

Feb.
1944

Victory Garden Reminders

By

J. F. Rosborough, Extension Horticulturist, Texas A. and M. College

No. 1. SOIL PREPARATION AND FERTILIZING.

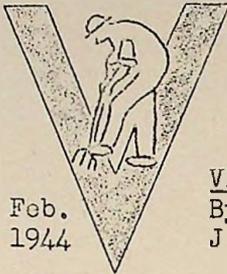
No vegetable grows better than the soil in which it is planted. It is better to delay planting until the soil can be prepared properly, than to hurry and plant in poor soil.

Good Drainage is Essential in Wet Areas. Where water stands after spring rains, vegetables will not grow. In areas of heavy rainfall the first undertaking is to ditch the garden, then plow it so that there will be large beds four to five feet across, on which several rows may be planted. In areas of limited rainfall, the soil is pulled up in ridges four to six inches high to make individual rows on which planting may be done. Germination and early growth is checked by poorly drained, soggy soil.

Good Plowing or Spading is Needed. The soil should be plowed or spaded at least five or six inches deep; 10 inches would be better. Deep tillage brings warm air into the soil and raises soil temperature. Seed germinate more readily at a temperature of 70° and if the soil is well prepared and well drained, the seed will get off to a good start. If the soil is stirred several times before planting, it is advantageous. Bad grasses, such as Bermuda, Johnson, and Coco or Nut grass, should be removed. Tiny vegetable seed cannot compete with established grasses, and it is better to kill out the grass before planting the garden.

Rich Soil Gives Best Yields. If rotted manure is available, apply 50 pounds per 100 square feet before the garden is plowed. If the supply is limited to less than this amount, it may be applied in the furrow just before planting the seed, at the rate of 10 to 20 pounds per 100 feet of row space. Victory gardeners in areas of limited rainfall or in black land sections where commercial fertilizer cannot be used, should use barnyard manure to increase production. Town or city gardeners who have compost made of leaves, lawn trimmings, etc., may use this material likewise. It must be remembered, however, that neither of these so-called fertilizers are rich in actual plant food. That is, they are not complete plant foods. A ton of rotted manure contains only 25 pounds of actual plant food, and 1975 pounds of vegetative material. Both rotted manure and compost are strengthened by mixing 100 to 200 pounds of super-phosphate or 5-10-5 commercial fertilizer per ton (wagon load), using about 10 pounds of this mixture for 100 feet of row space.

Use Commercial Fertilizer Wisely. In sandy areas commercial fertilizers analyzing 5-10-5 may be used by Victory Gardeners. For best results, apply fertilizer in the row 10 to 14 days before sowing seed or setting plants. If this cannot be done, it is safe to use it at time of planting in the following way. Open the row, sprinkle fertilizer in at the rate of 3 to 5 pounds per 100 feet of row, mixing thoroughly with the soil, then plant the seed. Irish potatoes, english peas and tomatoes may be given a side dressing of fertilizer after plants begin growth.



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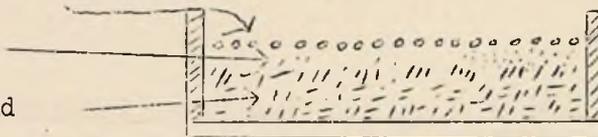
No. 2. MAKING A SMALL PLANT BED

Slow-growing plants, such as lettuce, cabbage, tomato, pepper and eggplant, may be started in a small bed to advantage. This practice gives the plants a "head start" in the early spring so that they will be ready by garden planting time six to eight weeks later.

A wooden box 4 to 5 inches deep, 18 inches wide and 24 to 30 inches long is a convenient size. An old washtub or abandoned dishpan may be used. The main consideration is a small container that can be picked up and brought into the kitchen on cold days and nights, and put outside on warm days.

Starting the Plant Bed. In timbered areas rotted leaf mold from the woods may be used for growing plants. A mixture can be made of equal parts of well rotted manure and top soil, or better still, a mixture of one-fourth rotted manure, one-fourth sand, and one-half top soil can be used. Make a layer 2 to 3 inches thick of any of these mixtures, and put a layer of coarse sand 1" thick over it. Mark off rows in the sand 2" apart, plant the seed, three to four to the inch, and cover $\frac{1}{2}$ " deep. Scatter a thin layer of pea-size gravel over the surface after planting, then sprinkle freely with water. The gravel is used to help prevent damping off of the small plants.

$\frac{1}{4}$ " pea size gravel
1" of sand
2" to 3" of $\frac{1}{2}$ manure and
 $\frac{1}{2}$ garden soil mixed



Cross Section of Plant Bed

Handling the Plants. The plant bed should be started six to eight weeks before time for setting the plants in the open garden. Lettuce and cabbage plants can be moved direct from the plant box to the garden when they have attained a height of 2 to 3 inches. Tomatoes, peppers and eggplants should be transplanted when 4 to 5 inches high into a larger plant bed where they will have 3 or 4 inches of space between plants, which will help them to grow off quickly when set out and make sturdy plants. Some gardeners prefer transplanting into small paper cups or old tin cans, so that the plant can be set out easily in the garden with the soil around it. Plants that have been transplanted into a second container should grow for 3 to 4 weeks until they have become vigorous and stocky. If this is done, they will grow off quickly when moved into the garden.



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By

Extension Horticulturists and Entomologists, Texas A. and M. College

No. 8. APRIL PLANTINGS

Many Victory Gardeners are confronted with the problem of just what to plant in early April. Cold, wet weather has slowed up or prevented many from making the usual plantings that should have been made in March. The question is: should some of the cool season vegetables be left out?

Some Vegetables Should Not Be Planted Now. In the southern half of the state it would seem wise to omit english peas, spinach, cabbage, carrots and head lettuce. In the northern half of the state these can still be planted. There is some question about english peas in those areas where late April and May are likely to be warm. Where conditions of this kind occur, gardeners should use dusting sulphur to hold mildew in check. This disease gets on english peas in warm weather, causing a powdery appearance on the leaves. Later the leaves have a rusty appearance and the plants die. Dust once a week with dusting sulphur to prevent this trouble.

Other Early Vegetables Can Still Be Planted. In all areas there is still time to plant irish potatoes and sweet corn. Both should be well fertilized to stimulate rapid growth. If irish potatoes are just coming up in soil that has been subjected to excessive moisture, side dress by adding one to two pounds of 5-10-5 commercial fertilizer. This is done by opening a furrow three to four inches deep on each side of the plant row and sprinkling in the fertilizer. Cover and stir the soil by thorough cultivation. Other vegetables showing ill effects of excessive moisture and cold weather may be stimulated into quick growth by side dressing.

Let's Get Busy On These, Too. In Central, East and South Texas warm weather vegetables may be planted now. Green beans, squash, cucumbers, swiss chard and tomato plants should go into the ground now. Wait until the soil has warmed thoroughly before planting butter beans, okra or setting popper or eggplant plants. Be sure to wait until all cool weather is over and both days and nights are warm before planting blackeyed peas, cantaloupes and watermelons. Don't forget to inoculate green beans, butter beans, and blackeyed peas before planting in order to stimulate early growth and greater production.

Kill The Cut Worms. These pests spend the winter in the soil in various degrees of maturity, and begin to feed on young garden plants as soon as they are up. Cut worms can be satisfactorily controlled by poison bait containing 5 lbs. wheat bran, $\frac{1}{4}$ lb. Paris green and enough water (2 to 3 quarts) to make the bran moist. Application should be made by distributing broadcast late in the afternoon about three days before tomato plants are set out, in order to exterminate cut worms before they have a chance to damage the plants. If necessary, the same bait can also be used after plants are set out.



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J. F. Rosborough, Extension Horticulturist, Texas A & M College

No. 9. MAINTAINING EARLY GROWTH AND PRODUCTION.

Tomatoes. To counteract retarded growth from high winds and dry soil, tomato plants should be watered every other day for the next ten days. About a pint to a quart of water around each plant will work wonders. Cucumber plants too will respond to additional moisture during dry weather at critical periods of growth.

Squash. When plants have begun to make vine, it is time to thin them out, leaving one plant every three feet. Select the largest plant and cut the others off at the ground line with a sharp knife. Do not try to pull the plants out where there are three or four plants growing very close together, as it may upset the roots of the plant that is to remain. This method will also work for cucumbers.

English Peas. English peas are beginning to bloom and produce at this time. Look at the bottom leaves, and if they show signs of yellowing, they need water. This is the critical stage, and if they are to continue to produce blooms and peas for the next few weeks, give them plenty of water. Watch for signs of mildew -- a powdery appearance on the leaves, later looking rusty and dying -- and dust once a week with sulphur to control this disease, otherwise the plants may be lost.

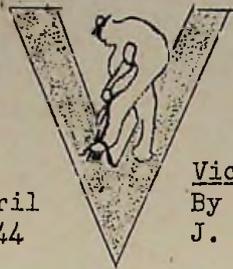
Greens. Mustard greens should be planted again. If you want to mix some radish seed in with the Tendergreen mustard, you can save space and hedge against too many radishes. It is also time for a second planting of lettuce. Your choice is Black Seeded Simpson or Grand Rapids, for summer leaf lettuce.

Okra. Now that the soil is beginning to warm up in most parts of the state, get your okra planting in. If you have not already done so, thin the plants when they are up 2 to 3 inches high, to a spacing of 24 to 36 inches apart. Given plenty of room, okra will branch out and can be harvested from each side branch. If it is crowded, no branching will occur and a single stem will be the only source of production from the plants.

Beans. Do not let the month end without making a second planting of green bush beans. If you want a change, you can make your second planting of the Golden Wax variety. Sow butter beans along the garden fence. Prepare the soil thoroughly and plant pole limas. Sieva, a small white type, or Florida Speckled, a prolific brown bean, are both well adapted to most parts of Texas and will produce beans in hot weather when the green bush beans are all gone.

Pepper. If you have not set out your green peppers, and are unable to get plants, sow the seed in the open garden and thin out to a spacing of 2 to 3 feet between plants. In order to get them up quickly, sprinkle the soil after seeding and keep it thoroughly moist for five to seven days.

Do Not Forget Cultivation. Weeds are the most insidious pests in the garden. They rob vegetables of plant food, moisture and sunlight. Destroy them with frequent shallow cultivations. Deep cultivation may destroy vegetable roots and reduce yields.



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No. 10. ANSWERS TO VICTORY GARDENERS' QUESTIONS.

Q. Why doesn't my lettuce head?

A. There may be several reasons. Head lettuce is a cool season vegetable and should be planted 20 to 40 days before the last killing frost in the spring. Hot weather hastens maturity of lettuce plants and causes them to go to seed before heading. Good heading varieties, such as New York No. 12, Los Angeles, and Big Boston, will head if given ample room. If your plants are closer than 6 inches apart, thin them and keep watered and cultivated.

Q. My english peas have powdery-looking leaves. What is the trouble?

A. This is the first sign of mildew. In the second stage, leaves will look rusty and die. Dust once a week with dusting sulphur.

Q. What is the difference between inoculating seed and treating seed with semesan, bichloride of mercury, or other seed treating compounds?

A. Inoculation stimulates the growth of legume plants, such as beans and peas, because the material in the inoculating dust enables the growing plant to utilize nitrogen fertilizer in the soil as well as gather nitrogen from the air. Seed treatments, such as copper, zinc and mercury compounds, protect seed against diseases, borne on the seed coat, reduces rotting, damping off, etc.

Q. Last year I did not have good radishes. The tops were there, but nothing formed below the ground surface. Why?

A. The seed bed should be well prepared, pulverizing the soil, before planting. If your radishes are already growing, try pulling some loose soil up around them.

Q. One neighbor tells me that irish potatoes will not sprout if the eyes are not placed down when seed pieces are planted. Another neighbor says the eyes should be placed up. Which is correct?

A. Actually it makes no difference whether the eyes are placed up, down, or sideways. More often failure is due to seed pieces being cut too small, or because heavy rainfall and cool weather caused rotting before they had a chance to sprout. Seed pieces half the size of a hen egg, or larger, are best. During the period of sprouting and early growth, potato plants live almost entirely on the food material in the seed piece. Therefore seed pieces should not be too small.

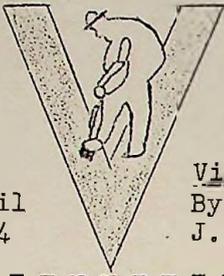
Q. My sweet corn was a failure last year. The first planting rotted in the ground, and the few ears made on the second planting were badly damaged from worms.

A. Sweet corn seed will rot if planted in cold ground. Wait until frost is definitely over and the ground has warmed. The Honey June variety developed by the Texas Experiment Station a few years ago, has heavy shucks over the ear tip, which makes it resistant to damage from corn ear worm, and the corn is sweet and good. Try it next time.

Q. I have heard that breaking over the tops of onions will make them bigger. Is it so?

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- A. This practice is used by some growers. The theory is that by drawing the dirt away from the onion after it begins to bulb out, and smashing the tops over on the ground, that the strength all goes to the onion, causing it to grow larger rapidly. This work is unnecessary and may cause injury to the onion bulb, making it difficult to store satisfactorily. If good, healthy plants have been used, they will bulb normally.
- Q. My tomato plants have been whipped by the wind until they look as if they might die. What can I do to save them?
- A. Water them every other day for a week or ten days while the soil is dry. A pint or a quart of water to each plant will work wonders. Protection from the wind by setting up shelters of old sacks tacked on wooden frame, or shingles, etc. will help.
- Q. Squash seed have come up and the plants are too thick in the hills. Should I thin them out?
- A. Select the most vigorous plant in each hill and cut the others off at the ground line with a sharp knife. Do not attempt to pull them out, because it might upset the roots of the plant that is to remain.
- Q. I don't know whether to plant onion seed, sets or plants. What is the difference?
- A. Onion seed should be planted early, in February or first part of March. Seed planted in April or early May will produce a supply of sets for fall planting. Onion sets are preferable for fall planting. If planted in the spring, they often develop into deformed onions, which do not keep satisfactorily. Sets are satisfactory for green onions, however. If you want to have large, well formed onions for storage, use onion plants.
- Q. Are wood ashes of any benefit to the soil?
- A. Wood ashes contain 30 to 40 per cent lime, and may be of benefit in sandy soils which are generally acid. Heavy, black soils, however, are usually neutral to limy, and do not need to be increased in lime content by application of wood ashes.
- Q. Does pruning of tomato plants decrease yield? Should I stake my plants?
- A. It is true that pruning reduces total yield of fruit per plant, but it increases the early yield and improves quality. In the southern and western parts of the state, staking is not necessary. Staking is generally done in East Texas and in other cases where the garden area is limited, in order to get early production and to keep the plants up off the ground.
- Q. Should all of the suckers on tomato plants be pinched off?
- A. The plants should be suckered about once a week, up to the first flower cluster, or until the third flower cluster has set. Suckers appearing late in the season will provide shade and protection for the fruit, and may be left for this purpose.
- Q. How many watermelons should be left on each vine to mature?
- A. Two good melons per plant should be left. Wait until the melons are six to eight inches long, then select the best ones and remove the others.
- Q. What is a "starter solution" and how can it be used?
- A. A "starter solution" is an application of commercial fertilizer mixed with water. Use $\frac{1}{2}$ to 1 lb. of fertilizer to 5 gals. water, dissolved thoroughly, and pour a pint of this solution around plants when transplanting into the garden. The treatment may be repeated in a week or ten days.
- Q. I do not get good results from commercial fertilizers. What can I use on tomato plants?
- A. Commercial fertilizers do not respond well in some heavy soils. Use 50 lbs. of well rotted barnyard manure per 100 feet of row space, and add 4 to 5 lbs. of superphosphate for each 100 lbs. manure. Use twice as much superphosphate where sheep or poultry manure is used.



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No. 11. WHAT EXTENSION WORKERS ARE DOING WITH THE VICTORY GARDEN PROGRAM.

Morris County. House to house survey of 1943 gardening activities and plans for 1944, conducted by 4-H club boys.

Jackson County. Garden club officers ask each member of each of several clubs to assist at least one person with gardening who had never grown a garden before.

Ector County. Town organizations sponsored garden contest offering War Bonds as premiums to winners.

Nolan County. Has already set up two canning centers for processing surplus vegetables from Victory Gardens.

Navarro County. In cooperation with Chamber of Commerce, utilizing every available vacant lot for gardens.

Moore County. War plant managers dividing available lands near plant for workers' gardens and furnishing land and water free of cost.

Smith County. Chairman of the City Commission agreed to be responsible for contacting every town family and encouraging them to plant gardens.

Gray County. Oil company furnishing land, water and plowing up areas for employees gardens.

Tom Green County. Each community has individual garden contest. Each business firm in San Angelo sponsoring one community contest.

Wharton County. Three club school gardens.

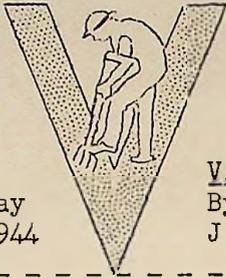
Freestone County. Drug stores stock gardening supplies and all materials and use gardening mats each week in advertising space.

San Saba County. Window displays of tools, seeds, fertilizers, insecticides, spraying and dusting equipment and literature.

Llano County. City park cut up into twenty-three garden plots for gardens for those who do not have garden space at home.

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WHAT IS YOUR COUNTY DOING? Let us have more reports on methods, ways and means that are working in your county. Others may be able to adapt suggestions to fit their local conditions, which will be beneficial to all of us in getting the job done.



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No. 12. MAY PLANTINGS.

Replant the Vacant Spaces Now. Since some of us have been making pretty good headway in consuming early vegetables, there may be places where we can start replanting even in the same rows. Where there are skips in cabbage rows, plant or set out pepper plants, okra, or late tomatoes. "Summer tomatoes" can be planted directly in the row, sowing three to four seed per foot. When plants are six to eight inches high, thin them leaving the best ones about three feet apart in the row. Porter, Bison, Danmark, or Cherry tomatoes are best varieties for hot weather. Summer tomatoes should not be pruned or staked, because the foliage is needed to protect fruit from hot sunshine. Late roasting ear corn may be planted between the rows of Irish potatoes, if the potatoes are about mature. Or wait until the potatoes are dug, then plant late green beans or blackeyed, cream or purple hull peas.

Your Sweet Corn Needs Attention. In the next ten days sweet corn will really be on a growing spree. When plants are knee to waist high, side dress with 5-10-5 fertilizer at the rate of two pounds per 100 ft. of row. If you can get nitrate of soda this will work faster, but the 5-10-5 will be satisfactory. Plants should be thinned to 18 inches apart in the row to insure vigorous growth. Some varieties of sweet corn tend to produce too many suckers. If the soil is extremely rich and well supplied with moisture, one or two suckers per plant may be left. At tasselling time if the weather is dry, all suckers should be removed. This will insure the development of at least two good ears on the main stalk. Where too many suckers are allowed to grow, the size of the ears is definitely reduced.

It's Sweet Potato Planting Time. Recent rains have made an ideal season for setting sweet potato slips. Loose, well prepared soil is essential for successful sweet potato growing. Rows $3\frac{1}{2}$ feet apart and bedded 9 inches high are recommended for Texas. Where commercial fertilizer can be used, 300 to 600 pounds per acre of 5-10-5 or 4-8-8 will increase yields and improve quality. For smaller plantings, 5 pounds per 100 ft. of row space is the right proportion. Mix thoroughly with the soil to prevent root burning. Plant slips 14 to 16 inches apart.

The best sweet potato slips are six inches in length. Under certain conditions where disease and insects are troublesome, the slips may be allowed to grow to a height of 10 inches, then cut above the surface of the soil. Under favorable growing conditions of plenty of moisture, vine cuttings will live equally well as slips and will produce as high yields. Experiment Station records show that slips set in May will yield approximately one-third more than those set in June or early July. The difference comes from favorable early spring growing season which gives the plants sufficient growth to make a crop of potatoes before extremely hot, dry weather begins. A planting of 100 ft. of row space properly fertilized and cultivated should yield approximately 150 pounds of sweet potatoes. If ample moisture is available, sweet potatoes can be planted following Irish potatoes, with the addition of 1 to 2 lbs. fertilizer per row foot.

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WHAT EXTENSION WORKERS ARE DOING WITH THE VICTORY GARDEN PROGRAM.

Waller County. Business firms of Hempstead closing all day Tuesday each week, so that employees and operators can do Victory Garden work. Personal letters sent to each business firm asking that Victory Garden information be included in each ad.

Castro County. The USDA film strip on gardens was shown to 4-H club boys, and a check on their plantings will be made soon to see that every member possible is enrolled in garden work. Planting time in Castro County is in early May.

Sabine County. Managers of saw mill furnished workers and equipment for breaking ground to plant Victory Gardens.

Travis County. Holding Victory Garden Tours to five or six outstanding gardens thrown open for visitors on Sunday afternoons. Owner of the garden is present to show the garden and answer questions. New gardens are selected each week, spotted over the city, and publicity is given as to their location, and so forth.

Parmer County. Expansion of Victory Gardens being emphasized. A garden demonstration team of two club boys appeared before farm and town groups, publicized through weekly radio programs, newspapers and organized city and farm groups.

Uvalde County. Under direction of the home demonstration agent, women's clubs are working up window exhibits on control of garden insects. A commercial onion grower donated plants for distribution to 4-H club girls' Victory Gardens in the county.

Harris County. 50-word spot announcements being used on radio daily sustaining news program. Other programs on Victory Gardens being used weekly, all scripts prepared from Extension agents' office. Cooperation secured through contacts with chamber of commerce, federated club groups, churches and other groups in Houston.

Panola County. County War Food Committee conducted a house-to-house survey of 1943-44 garden activities in Carthage, made by FFA and Home Making classes. A Garden Club is being organized in Carthage. Window displays of insecticides, spraying and dusting equipment are being used.

Lynn County. Over 200 boys have signed pledges to grow 4-H club Victory Gardens. Twenty-two cotton gins in the county have raised \$550 for prizes in the Victory Garden Contest. Winners will receive pure bred gilts, beef calves and registered dairy stock, purchased with the money donated by the gins.

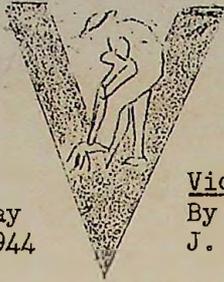
Dallam County. The Mayor of Dalhart declared May 1-6 "Victory Garden Week." The USO prepared a huge thermometer, erected downtown, and persons planting a Victory Garden reported to the Chamber of Commerce. The thermometer was pushed up according to daily reports, with 1000 gardens as the goal.

Bell County. Theater manager is paying for and running five times per day a 50-word Victory Garden spot. A local banker is being responsible for garden announcements at each church every Sunday. Local merchants paying for full page advertisements each week, to be used as the local agents see fit.

Baylor County. Under direction of the exhibit committee of the Home Demonstration Council, representatives of all agricultural agencies in the county sponsored garden exhibits used in prominent store windows. One exhibit included suitable varieties and soil preparation, the other an insect control exhibit with the slogan, "A Bug in Time Saves 99."

* * *

Keep your garden reports coming with new ideas so that we can pass them on to other agents over the state.



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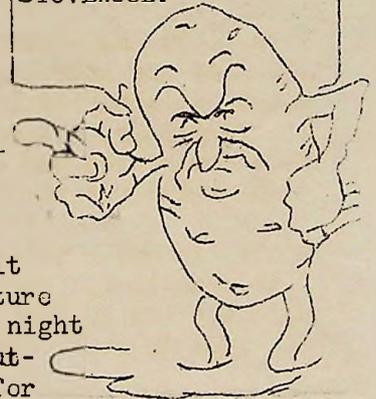
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No. 13. HOME STORAGE OF VEGETABLES.

Let Potatoes Mature Before They Are Dug. Potatoes can be dug before the tops die, but they should be mature if they are to keep properly. To check maturity, press the thumb against the skin of a few of the potatoes. If the skin is tough and does not break easily, the crop may be harvested. In areas where excessive rainfall has occurred a short time before harvest, water blisters (small elevated white spots) are likely to form on the skin. Delay harvesting until the blisters have dried. If harvesting is done while the potatoes are blistery or sappy, heavy losses by rotting may occur.

Use Care in Handling. Potatoes should not be handled like stacks of stovewood if they are to keep. A turning plow or a middle buster run 8 to 10 inches deep may be used to dig the crop. Separate all skinned or bruised potatoes from the good ones. Use the skinned ones first. If storage conditions are right, the others will wait patiently for their turn on the table. Remember to handle them almost as carefully as you would an egg. As soon as the potatoes are dug, place them in the shade so that they will not blister.

BE CAREFUL HOW YOU
TREAT ME! DON'T
THROW ME AROUND
LIKE A PIECE OF
STOVEWOOD.



Good Storage Conditions Are Essential. A cool, well ventilated cellar is satisfactory for potato storage, provided it has an overhead vent that will allow the warm air and moisture to escape. The door and overhead vent should be opened at night and closed during the day to keep the interior cool. If out-buildings or the area under the farm house are to be used for storage purposes, cross ventilation is essential. If exposed to light, potatoes will turn green, which makes them undesirable for consumption. Avoid spreading the potatoes directly on the ground or floor. Provide a slatted false floor with at least four inches of air space. Even willow poles or hay on which the potatoes are spread will allow the air to completely circle each potato. Ventilation picks up the moisture and keeps the potatoes dry, which tends to reduce rot.

What Varieties Keep Best? The Bliss Triumph variety is best used as "new" potatoes. Irish Cobblers are preferable for storage. The Katahdin variety is especially well suited to storage, and has outstanding keeping qualities. If this variety is to be used after digging, it is best to let the potatoes cure for thirty days before cooking, so that the texture of the potato will be firm. A peculiarity of the Katahdin potato is its tendency to make potatoes near the surface of the ground. For this reason, soil should be pulled up around the plants at potato making time, to prevent green discoloration. Well grown, carefully harvested Katahdin potatoes keep better in storage and have better cooking qualities than any other variety.

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Onions. Right away your onions will be ready to go in storage for winter use. Before onions are harvested they must be well ripened and thoroughly cured if they are to keep well in storage. In selecting onions for storage, select those where the tops have ripened down or shriveled, and be sure that the outer skin of the bulb is dry before they are pulled. Use "thick necks," immature, or soft onions immediately as they do not keep well. At harvest the onion tops are clipped to 1/2 inch length. They may be placed in crates or open mesh sacks in the shade until they are dried. Drying usually requires five to seven days. Globe type onions keep better than the flat Bermuda type.

A few essentials in successful onion storage are:

1. Well matured and dried until they rattle when handled.
2. Storing in open crates of not more than one bushel capacity.
3. Plenty of ventilation; low temperature; dryness.
4. Insure safety from actual freezing.

* * * * *

Beets. To store root vegetables, such as beets and carrots, in sand, some moisture may be needed to prevent shriveling. But avoid adding moisture unless needed because it will increase the risk of spoilage. Storing in layers on clean sand or without sand has given good quality products. If sand is not clean, it may produce an earthy flavor in the product.

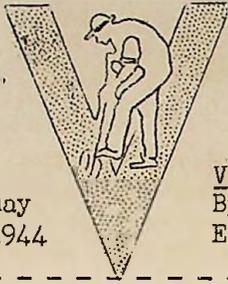
Pack beets and carrots in layers of sand in jars or boxes of about one bushel capacity and store in a cool, well ventilated place. In packing in dry climates, slightly moisten the sand and place two to three inches in the bottom of the container. Then put in a single layer of vegetables not touching each other. Then cover with one inch of sand, then another layer of vegetables, and continue until receptacle is filled.

Beets, in order to store well, should be about two inches in diameter, in perfect condition, and of good color. Carrots should be one to two inches in diameter and of good color. Cut off the tops of beets and carrots, leaving one inch of stem. Dry one hour in the shade, and store.

* * * * *

Storing Green Tomatoes. In commercial tomato areas, green cull tomatoes from packing sheds may be properly treated and placed in storage for a month or two. Before storing, paint both the stem and scar with wax made by melting together one part paraffine, one part beeswax and two parts mineral oil. Store in a cool, well ventilated place to ripen. Place them on a slatted shelf so that they do not touch, or deck in a cellar.

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Cooperative Extension Work in Agriculture and Home Economics
Agricultural and Mechanical College of Texas and United
States Department of Agriculture Cooperating
Extension Service - County Agent Work
J. D. Prewit, Acting Director

May
1944

Victory Garden Reminders

By
Extension Horticulturists, A. and M. College of Texas

No. 14. VEGETABLE DISEASES.

Plant diseases can rarely be cured, but it is possible to prevent their occurrence and spread. Disease control should begin with the seed and continue until harvest. Even though seed treatments prior to planting and spraying or dusting plants with proper materials for the control of various diseases are important, these two things are only a part of the program for effective disease control. Other disease control measures include: disposing of plant residues at the end of the season; keeping down weeds in the vicinity of the garden; change garden sites as well as rotating vegetables in the garden plot; use disease-free seed of resistant strains or varieties; select fertile, well drained soil; practice the proper use of fertilizers; clean cultivation.

The following is a list of the more common vegetable diseases, with symptoms and control or treatment.

EARLY BLIGHT. Affects: chiefly tomatoes, potatoes. Symptoms: Numerous brown spots on leaves which enlarge into circular spots. Brown cankers on stems and may even girdle seedlings at ground line. On the fruit "nailhead" spots are formed. Control or Treatment: Spray with 3-2-50 Bordeaux mixture at first appearance of leaf spots. One or two sprayings at 7-10 day intervals may be sufficient unless the weather is wet. Copper-lime dust (20-80) may be used instead of Bordeaux.

SOUTHERN BLIGHT. Affects: chiefly tomatoes, peppers, irish potatoes, watermelons, cantaloupes and most fleshy rooted vegetables. Symptoms: Decay of stem at or below ground line. Plant wilts and soon dies. Whitish fungus may be seen on stem and during wet weather small brownish seed-like fungus bodies may be present. Control or Treatment: Remove and destroy affected plants. Rotate with fibrous rooted crops, such as corn, sorghum, or small grains.

BACTERIAL CANKER. Affects: chiefly tomatoes. Symptoms: Shriveling of scattered leaflets on plants. Interior of stem becomes brown, dries out and stem cracks open. Small removable spots on young fruits. Control or Treatment: Properly treat seed before planting. Spray or dust as given for Early Blight.

BACTERIAL SPOT OR SPECK. Affects: chiefly tomatoes, peppers. Symptoms: Light colored sunken spots on fruit, covered with broken epidermis. Spots at first are slightly raised and surrounded by dark water-soaked tissue. Small spots with thin, dark centers also appear on the leaves. Control or Treatment: Rotate crops and destroy crop residues. Treat seed. Spray or dust as given for Early Blight.

DAMPING OFF. Affects: beets, broccoli, brussels sprouts, cabbage, cantaloupe, cauliflower, cucumbers, eggplant, pepper, tomatoes. Symptoms: Decay of seed and collapse and death of young seedlings. Control or Treatment: Chemical treatment of seed prior to planting, as outlined in F.B. 1862. For seedling damage, spray with mixture of 1 oz. semosan to 3 gals. water.

POWDERY MILDEW. Affects: cantaloupe, beans, cowpeas, english peas. Symptoms: dusty, whitish appearance on leaves and stems. Control or Treatment: Dust thoroughly with 325 mesh dusting sulphur. On cantaloupe, use 20-80 copper-lime dust. Repeat every 7 to 10 days.

DOWNY MILDEW. Affects: cabbage, cauliflower, brussels sprouts, mustard, turnips, cantaloupe, watermelon, cucumber, squash. Symptoms: Moldy appearance of leaves and stems. Later may turn brown. Control or Treatment: 2-3-50 Bordeaux spray or 20-80 copper-lime dust. Repeat every 7 to 10 days. Use healthy seedlings in case of cabbage and related plants.

ANGULAR LEAF SPOT. Affects: cucumbers and related vine crops. Symptoms: Small angular spots on leaves at first water-soaked and later turn brown. On stem appears as lesions somewhat irregular and elongated. On fruits as water-soaked spots and later appear white. Control or Treatment: Seed treatment. Crop rotation. Spraying with 4-4-50 Bordeaux mixture.

RUST. Affects: chiefly beans, asparagus. Symptoms: Red pustules on leaves, later turn black and defoliate. Control or Treatment: Spray with wettable sulphur or Bordeaux mixture or straight dusting sulphur. In case of asparagus, fall cutting and burning of tops.

ROOT KNOT OR NEMATODE. Affects: practically all vegetables. Symptoms: Elongated swellings or small round galls on the roots of plants. On roots of some vegetables appears as large, cheesy masses on roots. Control or Treatment: Use only nematode free plants. Plant crops such as oats, wheat, barley, sorghum, corn, peanuts, onion, resistant cowpeas, etc. where trouble is found.

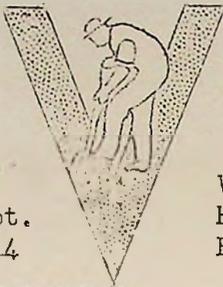
COTTON ROOT ROT. Affects: beans, beets, carrots, eggplant, okra, cowpeas, pepper, sweet potatoes. Symptoms: Wilting of plants and later die; bark of roots decay. Often show brownish, wooly strands of fungus on surface. Appears in spots in field and may spread rapidly. Control or Treatment: Plant such crops as corn, wheat, oats, sorghum or pasture grasses.

BACTERIAL WILT. Affects: cantaloupes and related vine crops. Symptoms: Sudden wilting of entire plant which later dries up. A sticky ooze can be pressed from the freshly cut stem. Treatment or Control: Keep plants well covered with a dust consisting of 1 part calcium arsenate to 20 parts gypsum to protect against striped cucumber beetle. Plant an excess of plants and thin out after plants are started. Remove and destroy wilted plants as soon as they are seen.

POTATO SCAB. Symptoms: Roundish or irregular, rough, corky areas on surface of tubers. Injury does not extend far into the potato, but scabby potatoes are objectionable in appearance. Treatment or Control: Crop rotation. Seed treatment before planting (F.B. 1862). Plant on new land. Use acid forming commercial fertilizers on alkaline soils where scab is most prevalent.

POTATO ROT. Heavy rainfall presents a problem in potato harvesting and storing. Water blisters may cause potatoes to rot in storage. Where the soil is well drained, is not excessively wet, and can take care of extra moisture by drying up in a few days, do not dig the potatoes, but delay harvesting until the blisters have dried. On the other hand, where soil is very wet and soggy and will remain so for several days, it is best to get the potatoes out of the ground at once, and allow them to dry out more quickly in a cool, dark location where there is lots of ventilation. Watch them for a few days, and if the blisters dry up and disappear, the potatoes can be placed in permanent storage. If rot continues, dispose of them immediately.

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J. D. Prewit, Acting Director



Victory Garden Reminders
By
Extension Horticulturist, Texas A. & M. College

J. D. Prewit

Sept.
1944

NO. 19

HOW A FALL GARDEN

In most back yards in south, central and east Texas, vegetables can be grown during the fall and winter season. In fact, many of the most useful vegetables such as onions, cabbage, spinach, carrots, beets, mustard, lettuce, radish, and Irish potatoes, will produce well with average care.

The first job in your fall garden should be cleaning off all weeds and vegetation before the soil is plowed. Plowing should be done 4 to 5 inches deep, taking care to thoroughly pulverize the soil especially if it breaks up cloddy. If barnyard fertilizer is available, apply it broadcast over the surface. Don't worry about getting too much, - the more the better. This material will greatly increase the water holding capacity of the soil and prevent packing. Before planting the seed, give some consideration to commercial fertilizers. In areas of sandy soils and adequate moisture, commercial fertilizers analyzing 4-12-4 or 5-10-5 applied at the rate of 3 to 4 lbs. per 100 feet of row will stimulate quick growth.

Plants such as tomatoes, peppers, and egg plant which have survived the summer, may be stimulated into new fall growth and production by applying two or three tablespoonfuls of fertilizer per plant. Chop the fertilizer into the soil 6 to 12 inches from the body of the plant for best results.

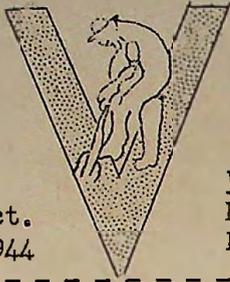
In purchasing seed for the fall garden, it is advisable to secure a little more seed than for the spring garden because germination at this season is not generally quite so good. Seed with a hard seed coat such as beets and spinach should be soaked over night in water before planting. It is also a good plan to firm the soil over the seed after planting by tramping with a hoe or even walking over the row after the seed are covered. Irish potatoes can be made to come up more readily by covering the potatoes with damp sacks or straw for several days until they have sprouted, then cut the seed pieces and plant.

FALL SCHOOL GARDENS

Now that the majority of rural, urban and city schools have begun, we have a wonderful opportunity to get in some good "selling" on fall gardens to pupils to not only take home but the idea of fall school gardens has many possibilities. The fall school garden should have more possibilities and merit than spring school gardens since all vegetables grown can be used in the school lunch room. Pupils desiring to "earn" all or part of their lunch money might do so in the garden. We shall be glad to work with agents in any way possible to fully develop such a program.

GREEN MANURE CROP IN THE OLD GARDEN

In all probability the fall garden does not cover the entire garden plot or it may be in an entirely different location. Most garden plots may be profitably planted to a fall green manure crop and well fertilized. Turn under next spring



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Victory Garden Reminders

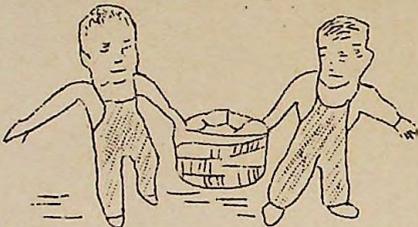
Oct.
1944

By
Extension Horticulturists and Extension Entomologists

No. 22. YAMS FROM THE GARDEN INTO STORAGE.

Texas can now boast of having almost one million Victory Gardens in 1944. Before the year is gone we will have reached and probably exceeded that figure. Many gardeners are new and inexperienced at the job, and it has been necessary for them to be constantly on the alert to learn a thousand-and-one points in growing vegetables.

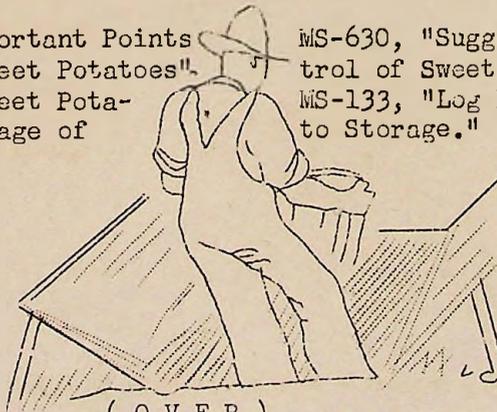
Some of these new gardeners are more fortunate than others in having garden space large enough for sweet potato production. That, of course, means that a new responsibility is approaching -- that of properly handling and storing a few bushels of sweet potatoes. The following points may be helpful in doing the job.



1. Your potatoes are mature enough to dig and store when cut surfaces dry quickly. Go over the patch and take a half dozen random samples for testing.
2. Just in case Jack Frost beats maturity to the draw, go out immediately after the frost and cut off all vines to prevent the injury entering the potatoes. Then dig the potatoes within two or three days, or sooner if conditions are favorable.

BRING THEM IN OUT OF THE SUN.

3. Yams should be dug when the soil is relatively dry so there will be little or no dirt adhering to the potato.
4. Dig and handle very carefully to avoid cutting or bruising.
5. Do not leave exposed to hot sun after they are dug. This induces decay.
6. Place in crates and in storage in such a way as to give complete air circulation on all sides.
7. Temperature in storage should be between 48° and 60° F. Slightly below 48° will cause chilling and poor keeping; above 60° will likely induce sprouting and greatly reduce the quality of the potato. Temperature up to 85° F. for the first ten days to two weeks after harvesting is fine to drive out excess moisture.
8. References: MS-342, "Important Points in Handling and Curing Sweet Potatoes". F.B. 1442, "Storage of Sweet Potatoes." MS-676, "Farm Storage of Sweet Potatoes in Earthen Banks." MS-630, "Suggestions for the Control of Sweet Potato Diseases." MS-133, "Log Houses for Sweet Potato Storage."



(OVER)

INSECTS IN THE GARDEN.

Conditions in the past two weeks have been ideal for the development of garden web worms, fall army worms and salt marsh caterpillars. All three of these worms are general feeders and will cause serious damage to young, tender vegetables, if they are not controlled. For small gardens, the best material to control these pests is a rotenone-sulphur dust mixture. For best results this dust should contain at least .75% rotenone.

The young worms are readily killed with the above dust mixture, but the older worms are more resistant to the insecticides and several applications at five-day intervals may be necessary before the worms are controlled.

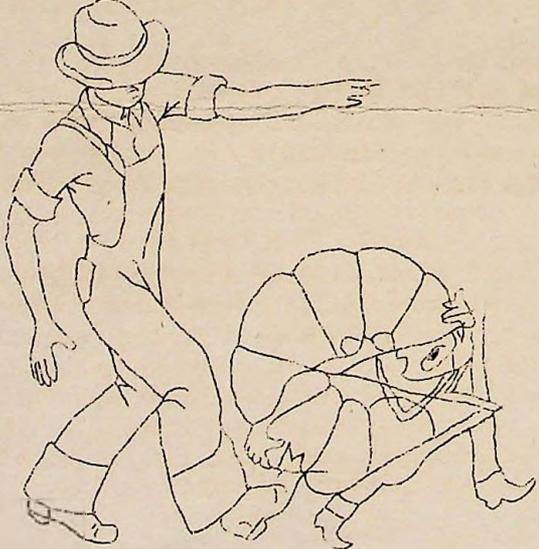
In larger gardens, where the cost of production is a major factor, 1 part of cryolite to 2 parts of sulphur can be used instead of the above mixture. The cryolite dust mixture is cheaper and will control the worms.

Plant lice or aphids, which are tiny insects feeding principally in the terminals or underneath the top leaves of many vegetable plants, are common in most gardens at this time of the year. There is only one way to prevent plant lice damage -- dust or spray the vegetables thoroughly before the lice have a chance to build up a high population. As soon as the first lice appear, dust the vegetable plants with a rotenone dust, or dust or spray with Blackleaf 40 (nicotine sulphate) according to directions on the bottle. Add 1 cubic inch of soap, or 1 tablespoonful of household ammonia per gallon, if the spray is used. If the dust is used, a good grade of hydrated lime should be used with the Blackleaf 40.

In addition to the pests already mentioned, there is one other pest that is commonly found in fall gardens. This insect is a tiny black jumping beetle, commonly known as the flea beetle, that eats tiny holes in the leaves of turnips, mustard, radishes, and many other vegetables.

The rotenone dust or the cryolite dust as mentioned for the control of worms will give satisfactory control of the flea beetles.

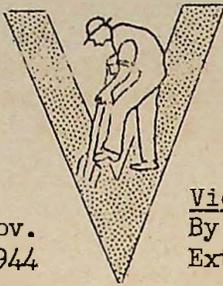
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A WORM IN TIME SAVES 999:--

- Spade the garden early.
- Keep weeds cut down.
- Clean up trash and litter.
- Spray plants thoroughly.

* * * * *



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Ide P. Trotter, Director

Nov.
1944

Victory Garden Reminders

By
Extension Horticulturists, Texas A. and M. College

No. 23. FALL VEGETORIALS

Drouth during the past thirty days has slowed vegetable planting, especially those vegetables which are usually planted in October, after cool weather has begun. Recent showers in most sections, followed by cool days and nights, serve to remind us that planting time is here.

If you live in Central or South Texas, you can plant these now.

Beets. If your first planting did not come up or possibly insects damaged them, you can still have beets this winter by planting now. Soak the seed over night to hasten germination. The Detroit Dark Red or Crosby Egyptian are good varieties.

Carrots. One of the most cold-resistant vegetables that we have. If planted sufficiently early to become established before cold weather, your fall planting will go through the winter for continued use into the late spring. Remember that fall planted carrots yield better and have higher quality than spring carrots. If the soil is inclined to be compact, spade to a depth of 10 inches to provide deep, loose growing area in which the carrots will develop normally, otherwise many small roots will develop.

Cabbage. Those who have planted cabbage seed to be thinned doubtless have good size cabbage plants at the present time. If plants are to be purchased, now is a good time to set them. A teaspoon of commercial fertilizer, a No. 2 can of rotted manure, and about a pint of water around each plant at time of setting will do the job. Repeat the watering every other day until the leaves stop wilting during the day. When wilting ceases, they have definitely made up their minds to head or "bust." Sometimes they do both. Charleston Wakefield, Copenhagen Market and Glory of Enkhuisen are good varieties. "Glory" is the heaviest yielder, while Charleston and Copenhagen are quicker to head.

Spinach. It's spinach planting time now. Spinach likes a firm seed bed. Freshly bedded rows should be "firmed" by tamping with the hoe or even walking on the row before planting. Areas having considerable winter rainfall should always plant on beds to insure drainage. Spinach will not stand wet feet. The Giant Nobel, a smooth leafed type, is best for humid areas. In the drier sections Bloomsdale Savoy is the choice of varieties.

Onions. Clumps of young shallots can be divided now. These clumps of six or eight young plants can be separated, leaving two or three in a clump, to quickly develop finger-size green onions. As soon as onion plants come on the market, put out a row to mature next spring. Sets can still be planted to produce green onions. Be sure to eat them all up during the winter. The bulb onions coming from sets do not keep as well as those grown from plants.

Fall Irish Potatoes. Let them grow until a hard freeze kills back the tops to ground level. They are just now getting down to "making" and if frost will hold off a few more weeks, we will really have some good potatoes to dig.

(OVER)

Head Lettuce. Lettuce seed germination this fall has been poor. High temperatures are responsible. This vegetable doesn't like heat and won't even try to grow unless the weather is cool. If your first planting refused to grow, try another one now, using New York, Imperial, or Hanson.

A GOOD GARDENER IS SMART AND LOOKS AHEAD.

Tip No. 1. As soon as the fall potatoes are dug, replant these rows with onions from plants.

Tip No. 2. Follow the green beans with Chinese cabbage.

Tip No. 3. Follow tomatoes or squash with a second planting of spinach.

Let's Keep The Ground Busy

* * *

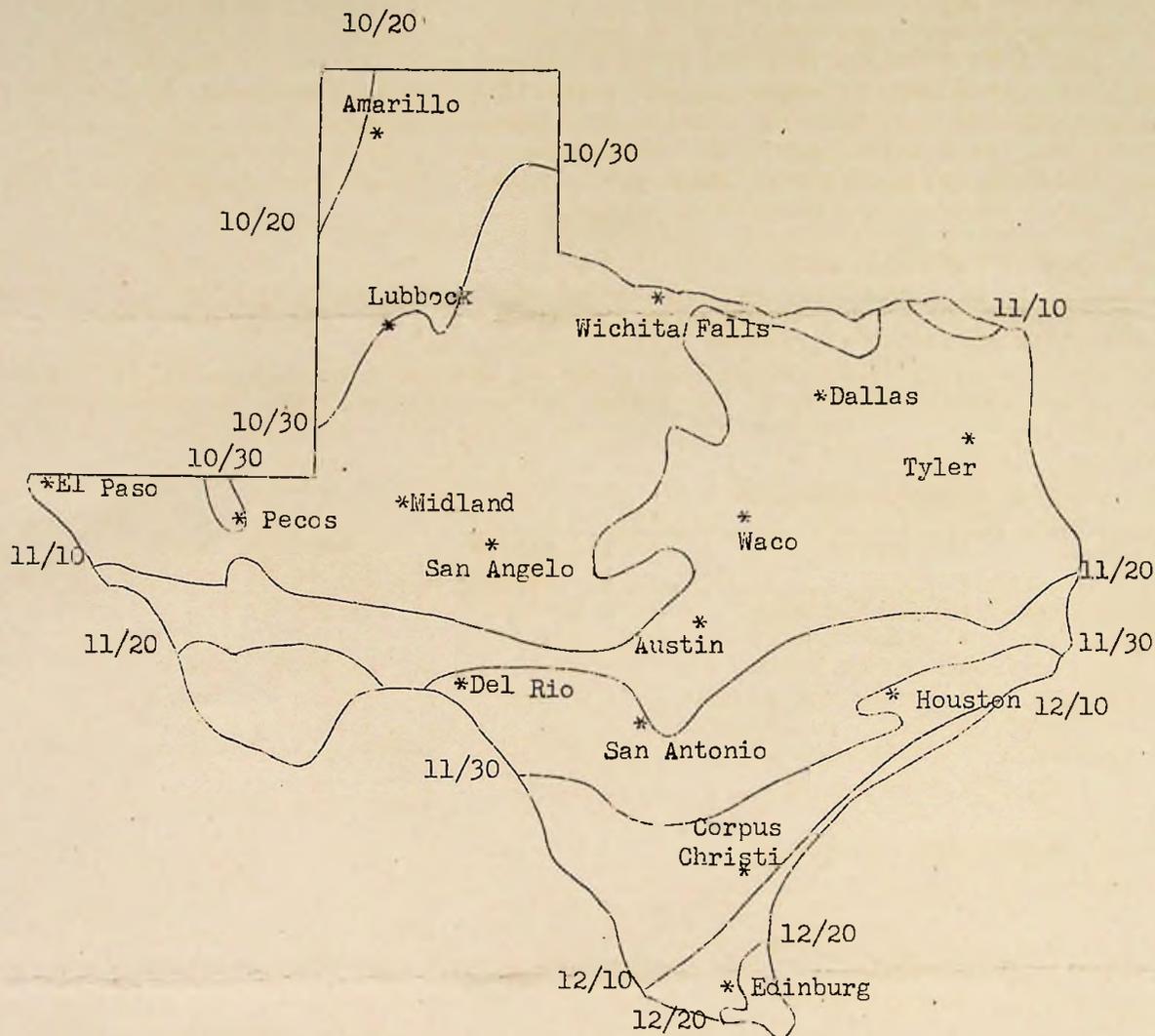
FRUIT DRIPPINGS.

A Big Pecan Crop. The crop estimate for Texas is 43 million pounds -- plenty of pecans for everybody.

Thrashing. It doesn't hurt the trees if the nuts are knocked off with cane poles, if the twigs and branches are not damaged in the process. A canvas cover or wagon sheet spread over the ground before thrashing is begun will enable those doing the harvesting to get the pecans up more quickly.

Drying. Pecans are often harvested and placed in storage before the meats are thoroughly dry. Heating and molding of the meats may result. If pecans are harvested in large quantities and piled in bins, ample ventilation should be provided. It is better to keep the pecans in sacks for 10 to 15 days where air can circulate freely over and around them.

Storing. Pecans can be kept in storage for two or three years in good condition if properly handled. In freezer lockers shelled meats will keep satisfactorily for three years. Place the shelled meats in tin cans or any other tight container and place in storage in December. Pecans in the shell may be placed in cold storage at 32° to 36° F. It is important that pecans that are to be held for long periods of time be placed in cold storage before any deterioration in the meat begins. Do not delay putting in storage if best quality is to be maintained over a long period.



The map above shows the average dates of the first fall frosts in the various areas of Texas. By locating your county you can determine the proper planting dates for the various fall vegetables.

by late gardening time. If the garden plow is an old one, it is likely infested with nematodes, root rot or some other disease or insect troubles. A change in garden plots would probably be advisable. Plant the new location to oats, rye, barley, vetch or similar crops.

KEEP YOUR VEGETABLES GROWING

Early planted vegetables are probably about ready now for some "growth shots". In areas where it can be used, dissolve $\frac{1}{2}$ to 1 lb. of 5-10-6 or similar fertilizer in 5 gallons of water and use 15 to 20 gallons of the solution per 100 feet of row. Apply 6 to 8 inches from the plants. Heavy application of barnyard fertilizer with 4 to 5 lbs. of super phosphate per 100 pounds of barnyard, followed by heavy watering will also "do the trick". Where yellowing or chlorosis is bothering the vegetables, add 1 lb. of copperas to 5 gallons of the solution or 10 lbs. of barnyard fertilizer, whichever is used. Repeat side dressings every two to three weeks or as often as is needed.

FALL VEGETABLE PLANTING CHART

Some vegetables are more cold resistant than others. This should be given consideration in selecting vegetables to go into your garden. The following table should serve as a guide in determining planting date of various type vegetables in any given locality, with the assistance of the fall frost map on the back of this sheet.

Table I. Frost Tender Vegetables

A. Kind	B. Variety	C. Days to Harvest	D. Planting in Fall	
			Before Frost	After Frost
Irish potatoes	: Bliss Triumph	: 75-100	: 65-100	: xx
English peas	: Thomas Laxton	: 50-75	: 50	: 10
Radishes	: Scarlet Globe	: 30-40	: 80	: 10
String beans	: Stringless green pod	: 45-65	: 70-140	: xx
Lettuce (leaf)	: Black Seeded Simpson	: 50-80	: 20-80	: xx
Lettuce (head)	: New York No. 12	: 80-100	:	:
Mustard (head)*	: Tendergreen	: 20-30	: 80	: 10

Table II. Semi-Hardy Vegetables

Carrots	: Chantenay or Danvers	: 75-100	: 20-80	: xx
	: Half Long	:	:	:
Cabbage (plants)	: Charleston Wakefield	: 90-110	: 80	: 10
" "	: All Head Early	: 80-110	:	:
Turnips	: Shogoin	: 60-75	: 5-80	: xx
Beets	: Detroit Dark Red	: 90-120	: 80	: 10
Swiss Chard *	: Lucullus	: 50-60	: 50-170	: xx

Table III. Frost Hardy Vegetables.

Collards* plants	: Louisiana Sweet	: 90-110	: 20-85	: xx
Onions (sets or plants) *	: White Bermuda	: 80-90	: 50	: 40
	:	:	:	:
Shallots	: Shallots	: 70-80	: 50-95	:
Spinach	: Long Standing	: 60-90	: 50	: 10
	: Bloomsdale	:	:	:

*Harvest before maturity.