

may be set for the first season 9 or 10 inches apart; as they increase in age and size they will require more space. Hybrid Perpetuals, during the first year, will do nicely at 12 inches apart, taking out and replacing elsewhere every alternate plant the second or third season. The strong two-year-old budded Hybrid Perpetual roses that we supply will require at least 2 feet apart each way.

Hamilton, Ont.

WEBSTER BROS.

FRUIT FERTILIZERS.



ECONOMICAL manuring implies the applying of elements needed for plant growth that are deficient in the soil. Ordinarily in average soil all that will be necessary to furnish is nitrogen, potash and phosphoric acid. It is often the case that there will be plenty of one or two of these, while in others all may be needed in order to secure the best results. Generally, in applying stable manure, we supply all of the elements needed. The objection to using much stable manure in the orchard is the tendency to produce too strong a growth of wood. This is rather more the case with a young orchard than after it has once become well established. For this reason, says *Western Plowman*, it is often the case that in what may be considered a fairly rich soil, strong stock manure often proves almost as detrimental as beneficial, and especially so when it contains a considerable per cent. of nitrogen. Phosphoric acid and potash are generally more needed than nitrogen. It is, therefore, largely for this reason that wood ashes and ground lime, or bone meal, can be applied to many varieties of fruits to a better advantage than fresh stable manures. If there is any difference to be made in applying the different kinds of fertilizers to different varieties of fruits, apply ground lime to the peach, cherry, and pear trees, and the wood ashes to the apple, as phosphoric acid is most needed by the first-named, and potash by the latter, but either will be beneficial to a more or less extent by the application of the other. Grapes, and in fact, all varieties of small fruits, are benefited by an application of bone meal. In all cases it is necessary to apply this fertilizer in a form that can be readily worked into the soil. One of the advantages in using either ashes, or bone meal, is that they are more readily soluble, and, in consequence, are sooner available than the average stable manure. So far as is possible, the wood ashes should be applied to fruits, both vine and tree, and if the soil is not naturally rich, stable manure may be used. But when there is a free supply of nitrogen in the soil, the most economical plan of supplying the other two ingredients, or essentials, is by using bone meal and wood ashes, using stable manure with other crops.