Manures and Fertilizers.

THE SPECIAL NEEDS OF CROPS.

There is a kind of farming where natural fertility, however great, is in-adequate to meet the special needs of

There is a kind of the special needs of the crops grown. In the growing of these, as in market gardening, the farmer should consider both yield and quality. These characteristics are only perfectly acquired by the particular crop when an abundant supply of plant food is available: a. deficiency of food is particular crop when an abundant supply of plant food is available: a. deficiency of food is found mainly in yield, the returns being measured by the size of the crop and not by its quality. Fortunately, most garden crops belong to a distinct class, which possess a low fortility value and a relatively high commercial value.

If it is remembered that the sale of crops is virtually a sale by the farmer of so many pounds of nitrogen, phosphoric acid and potash, in crops of this sort, the constituents are soid at the maximum price, and therefore the cost of the plant food applied, although the amounts used may be regarded as enormous, is but a small preportion of the value of the increased crop. Take spangus, for example, the market value of this crop is in large part governed by the size, suculence and sweetness of the cdube shoots, spindling shoots, or any bitterness or stringyness, is accompanied by a lower market value of this crop is in large part governed by the size, suculence and sweetness of the cdube shoots, spindling shoots, or any bitterness or stringyness, is accompanied by a lower market value of the food any value. The extreme cost of the plant food and the crop from that acre. An application of 350 worth of plant food will of the growth, and tertilization which scanetimes amounts to one ton per acre of a high-grade mixture win bear no adequate relation to the total value of the crop from that acre. An application of 350 worth of plant food will often prove more protiation for the conditions of growth and terminate for the acre of a high-grade mixture win bear no adequate relation to the total value of the crop from that acre. An application of 350 worth of plant food will often prove more protiatio

special kinds and forms of plant fool be supplied. The crops are artificial rather than natural and require a forc-ing beyond that possible from natural stores in the sell.

Many advocate the exclusive use of barnyard manures for crops of this character, but they cannot economically need the situation as well as the com-

meet the situation as well as the commeet the situation as well as the com-mercial fertilizer, because it is not pos-sible to so readily adjust the supplies of plant food in them as to result in the greatest and most perfect produc-tion, besides if they are as good the supplies are inadequate and too expen-sive. It is here that fertilizers must be used, and in constantly increasing sive. It is here that fertilizers must be used, and in constantly increasing quantities and definite knowledge concertang their character and methods of use is especially demanded, for net only is there a larger consumption each year, but the consumers are demanding quality of product also, which can be met most surely and economically by artificial supplies of plant food. [Pirector E. B. Voorhees, N J Exp Sta.

FERTILIZING THE ORCHARD.

Richness of soil-in plant food is just an important in an orchard as elsewhere. Too often the orchard is negwhere. Too often the orchard is neg-lected in this respect and no orchard can go on giving profitable returns for a long series of years without being fed. This must be done by applying manure knong the trees, as it is not possible to rotate. One of the best manures for fruit trees is the manure from the horse tree. It is hardly possible to the

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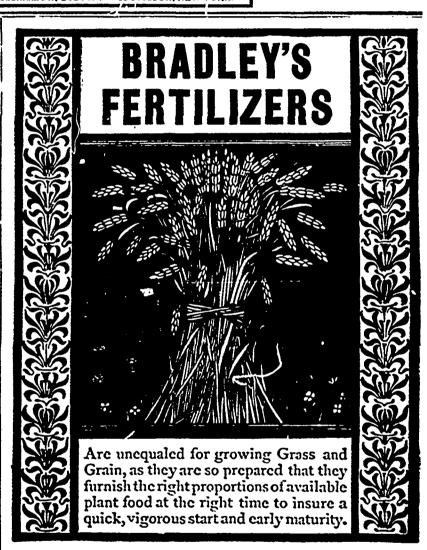
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it will soon become bankrupt, hence the wise farmer will see that he at least wise farmer will see that he at least maintains an equilibrium by depositing annually what is drawn out. This guards against the gradual removal of plant food. After a soil has once become run down, it is a very difficult matter to build it up again. It is a far more economical plan to gradually increase the productive capacity of the land.

Unleached Wood Ashes, which used to constitute the chief supply of potash, are not now to be had in sufficient quantity to suitable the demand for polarity to supply the semand for polarit Ashes are one of the safest and best sources of polarit for most crops and solls. The most economical source of supply for polarit is now generally considered to be German polarit solls, of which kalnit contains about 11 per cent of polarit.

The Next Best Thing to fertilizers and manures is to tickle the soil by frequent cultivation.

The Farmers' Produce Ass'n was recently organized at Wyoming, Del, to cover Kent Co, with A. N. Brown presi-dent and E. G. Packard of Dover as secretary. President Brown says: "We propose to ship our own produce and to have our own dealers in the markets fruit trees is the manure from the horse state. It is hardly possible to improve upon it for general fertilizing. Spread it under the trees in liberal spread it under the trees in liberal spread it under or early spring. If the irres are large, cover the entire ground except a fool around the trunks. Thus scattered, it encourages rootlets to fill the soil completely and add to the strength of the tree. If the poultry home is in or near the orchard and the pullry parded therein, they will greatly increase the fertility of the soil by the ton as herefolore. We have soon members enrolled and expect to have said haves with the crop of truit. In this section of country a low shrubby manner of growth is desirable, as it



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