

have tarred the cracks. A friend of ours was once troubled with chicken cholera, and by adopting the above in connection with removing affected fowls, he soon put a stop to the ravages. A small lump of tar in the drinking water supplied to the fowl will be found beneficial, provided it is the Carolina tar, which is very different from other kinds.—[Ex.]

### Much Trouble with Cholera.

There is much dysentery or cholera among the chickens of the country. Almost every mail brings us enquiries for a treatment for chicken cholera or submitting symptoms of that disease. The most pronounced symptom of the affected fowls is diarrhoea, and as this may accompany either dysentery or cholera, or be a simple affliction in itself, we cannot always pronounce with certainty on the trouble with certain flocks. Cholera is a contagious disease of the bowels, encouraged by improper food, filthy quarters, extreme heat, etc. When the disease is once established, treatment is generally useless, other than improving conditions. Much of the sickness generally supposed to be cholera is nothing more than a severe diarrhoea, which will yield to remedial agents. Where the disease is severe, it would be best to kill all badly-affected birds, and burn them, and then clean up the pen, white-washing and otherwise cleaning up, make the floor clean and dry by putting in fresh sand, if necessary, stop draughts, change food, and give as much light as possible. Birds apparently well should be given sulpho-carbolate of zinc in the drinking water, one-eighth of an ounce of the drug to a quart of water. Where a simple diarrhoea is the trouble, it can be checked by giving boiled milk and feeding dry food.

Probably the damp season, neglect of cleanliness on account of labor stringency, and other conditions, have combined to cause so much disease this fall. Cleanliness in such cases is the best safeguard and cure for such diseases.

### Poultry Lice.

In a bulletin issued by the Montana Experiment Station, Dr. H. C. Gardiner deals with lice, that ever common problem to poultrymen, as follows:

The large gray louse (*Liperis caponis*), the red mite (*Dermacysses gallinae*), the bird flea, and the mite (*Sarcoptes muteces*) causing scaly legs, are the external pests causing the bulk of the trouble arising from the insect pests.

Cleanliness is the starting point of success in combating these pests, and houses and fixtures of simple construction, affording few cracks, aid materially in preventing attacks, as they do not afford the protection necessary for the lice.

In keeping buildings free from lice, kerosene must be used freely on roosts, nest boxes and other fixtures, accumulations of filth are to be avoided in every direction, and all surfaces on the inside of the building should receive a coating of whitewash containing carbolic acid at least twice a year. The efficiency of this whitewash is greatly increased if applied with spray. Litter on the floor of pens and in the nest boxes should be renewed frequently, and insect powder scattered in the nests. Kerosene emulsion is valuable, particularly for the fleas and mites, and is best applied with a spray pump, and made as follows: kerosene, one gallon; water, one gallon; soap, one-half pound. Dissolve the soap in the water by boiling, and while hot turn in the kerosene and churn briskly for five minutes. This solution is sufficient for about fifteen gallons of spray solution. Six ounces of crude carbolic acid to the gallon (hot) also makes a very good solution to use as a wash for roosts, nest boxes or floors, when cleaning out.

The largest number of deaths from these pests occurs from the large gray louse which attacks young chicks. These lice are found on almost all chicks which have been hatched under hens and annually kills thousands of young chicks. It is a good practice to grease lightly the back of the head and under the wings of all young chicks which are hatched, the lice confining themselves almost entirely to those parts. Common lard serves the purposes, but we have used carbolated vaseline, and find it preferable.

The red mite is combated more effectually with kerosene applied to the hiding places, by the use of insect powder on the fowls, and by providing opportunities for dusting.

The mite causing scaly leg is a particularly annoying pest, and very prevalent. It burrows under the scales on the legs, and by its irritation causes an exudation, of which the enlarged scaly portion is formed. The heavier breeds of fowl are most affected by this pest, the Mediterranean classes apparently resisting to a marked extent.

In order to avoid the spread of this disease it is well to isolate affected birds when treating them in order to prevent the infection of the rest of the flock. In order to reach the parasite, it is necessary to soak off the scaly crust with warm soapy water, and then carefully remove to avoid bleeding. The legs should then be moistened daily for three or four days with balsam of Peru or ten-per-cent. croolin ointment.

### Care of the Apple Crop.

To the Editor "Farmer's Advocate":

Sir,—Will you be so kind as to allow me a small space in your valuable paper to express my views on the farmer's end of the apple business. Farmers, as a rule, do not handle their apples as they should. Every apple-grower should have a suitable place to store his apples for the packers. It is just as important as it is to have a place for his grain, roots or hay. This piling apples in the orchard should be a thing of the past. There are very few farmers but could fit up or build with little expense a suitable place that would protect their apples from the sun, rain and frost, and would answer a good purpose for ten months of the year as an implement house. Two years ago I put up a building that cost about \$400, and was thoroughly satisfied that it repaid me every cent of the cost the first year, as it was a very wet season, and I had no trouble in having my apples packed at any time. Packers are like other animals—they like to get in out of the rain. Having some suitable place to store the apples, the next thing is the picking. They should be handled as carefully as eggs, and be drawn from the orchard to the station every time on springs. By all means never let your barrels or boxes get wet, as that certainly has a very injurious effect on the apples and the barrels. I have seen apples

### Forestry at the World's Fair.

A plot of ground about 50x150 feet in size, along the north face of the Forestry, Fish and Game Building, at the World's Fair, St. Louis, is given over to an exhibit by the New York Forest and Game Commission, demonstrating the first four years' growth from the seed of a number of our forest trees. The exhibit is well placed, and attracts much attention. It is in charge of an old gardener, who hoes, weeds, waters and generally cares for the young seedlings and trees when not engaged in answering the curious questions of the crowd.

In conversation with the old man, I learned that he had done the planting under the direction of an assistant of Prof. Fox, of the New York Forest and Game Commission, and he was not averse to kindly criticisms of the learned gentleman's methods.

In the first place, he told me, the site was poor. All the top soil, two feet down, had been scraped off by the workmen in grading the grounds, and when the time came for the seeds to be sown and the young trees planted, it had to be done in sticky, pasty clay, totally unfit for such a purpose. No fertilizer of any kind was used. Notwithstanding such unfavorable conditions, the beds present in general a very healthy, vigorous appearance.

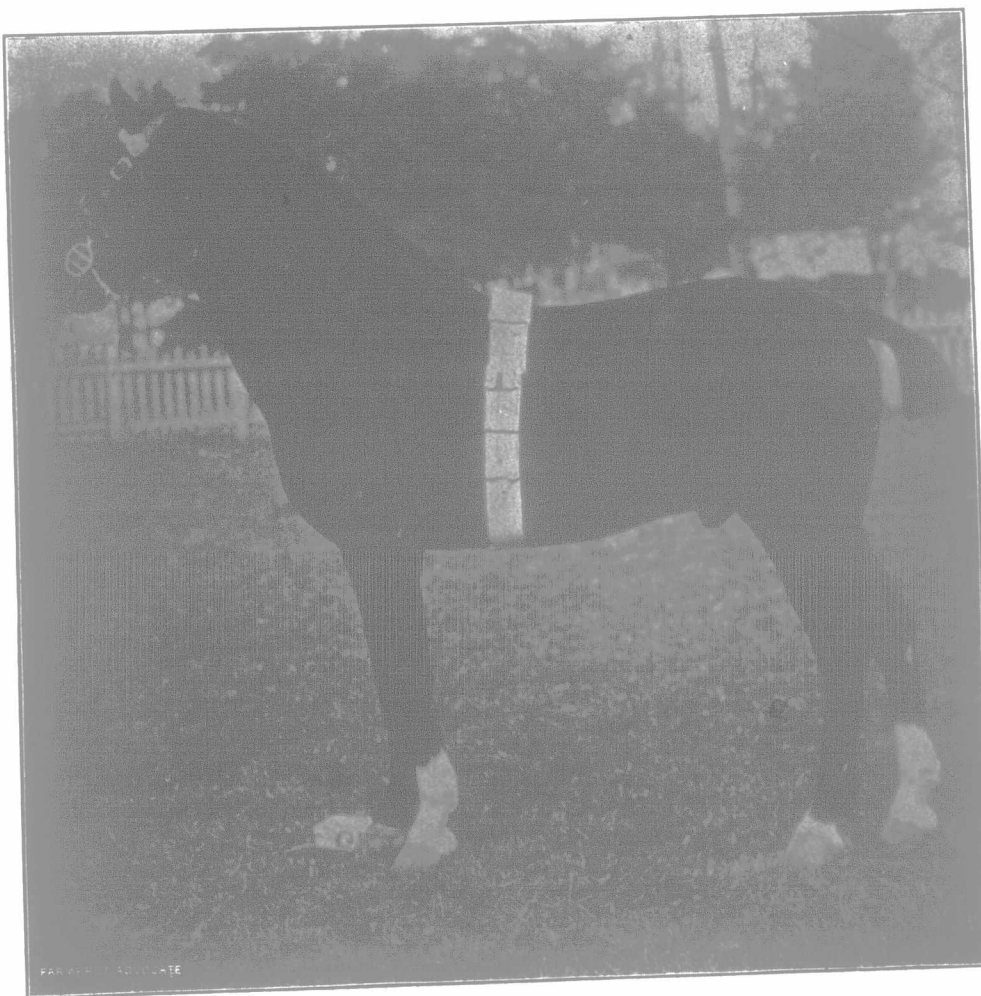
The beds in which the young trees—the deciduous up till the end of the first year, and the evergreens until the end of the third year—are started, are shaded from the direct rays of the sun by slatted covers. The slats are of lath, nailed crosswise, about one inch apart, on frames which are raised about two feet above the beds. When the seeds are first sown, the cover is,

of course, almost resting upon the soil, and is raised as time goes by. The youngest plants, those of the white spruce and red pine, which are three months and two months old, respectively, are covered with fine wire mesh to protect the seed from birds. The seedlings in these two beds are not apparently very thriving. The old gardener attributed this to over-shading, which had allowed a kind of grass and moss, which only grows in shady spots, to gain a foothold and crowd the seedlings. The white spruce plants about three months old are an inch and a half high; the red pine seedlings, about two months old, are two inches high.

The seed-beds of the deciduous trees are not covered. The young plants are thriving. There are three varieties growing in beds where the seed was sown. The American elm plants are about 12 weeks old, and from four to five inches in height; the white ash plants are

about 14 weeks old and ten inches high; the hardy catalpa plants are about 12 weeks old and from fifteen to twenty-four inches high. In fact, all the deciduous trees on the patch are doing splendidly. The catalpas grew nearly two feet during the summer; the white ash and basswood made six inches. The black walnut of two years is two feet high, and the white oak and honeylocust made strong growth and have good color. The soft maples of one year's growth are three feet high, but the hard or sugar maples did poorly, the leaves have a sort of mildew and the plants are stunted, possibly the result of the hot climate at St. Louis. The red oaks of one year are fifteen inches high. All the deciduous trees are planted in rows about two feet apart. The plants are about six inches apart in the row.

Coming back to the evergreen beds the gardener showed me vigorous red pine seedlings one year old, about four inches high; a bed of the same variety four years old, which had just been transplanted, presented a poor appearance. A bed of white pines of two years' growth yielded strong, healthy eight-inch plants; in the four-year-olds they had attained a growth of two feet. Scotch pines of two and four years were vigorous. A fine, uniform bed of Norway spruce, two years old, showed eight inches of growth; in the four-year bed they had grown to well-bushy plants fifteen inches high. The white spruce of four years was one foot high. The Colorado spruce and Black Hills spruce of five years were two feet and eighteen inches high, respectively. The tamarack or larch was the poorest of all. At two years and at four it presented a



**Painslack Prime Minister.**

Imported Hackney Stallion; sired by Pilot 2nd (3864); dam Gwendoline, by Highflyer (1648). Owned by Adam Dawson, Cannington, Ont. (See Gossip.)

lying in the orchard for two weeks after being packed, and it raining half the time. Now, about selling: It is quite common with the apple sharks to buy all the orchards they can get hold of as soon as the blossoms are nicely off, and some later on, but if you should sell that way, be sure and get something for your apples. Don't be like some fellows that sold that way last season and had to lows that sold that way last season and had to pick the crop, board the men, feed two or three horses, and draw the apples to the station, and when done had barely enough to cover expenses. Sad state of affairs, indeed; but still it might be worse, and such is the case. Lots of farmers sold their apples, picked them at quite a cost, and cared for them as best they could, and never realized a dollar on them. That was worse, but the worst is to come. One poor widow who lost her husband just twelve months previous, sold her little crop, and expected to have about 25 barrels, and after the packers were lodged, fed and through with, she was seen wending her way to the nearest station (about eight miles distant) with one solitary barrel. If I had lived in her neighborhood, and been aware of the facts, I certainly would have taken that barrel, paid the woman for it, and buried it decently.

Wentworth Co., Ont.

R. ATTRIDGE.

J. C. Hall, Peel Co., Ont.—I think the "Farmer's Advocate" stands pre-eminent in the list of farm papers at the present time.