

and allowed to grow up to weeds, which is worse than having no garden. The size of the family, the kinds of vegetables grown, the fertility of the soil, the season, and the methods used determine to a large extent the proper size of the garden. From observations made by the writer, a garden 50 x 50 feet where irrigation is possible, and 50 x 100 feet in the unirrigated districts, should produce an abundance of vegetables for a family of five. This does not include the area necessary for the main crop of potatoes. The area available on some city lots may be only a few hundred square feet, but even this amount of land, properly handled, can be made to produce enough radishes, lettuce, etc., for the table during the summer.

FERTILIZERS.

Well-rotted stable manure is the best general fertilizer for the garden. While the plant-food content is not as high as in some of the commercial fertilizers, it is of great value to improve the physical condition of the soil. It makes clayey soils lighter, earlier, and easier to work, and makes sandy soils retain moisture better, increasing the supply of available plant-food, and preventing them from blowing. Where winter rains are common, and especially on sloping land, manure should not be applied until spring.

Where stable manure is not available, commercial fertilizers should be considered, or they may be used to advantage in conjunction with stable manure. Their main value lies in the amount of nitrogen, phosphoric acid, and potash they contain. They appear on the market in many forms, and before buying any a complete knowledge of their plant-food contents should be obtained. By comparing the guarantee on the label on the sack with the tables in Circular No. 28, "Fertilizers for Fruits and Vegetables," which may be secured upon request from the Department of Agriculture, a knowledge of their actual value may be secured. This will show whether they are really worth the price asked; but careful experimenting with different fertilizers on the garden is the only way to determine whether it will pay you to apply them. Where the elements are applied separately, the potash and phosphoric acid manures should be applied during the fall or winter, and the nitrate of soda, from which we get our nitrogen in its most available form, should be applied in light applications (usually $\frac{1}{2}$ to 1 lb. per square rod) at intervals of about three weeks to the growing crops.

Crops grown for leaf production, as lettuce and cabbage, require more nitrogen than do the root and tuber crops, potatoes, turnips, etc., which require more potash and phosphoric acid. Where plants are grown as in a vegetable garden, it is often impossible to consider their individual fertilizer requirements. The following mixture is recommended as a general dressing for a vegetable-garden 50 x 50 feet: Nitrate of soda, 16 lb.; muriate or sulphate of potash, 25 lb.; and phosphoric acid in the form of bone-meal finely ground, 50 lb., or acid-phosphate, 15 lb. If possible, these three fertilizers should be applied as suggested above.

Lime is beneficial to most soil, and especially if it is inclined to be sour. From 50 to 100 lb. is sufficient for a plot 50 x 50 feet. It should be applied in the fall or very early spring. As the results last over a number of years, an application every four or five years is sufficient.

PREPARATION OF THE SOIL.

The vegetable-garden should be ploughed or spaded to a depth of 7 or 8 inches in the fall. This will open the soil to the effects of the weather, and also destroy many injurious insects, besides permitting the soil to absorb any moisture which may fall in the form of rain or snow. If fresh stable manure is used, it should be applied in the fall.

In the spring, after the land is ploughed again and harrowed well, the surface should be worked and reworked with a hand-rake until it is freed from all clods and is fairly firm. Having done this, the seed-bed is prepared, but any portion of the garden not planted at the time of preparation should be hoed and reraked previous to following plantings in order to conserve moisture and to kill any weeds which may have started.