Truth will make you free we are free indeed When Jesus makes withree we are free indeed Jesus brooks a serve for us on Decross Redeamed by Re Blood Wall upon thee Blood of Jesus

Springtime Is Garden Time

Gardening is a lost art for most individuals today. Lost also are its many advantages and benefits. Here are basic guidelines to help you recognize and RECAPTURE these benefits.

They may - generational curse by Dale L. Schurter

NCE UPON a time — when the trees began to bud and the birds began to sing and the feel of spring was in the air — the thoughts of our parents and grandparents turned toward planting a garden.

But today, most of us — their "sophisticated" children — might ask, "Who wants a garden?"

And, believe it or not, some will even ask, "What is a garden?" and, "What's it for?"

#### Purpose of a Garden

The most obvious purpose of a garden is the produce it provides. But in addition it can produce inspiration, purpose, family togetherness and character.

The germination and growth of one tiny seed portrays the awesome wonders God built into His creation. Even in the concrete jungle of a sprawling city you can be brought closer to creation and the Creator by observing the miracle of growth. "For ever since the world was created, his invisible nature, his everlasting power and divine being, have been quite perceptible in what he has made" (Rom. 1:20, Moffatt).

At creation God set the laws of life in motion: "And the earth brought forth grass, and herb yielding seed after his kind, and the tree yielding fruit, whose seed was in itself, after his kind" (Gen. 1:12). God ordained that every form of life would produce after its kind. The growth of every single plant reproducing itself proves again the existence of God!

In our sophisticated society of the seventies, the average person is uneducated to the benefits which can be derived from a family garden. With de-em-

phasis on rural living, and increased migration to urban centers, gardening has been sadly neglected. The trend in society has been to point people away from God and from doing things which demonstrate His handiwork.

However, as shown by a Senate resolution in *The Congressional Record*, April 6, 1972, the importance of a garden has begun to receive new emphasis, even on a national level. The resolution concludes: "Resolved by the Senate (the House of Representatives concurring), that each American family is urged where practicable, to plant a vegetable garden for the purpose of fighting inflation, saving money, getting exercise, and having the fun and pleasure of family vegetable growing."

#### Benefits of a Garden

Most people spend a large portion of their budget on food. Of the total, according to a National Commission of Food Marketing report, about one sixth is spent on fruits and vegetables. Many willingly pay premium prices to get home-grown garden vegetables if they are available.

Why?

What makes the difference in homegrown vegetables?

#### FLAVOR!

"Today, by train, truck, and plane, we draw on the riches of half the world for food. The 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 in Today's Garden, Carleton, page 2, emphasis ours throughout article).

A loss in flavor confirms a loss in nutrients. For freshness is also essential for the retention of vitamins and other food factors. So, for flavor and quality in foods, an ideal source of supply is your own garden.

Some, of course, are not able to have a garden at all. But almost *everyone* can have something — if only a window box for growing a few salad greens.

Herb gardens, nut gardens and cucumber gardens are all mentioned in the Scriptures. The term "vegetable" garden, however, does not appear as such because the word vegetable came into existence only about 200 years ago, since at that time all of our everyday vegetables were known as HERBS—even such commoners as the beet and carrot!

God Himself prepared the first garden: "And the Eternal God planted a garden eastward in Eden..." (Gen. 2:8). Herbs (vegetables) have always been grown and eaten by God's people.

Much can be learned by properly and persistently applying basic laws and principles of agriculture in gardening. And the reaping of abundant, tasty produce can result. "For the earth which drinketh in the rain that cometh oft upon it, and bringeth forth herbs meet for them by whom it is dressed, receiveth blessing from God" (Heb. 6:7).

Some of you will be able to grow a few vegetables right in your flower beds. Simply alternate rows — one row of flowers, one row of vegetables, etc. Some vegetables, like cherry tomatoes and artichokes, can be used as decora-

# 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.
- Small, slender stalk in grass; in small grains, lack of stooling.
- 4. Low yields.

## Not Enough Potash:

- Mottling, spotting, streaking or curling of leaves, starting on the lower levels.
- 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.
- Plants falling down before maturity due to poor root development.

A lack of major elements in the soil may generally be determined by plant growth as indicated here. In most cases the addition of good manures put on the soil between the rows and watered in will correct the problem.

tive plants and be located beside the house, along the yard fence — almost anywhere you choose.

If you can adapt an area about six feet square, you should be able to produce enough salad vegetables for a family of four all summer. Those of you who are afforded the opportunity of a larger garden can accomplish much more.

#### A Family Affair

Gardening is an engrossing pursuit. To be thrilled and inspired by the birth and growth of just a single plant can be a satisfying and rewarding experience. So make garden planning, planting and care an exciting, enjoyable *family* project by including everyone in the family.

Dad's job, as overall manager, should include acquisition of any needed tools and fertilizers. Mom becomes project supervisor while Dad is at work. She can also buy the seed. (There need be no large expense involved — seeds cost only a few cents; the few hand tools needed are usually in everyone's garage.) Teenagers can care for the tools, help plant, weed and beautify. Usually, the very small children help most by watching, but those of school age can learn to help put out onion sets or other vegetables that are easy to plant.

A way to give your small child (or children) a special treat is to mark off a one-foot square and tag his name to it. Let him feel responsible for "his plot." Help him prepare the soil and punch a few holes in it with his chubby little finger and drop in the seeds. He will literally sparkle and beam with excitement and accomplishment — especially when the first sprout begins to show!

Let everyone participate in the chores of the garden, as well as in its results. Having a common goal is a good way to help pull the family together and teach family responsibility.

#### Planning Your Garden

Success in gardening does not depend on guesswork or on the proverbial "green thumb." It comes from proper planning, timing, management and following God's natural laws of agriculture (Prov. 12:11).

A first consideration in planning a garden is its size. Where garden space and ample storage facilities permit, you can plant enough vegetables for daily use, and if you desire, some extra for canning and freezing.

If available, an area open toward the south (without shade from buildings or trees) is warmer (northern slope in Southern Hemisphere) and will enable planting two or three weeks earlier and encourage faster growth. If possible, plan your rows to run north and south for better utilization of sunlight by each plant. 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 also a very important part of planning your garden. There is a time to plant, and a time to harvest (Eccl. 3:2).

Planting and harvest times vary in different parts of the world. In many areas, especially the southern United States, a year-round garden is possible. Northerly areas and high-altitude or mountainous regions usually have later and shorter seasons. The USDA Home and Garden Bulletin No. 9, Suburban and Farm Vegetable Gardens, gives guidelines as to which vegetables can withstand a light freeze and gives general freezing dates. It is available by requesting it from the Department of Government Documents, Washington, D.C. Also, the backs of most seed packages have planting instructions on them.

The chart included with this article offers suggested growing seasons to help you determine when to plant. A general guide for the last frosts in the spring is to notice when the little wild flowers are in full bloom in your area. Although the dates vary from year to year, these wild flowers do not blossom too early or too late. If frozen after they are in full bloom, they would not make seed and the species would die. Many guidelines can be learned from these little "miracles" around us.

For those who have never had a garden or feel they would like more information, the book, Step-by-Step to Organic Vegetable Growing, by Samuel Ogden, contains basic and useful material on all aspects involved. It is published by Rodale Press, Inc., 33 East Minor Street, Emmaus, Pennsylvania 18049, or

perhaps it is available in a local library.

#### Soil Preparation and Fertilization

Having selected the best possible location, you need to begin preparing your plot for planting. Strive to loosen and aerate the soil. A rake, hoe, garden harrow or Rototiller is fine to assist in preparing the seedbed. Remember, your object is to loosen — not invert — the topsoil, which in some cases may be quite shallow.

The addition of organic matter (manures, grass clippings, compost, etc.) will help improve soil fertility and productivity. A healthy, fertile soil is a living soil. The organic matter provides food and an atmosphere to encourage the increase of microorganisms, earthworms and other soil life. (Be sure to write for our article, "The Worm and You.")

In some cases, adding a considerable amount of natural fertilizer to *new* home gardens is almost essential, since the condition of many backyard plots of ground is rather poor to begin with. For best results from manure, compost, etc., it should be applied evenly, well in advance of planting, on top of the soil, and/or mixed in only an inch or two with a rake.

#### **Choose Good Seed**

Another important item of initial concern is your choice of seed. The old name varieties for home gardens have the best flavor. Many newer varieties are bred only for good looks and long storage and shipping capacity. Flavor is a measure of quality and will bring rich dividends if proper selection is considered in planning. One book, How To Grow Vegetables and Fruits by the Organic Method (Rodale Books, Inc., Emmaus, Pennsylvania), lists some of the older varieties as well as more recent ones.

Most major seed company catalogs advertise both hybrid and open-pollinated varieties. You should specify a preference for open-pollinated varieties when placing an order, especially if you desire to save seed for the next season. (Seed saved from hybrid plants will not properly reproduce its own kind.) Open-pollinated seeds are also more likely to produce a higher-quality prod-

## VEGETABLE GARDEN PLANTING TABLE

ASPARAGUS, Seed	1 in.	3 in.	18 to 24 in.	Early Spring	Automo or Early Spring	1 02.	1 or 2 yrs. (ploots)
ASPARAGUS, Root	2 in.	18 in,	4 ft	Early Spring	Autumn or Early Spring	66 roots	2 years
BEANS, BUSH	1-1 1/2 in.	2 to 3 in.	24 in.	April to July	Feb., Apr., Aug., Sept.	2 lbs.	42 to 75 days
BEANS, POLE	1-2 in.	4 to 6 in.	36 in.	May and June	Late Spring	1 %.	85 to 98 days
BEET	1 in,	2 in,	12 to 18 in.	April to August	Feb., Apr. (Aug., Sept.)	2 oz.	45 to <b>60 days</b>
BROCCOLI	1/2 ia.	18 to 24 in.	36 în.	March and April	January to July	1/4 az.	90 to 100 days
BRUSSELS SPROUTS	1/2 in.	12 to 16 in.	24 to 30 in.	May and June	January to July	1/4 oz.	100 to 120 days
CABBAGE, EARLY	1/2 in.	12 to 18 in.	24 to 30 in.	March and April*	October to December	1/4 oz.	90 to 110 days
CABBAGE, LATE	1/2 in.	16 to 24 in.	24 to 36 in.	May and June	June and July	1/4 oz.	110 to 120 days
CARROT	1/2 in.	2 to 3 in.	12 to 18 in.	April to June	March and April, Sept.	1/2 oz.	55 to 80 days
CAULIFLOWER	1/2 in.	14 to 18 in.	24 to 30 in.	April to June*	Jan, and Fab. (June)	1/4 oz.	95 to 116 days
CELERY	1/8 in.	2 in.	18 to 38 in.	May and June*	August and October	1/4 oz.	120 to 150 days
COLLAROS	1/2 in.	14 to 18 in.	24 to 30 in.	Late Spring	May and June	1/2 02.	100 to 120 days
CORN, SWEET	1 in.	4 every 3 ft.	30 to 36 in.	May to July	February to April	4 oz.	55 to 90 days
CRESS, WATER	Weter	Breadcast		April to September	Early Spring	1/2 02.	60 to 70 days
CUCUMBER	1 in.	4 every 3 ft.	4 to 6 ft.	April to July	Feb. and March (Sept.)	1/2 oz.	50 to 70 days
EGGPLANT	1/2 in.	18 in.	24 to 30 in.	April and May*	February to April	1/8 oz.	125 to 140 days
ENDIVE	1/2 in.	12 in.	18 in.	April (July)	February to April	1 oz.	100 days
KALE	1/2 in.	18 ia.	18 to 24 in.	Aug., Sept. (Mar., Apr.)	October to February	1/4 oz.	55 to 60 days
KOHL-RAM	1/2 im.	4 to 8 in.	15 to 24 in.	March to May	September to May	1/4 oz.	50 to 70 days
LEEK	1/2 in.	4 in,	14 to 20 in.	March to May	May to September	1/2 ez.	120 to 150 days
LETTUCE	1/2 ia.	4 to 8 in.	12 to 15 in.	March to September	Soptember to March	1/2 02.	76 to 98 days
MUSKMELON	1 ia.	18 to 24 in.	48 to 60 in.	April to June	February to April	1/2 oz.	85 to 150 days
MUSTARD	1/4 in.	4 or 5 ft.	12 to 18 in.	March to May (Sept.)	Autumn or Early Spring	1 oz.	60 to 96 days
OKRA	1 ia.	24 in,	3 to 4 ft.	May and June	February to April	2 oz.	90 to 140 days
ONION, SEED	1/2 ia.	2 in.	12 to 18 in.	April to May	October te March	1 oz.	125 to 150 days
ONION, SETS	1 in.	2 in.	12 to 18 in.	February to May	Early Spring or Autumn	1 qt.	100 days
ONION SEED FOR SETS	1/2 in.	1/2 in.	12 to 18 in.	April		1 %.	90 days
PARSLEY	1/8 is.	3 in.	12 to 18 in.	Early Spring	Sept. to May-Sept.	1/4 oz.	65 to 90 days
PARSHIP	1/2 to 1 in.	3 in.	18 to 24 in.	March and April	February, March	1/2 oz.	130 days
PEAS	1 to 1 1/2 in.	1 to 2 in.	24 in.	March to June	September to April	2 Hrs.	45 to 75 days
PEPPER	1/4 in.	15 to 28 in.	24 to 28 in.	May and June	Early Spring	1/8 az.	130 to 150 days
POTATOES	4 to 5 in.	12 to 15 in.	24 in.	Early Spring	Early Spring	7 lbs.	100 to 130 days
PUMPKIN	1 in.	84 to 108 in,	96 to 144 in.	May to July	April and May	2 oz.	75 to 90 days
RADISH	1/2 to 1 in.	1/2 to 1 in.	12 in.	March to September	September to April	1 oz.	20 to 75 days
RHUBARB, SEED	1/2 in. to 1 in.	4 in.	18 to 24 in.	Early Spring	Early Spring	1/2 oz.	1 or 2 yr. (plants)
RHUBARB, ROOTS	3 to 4 in.	36 in.	4 ft.	Early Spring	Autumn or Early Spring	40 roots	2 or 3 years
RUTABAGA	1/2 to 1 in.	6 in.	18 to 24 in.	June-July	August and September	1/4 oz.	90 days
SALSIFY	1/2 oz.	2 in.	18 to 24 in.	Early Spring	Early Spring	1 az.	159 days
SPINACH	1/2 in.	2 in.	12 to 18 in.	Sept, and sarly Spring	September to March	1 oz.	45 days minimum
SQUASH, SUMMER	1 ia.	4 every 4 ft.	3 to 4 ft.	April to June	Spring	2 oz.	65 to 70 days
SQUASH, WINTER	t in,	4 every 6 ft.	7 to 19 ft.	May to July	Spring	1 oz.	125 days
TOMATO	1/2 to 3/4 in.	36-49, 24 staked	36 to 48 in.	May to June*	March-April	1/8 az.	125 to 150 days
TURNIP	1/2 to 3/4 in.	4 in.	18 to 24 in.	April and August	August to October	1/2 oz.	45 to 90 days
WATERMELON	1 in.	4 every 6 ft.	8 to 12 ft.	May and June	March to May	1 oz.	100 to 130 days

Ambassador College Art

This table provides vegetable planting information for most parts of the United States.

uct in both flavor and nutritional value. Good seed can often be acquired from local gardeners or seed stores near you.

It pays to plan ahead and get the best seed possible, so ordering early will help insure the purchase of the seed you desire, since seed companies sometimes run out of top-quality seed once the planting season begins. You'll find that seed is quite inexpensive. Usually, one 10- to 35-cent package per vegetable will be ample for the average family.

#### **Planting**

You may plant in any artistic pattern that suits your taste. However, if you desire nice, straight rows, stretch a heavy cord or rope taut along the ground and walk on it. It will leave a \*START IN HOTBED FEBRUARY OR MARCH

good indentation in soft earth. The corner of a hoe or a pointed stake will make a suitable furrow for most seeds.

The rule of thumb is to cover each kind of seed with an amount of soil equal to three times the diameter of the seed (or just check the directions on the seed packet).

Start on one side of the garden, planting 30- to 45-day crops. After harvesting these, you can replant. Next to 30-day crops, plant 45- to 75-day crops. Then plant your 75- to 100-day crops. The number of days each seed requires to reach maturity will be printed on the back of the seed package. This method of planting produces a continual vegetable harvest.

The USDA booklet mentioned earlier gives additional information on planting depths, characteristics of popular garden vegetables and other helpful points.

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 and pyrethrums also have helpful insect-repellent characteristics.

Some garden vegetables, such as Swiss chard and garden beets, may intercross over distances of a mile or more. Also, certain species of pumpkins and squashes will intercross (see *Growing Pumpkins and Squashes*, Farmer's Bulletin No. 2086, USDA, pages 4-5). Those species which will cross should not be planted near one another. Commercial seed growers separate them by at least one-fourth mile. This type of cross-pollination leads to inferior quality, flavor and mingled seed (Lev. 19:19).

Muskmelons (cantaloupes), water-melons and cucumbers will not mix or mingle with each other when planted in the same area. They can be planted next to almost any vegetable. However, two different varieties of watermelons, for example, will cross when planted in the same garden, forming hybrid seed. The same applies to cucumbers and cantaloupes. Such plantings are not recommended, since seed from each plant is to be kept pure (Gen. 1:11-12).

### Cultivation

Care should be taken to cultivate your garden properly. Hoeing or cultivating too deeply, too often or too close to the plants causes unnecessary loss of moisture and destroys many plant roots.

After the plants are well established it is generally wise to mulch your garden. Mulching is simply spreading a two-to four-inch layer of grass clippings, straw, hay, etc., between the rows and around the plants. It will help control weeds, save labor and conserve moisture. A mulch also encourages earthworm activity, helping to create a balanced soil for future crop excellence.

If you have properly selected seed and have 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, lace-wing flies and orange-and-black-spotted beetles, will take care of the few destructive insects. Pest insects seem to

have been created for the purpose of destroying weak, sickly and diseased plants. This is simply another way God has of telling us certain plants are unhealthy and not nutritionally fit for human consumption. These "bad" insects are only doing their duty. They were created to protect you.

One of the greatest concerns of governments today is a new accent on the understanding and care of our total environment: ecology. Each living thing exists in a delicate balance with other living things. You can learn valuable, firsthand lessons about God's web of life right in your own backyard!

#### Watering

Proper watering is another important consideration in caring for your garden. Too much moisture can contribute to unwanted fungus growth. Also with excessive watering, root growth may be restricted to the moist upper portion of the soil, thus reducing the plant food and normally occurring moisture available to the plant. As the root system enlarges, more plant food becomes available. The result is better production.

Watering is often a substitute for the lack of the blessing of rain in appropriate amounts at the right time — "in due season" (Deut. 28:12). A plant does not necessarily need water simply because the soil's surface looks dry. A lack of moisture is often indicated when plants begin to show a dark bluish-green color, yellowing, beginning signs of wilting, or "burning."

It is best not to apply water directly on plant foliage during the heat of the day. This may encourage "burning" rather than "cooling." When watering is needed, a good, gentle soaking once a week does much more good than daily wetting of the ground.

#### **Harvest Time**

Vegetables should be harvested when they are ripe to obtain highest nutritional value. At this stage they are tender and easy to prepare. Nothing tastes as good as home-grown vegetables served at the table mere minutes after being picked from your own backyard.

However, you may desire to gather some items earlier, especially if you can refrigerate, can or freeze them. When vegetables become overripe they lose some of their valuable nutrients.

Certain crops which need to be dry to keep — such as kidney, great northern and navy beans — must be fully mature when harvested. This also applies to pumpkins and some types of squash.

After harvesting, it is beneficial to mulch, apply manure, etc., or plant a cover crop like clover, winter peas, rye grass, etc., on the garden area if winter crops will not be grown. This will help increase fertility and provide an environment for earthworms and other soil life to feed on and continue working. Ground cover is always good to consider as a necessary part of any soil program — even if it's only a three-foot-wide area beside your sidewalk.

#### The Challenge Is Yours

In the World Tomorrow everyone will have his own plot of land to provide fresh foods for himself and his family. "They shall sit every man under his vine and under his fig tree; and none shall make them afraid: for the mouth of the LORD of hosts hath spoken it" (Micah 4:4).

In Tomorrow's World each family will be provided acreage large enough to support a small vineyard, fruit trees, a garden and perhaps a cow, a horse and a few chickens. In today's world, however, it is not possible for everyone to have such blessings.

But as your circumstances permit, whether a window box, a flower bed, a six-by-six plot or an acre, why not find out what an inspiring, enjoyable and educational experience gardening can be for the whole family? Get close to God by getting close to His good earth — see, feel and experience the miracle of life from the soil.

#### FOR MORE INFORMATION

If you would like to change a farm or garden to natural methods, you may be interested in information and general guidelines contained in our free booklet, World Crisis in Agriculture. It not only states many of the problems facing modern agriculture, but also contains valuable information concerning proper farming practices.