impression should be about $\frac{1}{16}$ in. deep—that is, not deep enough to affect the sensitive structures underneath — and the tips of the iron should be $\frac{1}{4}$ in. from where the hoof starts to form. The hoof should have repeated applications of neat's-foot oil and tar. If the sand-crack is so far back as to allow movement of the quarter and an opening and closing of the crack, a clip should be applied to hold the crack together, and a bar shoe put on if necessary. Should the sand-crack extend to the coronet, an occasional painting of tinc. canthaniln to the skin above the crack will help to stimulate the growth of the horn.

GROWTH OF FRUIT-TREES.

V. P., Devonport :—

I have a number of peach and apple trees, five years old, that I have plentifully manured with fowl-droppings, hoed in at intervals, during the last twelve months. The trees have grown well with the treatment. Is there any danger that they will grow too much wood and too little fruit ? The ground is a foot of black loam over yellow clay.

The Horticulture Division :—

It is a very desirable thing to have five-year-old apple-trees growing well, as long as they are kept well open and the wood allowed to develop properly. To what extent this should be allowed to continue is difficult to say without seeing the trees ; but it is always advisable to give preference during the first five or six years to the building of the tree rather than to fruit-bearing. Peach-trees at five years of age should be fairly large, and therefore may require steadying up. If so, open up the trees well, but otherwise prune moderately this winter. It may be found necessary to further check the trees by pruning next summer.

BROWN-FLECK IN POTATOES.

C. E., New Plymouth :—

Some of my potatoes have brown glassy lumps in them when cooked, the white part being quite good for eating. Those affected were grown in ratstail sod after the second working, and manured with a small quantity of farm manure, superphosphate, sulphate of potash, and sulphate of ammonia. I thought perhaps the disease was due to the large amount of vegetable matter in the soil. I should be glad to know if my supposition is correct, or what is the probable cause.

The Fields Division :—

The name of the disease affecting your potatoes is brown-fleck or internal brown-spot. Various causes have been assigned for its appearance, but none of them is sufficient to account for it. The soil and the weather, and even the manure, have all been brought forward as probable causes, but none have been found to hold good in every case. It is certainly most prevalent in light loam or sandy soils, but it is observed here that it usually occurs in that portion of the field where water lodges. Rapid growth is said to favour the disease, since the smaller potatoes or " seconds " are seldom affected, such potatoes being produced late in the season when growth is slow. The disease is also attributed to a want of lime or potash in the soil, but here again it has occurred where these ingredients were not lacking. Dry weather, associated with poor growth, has also been mentioned ; but in Germany damp weather is said to favour it, although under such conditions it does not always appear. It has been observed that if stable manure is applied immediately before planting it does not occur, but if applied earlier, in the previous autumn, it is liable to appear. Some varieties are more liable than others, but, on the whole, it must be regarded as a physiological and not a pathological trouble. It is not a parasitic disease, for no organism of any kind has been found associated with it, and it cannot be transferred to a healthy tuber. Diseased pieces have been inserted into sound potatoes without producing any effect, and diseased tubers have been planted from which healthy ones were produced.

As regards preventive measures, it is certainly not advisable to use affected potatoes for seed, since, whether the disease is transmitted by the seed or not, its presence indicates that the potato is at least a susceptible variety. The use of a potash manure, such as kainit, has been found in Scotland and elsewhere to have a marked effect in decreasing the disease, and may therefore be recommended.