

HORTICULTURE.

Remedies for Root Maggot.

Owing to the difficulty of destroying root maggots and other subterranean pests and the cost of chemicals for the purpose, growers depend largely upon methods of prevention. To be thoroughly effective these methods should be employed before the fly's eggs are laid.

A common method for deterring the parent flies from depositing eggs consists in placing sand soaked in kerosene—a cupful (6 fluid ounces) to a bucket of dry sand—at the base of the plants, along the rows. This mixture will also kill young maggots attempting to work through it.

For all forms of root maggots a carbolyzed form of kerosene emulsion is effective. This is prepared by adding to one pound of soap, boiled in one gallon of water, one-half gallon of crude carbolic acid, and diluting the whole with from 35 to 50 parts of water. This mixture is applied about the stalks of the plants affected. It is best to use it a day or two after the plants are up, or are transplanted, and to repeat every week or ten days until about the third week in May.

Mineral fertilizers are useful as deterrents, particularly when employed just before or after a shower has thoroughly wet the ground. The principal fertilizers for this purpose are kainit, nitrate of soda, and sulphate or chloride of potash. They may be used as top dressings before planting, or if not employed until afterwards they should be applied as nearly as possible to the roots, the earth being turned away from the plants for this purpose. These fertilizers, also, by stimulating plant growth facilitate recuperation from root-maggot attack.

There is great danger in the use of other fertilizers, such as stable manure, cottonseed meal, and organic fertilizers, comprising moldy leaves, dead plant life, and even fish scrap. In an account of this species published several years ago the writer stated that numerous instances had accumulated lately, and a long list could be furnished—where the presence of the insect could be traced to the causes above-mentioned. It is advisable therefore, to avoid the use of manure of any kind, rotted leaves, or other organic fertilizer, and, above all, to avoid further planting in fields which have been infested, or contain diseased onion plants, or where cabbage, cow peas, or any other plants have been turned under.

As soon as seed fails to appear at the proper time, or the plants show signs of wilting and maggots are found to be present, the seed may be hoed out, or the injured plants pulled and destroyed, together with the younger maggots.

Most of the methods, mentioned above have been used with success against onion maggots and other root-feeding species, and are all that are required in many cases of ordinary infestation of vegetable roots. Other remedies have been tested; mostly, however, without avail.—F. H. Chittenden, in U. S. Year Book.

One Crop at a Time.

After all that has been said and written to the contrary, many indifferent fruit growers still persist in trying to grow a crop of grain or hay in the apple orchard—trying to get two crops from the land in one year, and this often with very little cultivation or fertilization. It is said that a crop of apples takes as much out of the land as does a crop of wheat, and yet some will endeavor to produce both with less expense of putting land in condition than is given in the preparation of a field for winter wheat alone. A summer fallow is sometimes prepared for wheat, but this class of orchardist never summer fallows his orchard. When the double crop is harvested, perhaps a half a crop of wheat and practically no good apples, the grower decides that there is no money in fruit and declares in favor of the grain crop vowing to continue it and let the apples go. The bearing orchard is no place for mixed farming. It is one field which should be pulled out of the general rotation and given special orchard treatment. This means that fertilizer should be applied regularly and liberally, cultivation should be frequent and trees should be ripened up by using cover crops. The time to get in the cultivation will soon be over for this season, and the date for sowing the cover crop will soon be here. Keep the disk, or cultivator, going until the middle of July and then put on the cover crop of clover, buckwheat, cow peas, rye, or whatever you choose. The cover crop is not harvested, and all the plant food taken up by it is stored and conserved for the future use of the trees. Fruit growing and grain growing cannot be carried on successfully on the same land at the same time.

Is Lead Arsenate Affected by Frost?

Fruit and potato growers who have had spraying materials held over winter are always confronted with the question whether these have been depreciated by the time or conditions of storage. It is well known that lime sulphur is seriously weakened by freezing. It is advised, also, to keep lead arsenate protected from frost, though the necessity of this is not so clear. Prof. Harcourt of the Ontario Agricultural College, says so far as he knows lead arsenate would not be affected in any way by frost. It is a fully oxidized salt, so that it could not be affected in this way, and he cannot see why frost should in any way influence its value as a poison. He used some in his own garden this summer that was exposed to a low temperature the whole winter, and it has given excellent results. Naturally, if the container has been opened the amount of moisture will be less and the percentage of arsenic greater than in the original substance.

POULTRY.

Separate the Chickens.

Some very successful poultrymen separate their chickens as to size and age, and also according to sex, the former while the chickens are quite young and the latter just as soon as the sexes are recognizable, and a few of the more precocious males begin to "boss" the others. Some of the Mediterranean breeds develop at an earlier age than do the largest English and American breeds, and require attention earlier than do the latter classes. If the birds of both sexes are left together it will be noticed that a few of the males having the sex instinct a little earlier than the others commence to show their "authority" around the pen, with the result that the other birds become timid and remain away from the feed when their pompous mates are busy eating,

surprising how well they will stick to the place in which the first days of their lives were spent. Where this is done the various broods at least may be fed separately. But as the chickens become older the difficulty grows, they wander from pen to pen, and something is necessary to protect the younger stock, and the few birds which, for some reason, have not done as well as their mates. Small chicken-wire enclosures to keep the different sizes separated would be a good idea in this case.

The Hen in the City.

Editor "The Farmer's Advocate":

I have a fellow-feeling for your contributor who gave his experience with hens in the city. I like once in a while to come across one who will take up a sideline mostly for the fun of it, or for the satisfaction he gets out of the work without squeezing for every cent he can get out of it. There are many sidelines a city man might take up that would yield him larger returns in cash than this man got from his hens, but I think of the satisfaction of having eggs on your table that you're not afraid to boil in the shell without dreading to crack them, not knowing what you may find therein. Also the comfort it is to have a chicken that you know will roost, or a fowl that you don't have to start boiling the day before, because the age is uncertain.

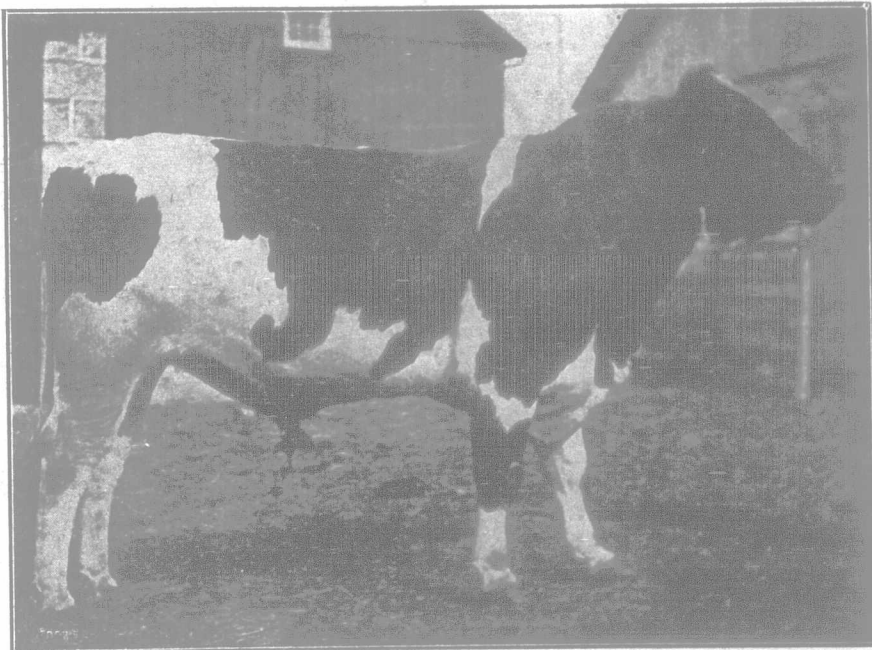
I too had an experience with hens in the city, but I think I beat your contributor in returns. I didn't feed any rats. I knew them of old, and began by making the henhouse rat-proof with metallic siding. The lot had 30 feet of frontage (or backage) and 40 feet of length was available for the hens. The house was built 3 x 12, with a 4 x 3 closet at one end for storeroom, with slanting roof, the back being on alley. I also knew the hen of old, and was wise to the fact that a small number will give better returns per hen, than if crowded. Therefore, I only wintered nine hens and a rooster. I wanted a good table fowl, as well as an egg producer, so decided on White Orpingtons. Five of them sat, and averaged about 10 chicks each. Some of the eggs were sold at \$1.00 a setting, and some of the best young stock went off for breeding purposes at good prices.

It pays the city man who keeps a limited number of fowls to have them pure-bred. They cost a little more to begin with, but he is sure to get back the extra outlay in either the sale of settings or breeding stock. But I don't consider it fair to undersell the poultry fanciers. They go to much trouble and expense to keep up good, pure-bred strains which are badly needed throughout the country. Therefore amateurs should do nothing to injure their business.

City folk won't stand trespassing hens. That was another reason why I chose a large breed. Plymouth Rocks, or Orpingtons will scarcely bother going over a 36-inch fence, if given plenty to eat. The 30 x 40 ft. space was fenced with 58-inch poultry fencing, and a fence went down the middle, dividing the yard-space in two equal portions. A door opened from each of these yards into the henhouse, but one 4 ft. gate did at the opposite end, by hanging it midway between the two yards, which were partitioned from the house yard of 20 x 30 ft.

In spring the hens were shut out from one yard simply by closing the door on that side. The ground was spaded up, and planted to radishes, lettuce, onion sets, spinach, early cabbages, early peas, beans, and sweet corn. By July 1st the bulk of this crop was used up, or nearly ready for use, so the door leading to it was opened, letting in the hens, and the other one closed. The hens would be in this new run through the blazing heat of July and August, so in addition to the corn left standing, sunflowers and sugarcane were sown to provide shelter.

The other run was then spaded, and planted to tomatoes, late cabbages, cauliflowers, turnips, and celery. As early as possible in fall, the hens were again transferred to this yard, so that the



Royalton Canary Hartoj.

The only bull in Canada, with the exception of his brother, whose dam made 34.60 lbs. of butter in seven days, and gave 116 lbs. of milk in one day, and 6,196 lbs. in sixty days. Owned by D. C. Platt & Son, Hamilton, Ont.

and run from them when these better developed birds show a desire for a test of strength, with the result that all those males which cover before their mates do not make the satisfactory growth which they should make, and the more-matured birds gain nothing from conditions either. When this stage arrives the sexes do better separated.

It is also a practice to be recommended to keep the birds in the various pens as nearly as possible of a size. Little chickens do not as a rule do as well in the same pen with and feeding from the same troughs as much larger chickens. Different hatchings, if the dates are far apart, do better kept in different pens. Inferior, sickly, or small chicks should invariably be kept away from the best stock. It is better for both. On the average farm, however, the few chickens raised have such a large free range as soon as they are big enough, that not so much attention to these points is necessary, but even then it is often noticed that when the chickens are all fed in one large flock, including big and little, weak and strong, pullets and cockerels, many of the smaller and weaker birds do not get their share, and are timid of a few of the bigger, stronger cockerels. It is well, where possible, to raise the various broods in different small pens, and teach them to go to roost in their own pens. This is not difficult, for it is