COOPERATIVE EXTENSION WORK
IN
AGRICULTURE AND HOME ECONOMICS
STATE OF OKLAHOMA
E. A. MILLER, Director

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Horticultural Food Budget

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Vegetables and fruits constitute a very important part of the diet. They are valued especially for bulk, mineral salts, acids, and important growth promoting elements. They provide variety to the diet and furnish heat and energy as well.

The following budget is estimated for five persons and is based on the use of at least two servings of fruit, one serving of potatoes, and at least two servings of other vegetables daily throughout the year.

In order to provide the required number of servings of fruit and vegetables listed in this budget it will be necessary to conserve a considerable amount by canning, drying or storing.

Garden of Mamie Walker, Oklahoma City.

HORTICULTURAL FOOD BUDGET

It is very desirable that all of these products be used by everyone. If any of these are omitted amounts of others should be increased to take the place of those omitted:

Kind of Vegetable	No. of servings or helpings per year for each member of the family	Quantity necessary for required number of servings (five persons)	Length of row required for five persons
Greens—Spinach or Mustard or Lettuce or Wild Greens or Beet Tops	104	130 lbs. or 65 qts.	1 lb. to 7 ft. of row
Swiss Chard	.....	.....	1½ lbs. to 7 ft. of row
Tomatoes	156	200 lbs. or 65 qts.	100 ft.
Cabbage or Cauliflower	156	200 lbs. or 100 qts.	100 ft.
Onions	104	130 lbs.	200 ft.
Carrots	20	25 lbs. or 35 qts.	50 ft.
Squash or Pumpkin	20	25 lbs.	25 ft.
Turnip or Rutabaga	52	75 lbs.	100 ft.
String Beans	104	130 lbs. or 65 qts	200 ft.
Asparagus	.....	.....	50 ft.
Green Peas or Lima Beans or Corn	156	200 lbs. or 100 qts.	200 ft.
Beets	52	75 lbs. or 35 qts.	50 ft.
Potatoes (Irish or Sweet)	365	900 lbs.	900 ft.
Parsnips	20	25 lbs.	40 ft.
FRUITS			
Apples	104	160 lbs. or 70 qts.	
Peaches	52	80 lbs. or 35 qts.	
Plums	52	80 lbs. or 35 qts.	
Berries	104	160 lbs. or 70 qts.	
Cherries	52	80 lbs. or 35 qts.	
Rhubarb	26	40 lbs. or 20 qts.	
Pears	52	80 lbs. or 35 qts.	
Grapes	52	80 lbs. or 35 qts.	
Melons	20	.....	
Prunes	26	30 lbs.	

In order to furnish the timely requirements in the way of vegetables for the budget outlined it will be necessary to raise a good garden. By a good garden is meant one which will furnish the following:

(1) A supply of a variety of fresh vegetables from early spring until killing frost in the fall.

(2) A supply of certain vegetables for storage in a fresh state for winter.

(3) A surplus for canning and drying.

From the above it is seen that a good garden would include a spring, summer and fall garden. The summer and fall gardens are dependent on

the spring garden, while the fall garden is especially dependent on the summer garden.

EARLY GARDEN

The factors which should be considered in raising an early garden are:

(1) The use of good seed.

(2) The planting of cabbage, cauliflower, lettuce and onion seed in the cold frame in October or the securing of the so called frost proof plants of the above vegetables in early spring.

(Write for Circular No. 68, which gives details for raising these plants.)

(3) Selection of an early soil, preferably with a gentle southern slope.

(4) Fall manuring and plowing. Early plowing frequently permits early seeding.

(5) The use of the hot-bed. (Write for Circular No. 113, Hotbeds and Cold Frames.)

(6) The planting of early varieties. (Write for Circular No. 70, revised, "The Small Home Garden.")

SUMMER GARDEN

The success of a summer garden depends upon, (1) Cultivation, (2) Proper selection and arrangement of vegetables in the spring garden.

Cultivation.—It is a recognized fact that moisture is the crop limiting factor in Oklahoma and the only summer sources of moisture are rain and irrigation. (Write for Circular No. 72, revised, Cypress Lath Sub-Irrigation System.)

The average gardener too frequently considers cultivation only as a means of destroying grass and weeds. The main function of cultivation is to conserve moisture and to keep down the grass and weeds. A soil mulch should be maintained on all ground in the garden not actually occupied by plants throughout the entire growing season.

Too frequently when the harvest season begins, the cultivation of the garden ceases. This is a serious mistake. Best results cannot be obtained from the growing crops because there is competition between the vegetables, grass and weeds for moisture and food material. Again, where a soil mulch is not maintained there is an excessive loss of moisture which is a decided disadvantage to any subsequent planting.

Selection and Arrangement of Vegetables.—As a general rule, it is difficult to plant and mature vegetables in Oklahoma during the summer. Therefore, a good summer garden will depend principally on the selection and planting of long lived drought or semi-drought resistant vegetables in the spring garden. Among such plants that may be successfully grown in Oklahoma are speckled pole lima beans, beets, carrots, celery (in the moist sections), Swiss chard, collards, corn, cucumber, egg plant, melons, okra, onions, parsley, parsnips, black eyed peas (or other varieties of cowpeas), peanuts, peppers, pumpkins, salsify or oyster plant, New Zealand spinach, squash, sweet potatoes and tomatoes. Fram this list by proper selection quite a variety of vegetables may be made available for the table during the summer when normally fresh vegetables are usually scarce.

The arrangement of the plantings in the spring and summer garden is an important factor in the raising of a fall garden. The perennials such as small or bush fruits, asparagus, rhubarb, horse radish, etc., should be planted at one side of the garden and followed by such vegetables as will occupy the ground throughout the entire growing season such as New Zealand spinach, Swiss chard, parsnip, parsley, beets, etc.

On the opposite side begin with the radishes, lettuce, spinach, mustard, etc., (short lived vegetables), followed by longer lived vegetables.

As the short lived vegetables are harvested, clear off the old plants and prepare the ground for successive crops or keep the ground cultivated so it will be ready for the fall plantings. (Study carefully the table arrangement of vegetables in the garden.)

Table of Arrangement of Vegetabl

100 x 140 feet-

No. of Rows	Kind of Vegetables	Variety
1	Asparagus	Palmetto (roots)
1	Rhubarb	Victoria
1-3	Horse Radish	Maliner Kren
2-3	Winter Onion	Potato or Shallot
1-2	Spinach	New Zealand
1-2	Swiss Chard	Lucullus
1	Carrot	Early Scarlet Horn
4-5	Parsnip	Guernsey
1-5	Parsley	Triple Curled
1	Beets	Early Blood Turnip
1	Salsify (Oyster Plant)	Sandwich Island
1	Okra	Dwarf Prolific
1-2	Egg Plant	New York Beauty or Improved
1-2	Pepper	Long Red Cayenne (hot long) Chili (hot small) Chinese Giant (sweet)
2	Tomato	Marvel Wilt Resistant
1	Beans (pole)	Kentucky Wonder
1	Beans (pole)	Speckled Lima
1-2	Cucumber	White Spine
1-2	Squash	Patty Pan
1	Watermelon	Irish Gray
1	Cantaloupe	Rocky Ford
4	Sweet Potato	Nancy Hall
4	Beans (bush)	Green Pod Stringless
4	Corn	Golden Bantam
4	Onions	Bermuda Seedlings
2	Cabbage	Jersey Wakefield
5	Irish Potatoes	Early Ohio, or Irish Cobbler
2	Turnips	Early White Milan
4	English Peas	Alaska and later varieties
1	Mustard	Giant Southern Curled
1	Spinach	Victoria
1	Lettuce, followed by Radishes	Big Boston
1	Radishes, followed by Lettuce	French Breakfast and White Icicle (half and half)

TABLE C

The table above was prepared to assist in meeting the vegetable requirements of the food budget. It will be seen that some vegetables are listed that are not included in the budget. Naturally the kinds and amounts of different vegetables to be planted will be governed very largely by the individual tastes of the members of the family. In addition to the vege-

les in a Garden for a Family of Five

—Row Short Way

Distance Apart			Time to Plant
Of Rows		In Rows	
Hand Cult.	Horse Cult.		
	4 ft.	2 ft.	Spring or fall
	4 ft.	2 ft.	Spring or fall
	3 ft.	18 in.	Spring or fall
1½ ft.	3 ft.	8 in.	Spring or early fall
2½ ft.	3 ft.	2 ft.	Feby. 22 to Mar. 10
2½ ft.	3 ft.	10 in.	Feby. 22 to Mar. 10
2 ft.	3 ft.	3 to 4 in.	Feby. 22 to Mar. 10
2 ft.	3 ft.	3 to 4 in.	Feby. 22 to Mar. 10
2 ft.	3 ft.	3 to 4 in.	Feby. 22 to Mar. 10
2 ft.	3 ft.	3 to 4 in.	Feby. 22 to Mar. 10
2 ft.	3 ft.	3 to 4 in.	Feby. 22 to Mar. 10
2½ ft.	3 ft.	12 in.	April 1st to 20th
2½ ft.	3 ft.	18 in.	Hotbed or box, Feby. 22 to Mar. 10
2½ ft.	3 ft.	12 in.	Hotbed or box, Feby. 22 to Mar. 10
4 ft.	5 ft.	2 ft.	Hotbed or box, Feby. 22 to Mar. 10
3 ft.	4 ft.	2 to 4 in.	April 10 to May 1
3 ft.	4 ft.	2 to 4 in.	April 10 to May 1
4 ft.	5 ft.	3 ft.	April 10 to May 1
4 ft.	5 ft.	3 ft.	April 10 to May 1
6 ft.	8 ft.	4 ft.	April 10 to May 1
6 ft.	8 ft.	4 ft.	April 10 to May 1
2½ ft.	3 ft.	20 in.	May 1 to June 1
2 ft.	2½ ft.	1 to 2 in.	Mar. 25 to April 25, successive plantings
2½ ft.	3 ft.	12 in.	Mar. 15 to Apr. 15, successive plantings
18 in.	2 ft.	2 in., thin to 8 in.	Feb. 22 to Mar. 10
2 ft.	2½ ft.	24 in.	Feb. 22 to Mar. 10 (set plants)
2 ft.	30 to 36 in.	12 in.	Feb. 22 to Mar. 10
18 in.	2 ft.	2 to 3 in.	Feb. 22 to Mar. 10
2 ft.	2½ ft.	1 to 2 in.	Feb. 22 to Mar. 10
18 in.	24 to 30 in.	1 to 2 in.	Feb. 22 to Mar. 10
18 in.	24 in.	1 to 2 in.	Feb. 22 to Mar. 10
14 in.	24 in.	2 to 4 in.	Feb. 22 to Mar. 10
14 in.	24 in.	1 to 2 in.	Feb. 22 to Mar. 10

'OMMENTS

tables listed above, or in place of the same ones, the average farmer frequently has field plantings of Irish or sweet potatoes, winter squash, pumpkins, cantaloupes, watermelons, or corn. Where field plantings are made the size of the garden may be reduced.

The above garden was planned more especially for a farm garden,

but the general suggestions as to kinds and arrangement of vegetables, so far as space will permit, apply to the town garden.

Careful note should be taken of the fact that beginning on one side of the garden such long lived vegetables as asparagus, rhubarb, horse radish, New Zealand spinach, etc., are planted. On the opposite side the short lived vegetables, such as radishes, lettuce, spinach (early), etc., are planted. Again, the hardy or semi-hardy vegetables (the ones planted early), are arranged so they may be planted without leaving any vacant spaces, as we proceed from side to side.

The number of rows show the proportional amounts of plantings of the different kinds of vegetables.

PLAN

It would be impossible to carry out the plan as suggested in the "Table of Arrangement of Vegetables in a Garden" without a carefully prepared plan in advance. Too frequently a gardener starts planting with the first package of seed he comes to and continues to plant until all that kind is gone. He picks up the next most convenient package and repeats the operation and so on and as a result there is no arrangement or proper proportion of the different kinds of vegetables.

Measure the length and breadth of the garden, then get a piece of white wrapping paper, yard stick and pencil, and lay off the garden plat to a scale. It is suggested that a scale of one-eighth inch to a foot be used, that is to say, when your garden plat is one hundred feet by one hundred fifty feet, your drawing will show it to be twelve and one-half inches by eighteen and three-fourths inches.

Swiss Chard in October.

Speckled Pole Lima Beans in October

The selection of kinds of vegetables to be planted in the garden, drawing of the garden to a scale and the arranging of the vegetables should interest the entire family some January night by the warm fireside.

FALL GARDEN

The long lived drought or semi-drought resistant vegetables planted in the spring garden and cared for during the summer, will go a long way toward making a good fall garden.

Where successive crops are not planted during late spring or summer, clean off the ground and keep it cultivated just the same as growing crops, thus conserve the moisture and keep the ground clean. Too frequently the gardener is not prepared for the late summer rains. Where cultivation, as suggested above, is kept up sufficient moisture, as a rule, will be available for planting and growing additional vegetables in the late summer and fall. (Write for Circular 113, "Fall Gardening.")

EGG PLANT, PEPPER AND TOMATO PLANTS

It will be noted in the table of "Arrangement of Vegetables in a Garden" under egg plant, pepper and tomato that the time of planting designated is February 22 to March 10. It should be carefully noted that the seed of these plants are placed in a hotbed or in a box in the house. In about four weeks these seedlings may be transplanted to a cold frame and finally set in the garden when all danger of frost is past. (Write for Circular 115 on "Hot Beds and Cold Frames.")

N. B.—For additional information, it is suggested that you secure the circulars referred to.