vegetables when they are ripe and contain the most nutritional value. At this stage they are tender and easy to cook and prepare. If they become overripe and too mature, they lose some of their nutritional value. Certain dried crops such as kidney, great northern, and navy beans must be mature when harvested. This also applies to pumpkin and some types of squash.

It is best to harvest only as much as can properly be taken care of (refrigerate, can or freeze) within three hours from harvesting. This will preserve the full tenderness, flavor and crispness. A home garden can often supply most of the vegetable needs of a family not only during the seasons it produces, but throughout the winter months if the produce is properly prepared and stored.

After harvest, if you desire to plant winter crops on part of the area, it is beneficial to mulch or use a cover crop on the rest. This gives the

earthworms and soil bacteria something to feed on and a chance to continue working before it gets too cold. This is part of a good program.

Remember to properly clean and store tools when your gardening season(s) are over. A light surface lubrication will prevent rust. Selecting an accessible dry location will help you locate them when needed and give them longer life.

Once you have made a garden plan -- stick to it. God's blessings require perseverance, hard work and diligence.

Successful gardening is rewarding and satisfying. How about it? Why not find out what a thrilling, educational experience and opportunity gardening can be for the whole family.

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