

is not necessary to go beyond the limits of Winnipeg to find sturdy plants that have shed an abundance of seed—sufficient to infest several farms.

Successful fighting of perennial sow thistle entails arduous and persistent labor and high cost. The soil must be kept black so that no leaves develop to prepare food to keep the running rootstocks in condition to continue sending up shoots. A successful farmer from Niverville stated recently that he had spent eight dollars an acre summer-fallowing this season to combat the pest. Others have spent as much or more. The man who succeeds will follow the treatment by continual search next season, and a continuation of cultural methods, if need be. On badly-infested fields it might be well to plow late this fall, leaving the roots exposed to the frost all winter, and then follow with persistent cultivation next season.

Demonstration Farms

Nothing in any line of work has greater force than a practical demonstration. Why not then have demonstration farms scattered through our broad Dominion? Colleges are established to instruct the younger men in up-to-date methods, but as for reaching the older members of the vast agricultural army this system is slow and at best very ineffective. The average farmer is slow to accept suggestions from a college trained neighbor's son or even from his own son. The son, too, does not always accept the bald statement of his well-versed professor with the same feeling of satisfaction that he would accept it if it were backed up by practical demonstration on soil similar to that found in his neighborhood and under the same general conditions. Some branches of agricultural education can be taught and demonstrated to advantage in a college class room, but that branch which is of paramount importance to agriculture in Western Canada can be demonstrated only on the Canadian prairies.

Why not then establish demonstration farms in different parts of the West, easily accessible to farmers of a comparatively wide area and in such numbers as will cover the various soil and climatic conditions characteristic of various parts of Western Canada?

Naturally the question arises: Who should establish and maintain such farms? Here is a laudable work for some wealthy individual with the interests of agriculture at heart and a desire to do something that will send his name through the future ages as one of the greatest philanthropists of the twentieth century. Again, perhaps some of our monied corporations could muster up enough genuine interest in agricultural development to at least form the nucleus for the good work. What could be of more lasting benefit to one of the railway companies now striving for supremacy on the Canadian prairies than the inauguration of a few demonstration farms along its line that would tend to revolutionize farming methods to such extent as to bring in hosts of settlers and increase the crops produced for shipment?

If monied men or wealthy corporations cannot see the advisability of such work then the burden falls on the government—either provincial or federal—to adopt such plan as a part of its agricultural educational scheme.

Seeding Down and Weeds

EDITOR FARMER'S ADVOCATE:

I have read the articles in THE FARMER'S ADVOCATE in answer to mine re "Seeding versus Summer Fallow" and would now like to make a few more remarks and to criticize some of the articles in a friendly way. I hope the writers will not think I am finding fault with their views, as I want all the information I can get on this subject.

I have heard Professor Bedford say that land left in grass for four or five years would not have any, or very few, wild oats in the following crop. Now C. S. Margetson claims that seeding down does not clear soil of any weeds, but that the land has to be clean before seeding. K. McIvor also claims to be free of wild oats, and gives seeding down the credit of keeping his land that way. My experience has been that where I seeded down on land containing wild oats, that in hay crops following I was cutting some wild oats each year. These must have been killed and I also find that grain crops following hay are nearly free of weeds.

Is it possible to farm in Manitoba and not summer fallow? Mr. Margetson says not. Mr. McIvor, J. J. Ring, and Stephen Benson claim they do not fallow, and have not for a number of years, and that their land produces as much per acre as when they used to fallow. That has not been my experience. As I said in my former letter, I have never cut a full crop nor a yield any-

had hail, and frost has only bothered us two years in the last twenty, and yet of all those settling here about 1882 only three are left—or any of their friends. The young people are not satisfied to wait until the father is through but go west for more land and the old place goes to strangers. I say, get all out of your farm you can every year because you may not be here to reap another harvest.

MANITOBA FARMER.

HORSE

Diseases of the Respiratory Organs

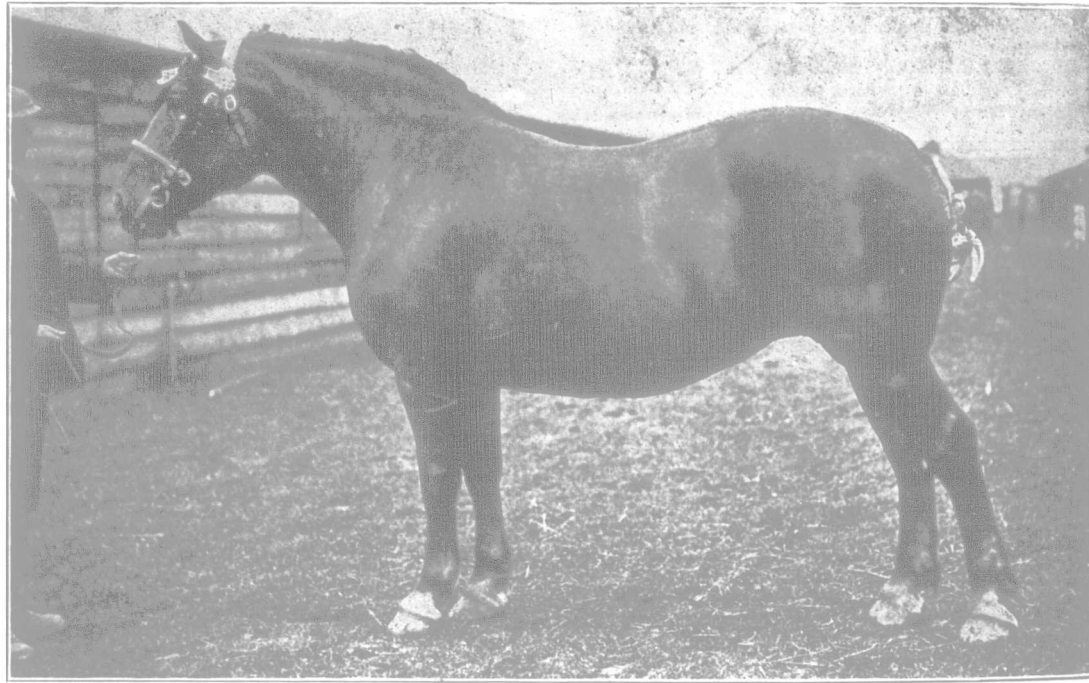
PART III.

By J. FIELDING COTTRILL, V.S.

This is the third of a series of interesting articles on common diseases of the respiratory organs in horses. Congestion and bronchitis have been treated in detail. This week's contribution takes up the ailments commonly known as pneumonia and pleurisy—[Editor.]

PNEUMONIA

Pneumonia is decidedly a fatal disease in most cases, and as such should not be attempted by any but a professional man, and he, a skilful practitioner who has no dread of this disease. It is well understood that germs are the cause in some



SUDBOURNE SURPRISE.
Excellent type of Suffolk mare, first in her class at the Royal show in 1909.

where nearly as good off hay ground broken up as on fallow. This year on 40 acres broken three inches deep and well worked after, I threshed 20 bushels per acre. On 40 acres alongside broken in June and July and backset I threshed 26 bushels per acre, all of it No. 1 Northern. Across the road on no better land my neighbor threshed 34 bushels per acre from fallow. Not much encouragement to seed down!

This year I intended breaking up 80 acres of meadow. I had 40 acres done in June and have it all backset ready for wheat. The other 40 had to be pastured until the middle of July and then was so dry we could not break it and it still is like brick. I wish to sow that to grain next spring, preferably wheat, but don't expect to get it broken before spring. I would like to know if anyone has had any experience with timothy sod broken in spring and the result.

Mr. McIvor mentions that in seeding down and taking a ton and a half per acre of hay, I returned more to soil than if I had taken a grain crop, but I differ with the gentleman in thinking that is a benefit to me. The fact of my land not producing more than my neighbors shows that the system does not work in that way.

Again, is it advisable to farm along the line of soil conserving, especially if it interferes with the yearly income? What benefit is it to me depriving myself and family of luxuries at present to leave behind a farm that some other man may make more out of? There are very few farms that stay in families very long especially in this country. I live in a good section of country. Our average here for the last twenty years has been twenty bushels per acre. We have never

instances, but in others, neglect of a simpler lung disease is certainly the cause. Again it may be produced by the same causes as bronchitis. In fact, when the seat of bronchitis is in the air cells and smaller tubes there is not much difference between the two diseases—hence it is termed broncho-pneumonia. In both cases that part of the air space is blocked up by the catarrhal exudate. In the other form known as the croupous or fibrinous form, the air spaces are blocked up by the fibrin or thread-like parts formed from the blood. In both forms the air spaces are blocked up, the lung becomes solid like liver (and hence is said to be hepatized), and like it will sink in water.

One form is known as mechanical pneumonia where the cause is any irritant, such as food, medicine, gases, smoke, etc. Impaction of the stomach, acute indigestion, influenza, strangles and glanders are often followed by pneumonia. Wounds in the chest may also produce pneumonia. Without going into minute details, the various stages of the disease may be said to be as follows:

1. Congestion of the lungs, in which the blood vessels are distended or engorged with blood.
2. The serum, or fluid part of the blood, escapes and fills up the air spaces.
3. The cell walls change and the other constituents of the blood escape.
4. These escaped matters unite to form fibrin and the whole becomes coagulated.
5. Later this coagulation will undergo a change.
 - (a) If the animal is to recover, this coagulation will gradually soften and break up—pass away by expectoration, and the air ultimately re-occupy the cells.