



An Up-to-Date Power Sprayer Well Adapted for Use in Old Orchards

lines, last summer the trees thinned from three to five inches produced five hundred and fifty pounds of fruit, while those that were unthinned produced five hundred and fifty-five pounds, but in the latter case there were six thousand peaches and in the former only a little over three thousand; or in other words, the peaches from the trees that had been thinned were almost twice the size of the others. From the trees that were thinned from five to seven inches, we obtained four hundred and forty-six pounds of fruit, but they were all exceptionally large and of excellent quality.

No safe distance to thin can be recommended, but in no case should two peaches be allowed to touch each other unless they are on opposite sides of a fairly large twig. They color and mature much better if they do not touch each other. When thinning fruit a man must use his own judgment. If he is in doubt whether the fruit should be taken off or not, he should take it off, because in nearly every case when the trees appear with only half a crop in the early season, later, when the fruit is large and more developed, the trees have all that they can bear.

What Tests of Commercial Fertilizers Have Shown

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(Continued from March issue)

It may be stated in a general way, that nitrogen forces leaf and stem growth and tends to delay the ripening process. Phosphoric acid aids in the formation and transportation within the plant of the protein and hastens maturity, while potash appears to be essential to the formation and transportation of starches, sugars, and so forth. With many of the crops of the market gardener, especially those sold in the immature state, quality is dependent upon, or measured by, both appearance and palatability: Palatability is determined by the succulence and sweetness of the vegetable, or by its freedom from bitterness, stringiness and other undesirable characteristics which frequently exist. These can be largely eliminated by providing an abundance of food for a continuous and rapid development of the plant. Any delay in the growth of a radish or of lettuce is largely responsible for the sharp taste and pungent flavor

of the former, and the bitterness and toughened fibre of the latter. For crops of this nature a generous supply of potash and phosphoric acid is essential, but nitrogen is the constituent which should predominate.

WHEN TO USE NITROGEN

When plants must be allowed to mature, as with the tomato, corn, potato, sugar beets, and so forth, a soluble form of nitrogen, as nitrate of soda, may be used early in the season to insure a good start, but it should be withheld during the latter stages of growth in order that the mineral constituents may have a chance to bring on maturity.

Big fleshy leaved plants, such as cabbage, cauliflower, and tobacco, require large quantities of potash. This is also true of such crops as potatoes, mangels, parsnips, and so forth, which store starch or some other form of carbohydrate in the tubers or roots of the plants.

Just as plants differ in their food re-

quirements they also differ in their ability to gather their food. This appears to be due, not only to the time of the year they make most of their growth, the length of the growing period and the depth and range of the roots; but, also, to differences in the ability of various plants to attack certain soil constituents. Consequently, a man must study his soil and crops to become familiar with the peculiarities of each and seek to provide in the form of commercial fertilizers that which the particular plant he is dealing with stands in most need. It is because this has not been done that so many people have failed to obtain results from the application of fertilizers.

EXPERIMENT FIRST

To become familiar with the needs of the soil, the requirements of the crops, and, at the same time, learn something about the influence of the various constituents of plant food on the crops he wishes to grow, it is advisable for the beginner to do some experimenting before he invests heavily in expensive fertilizers. Such an experiment may be made on the vegetables with comparatively small plots, say one-twentieth of an acre, or even smaller, but, where space will allow of it, larger plots are better. The arrangement may be as follows:

Plot I.
Check.

Plot II.
Nitrate of soda.....at rate of 200 lbs. per acre
Superphosphateat rate of 500 lbs. per acre
Muriate of potashat rate of 200 lbs. per acre

Plot III.
Nitrate of sodaat rate of 200 lbs. per acre
Superphosphateat rate of 500 lbs. per acre

Plot IV.
Nitrate of sodaat rate of 200 lbs. per acre
Muriate of potashat rate of 200 lbs. per acre

Plot V.
Superphosphateat rate of 500 lbs. per acre
Muriate of potashat rate of 200 lbs. per acre

Such an experiment shows the effect of the addition of the three main fertilizing constituents, nitrogen, phosphoric acid, and potash, against no fertilizer on the check plot, and as on each of the succeeding plots one of the constituents is omitted, a chance to note the effect each ingredient has on the crop. Naturally, the experiment must be placed on soil that is uniform and all the plots must receive the same cultivation. The experiment may be made even more simple by applying the mixture suggested for Plot II. above to one plot and nothing on another. However, such an experiment gives no idea as to whether the soil is deficient in any one constituent. This experiment is one that is always to be used where the complete mixed fertilizers are used, for it is the only way that one can demonstrate whether the fertilizer is really doing any good.

With reference to the use of fertilizers with fruit crops, we in this country have very little absolute data to quote from.