

herd bulls used to sire the 967 calves included in the statistics was just under three years. The medium age of these herd bulls was approximately two and a half years. This means that one-half of the calves were sired by bulls under two and a half years old at time of service. Seventy-five per cent. of all the calves were sired by herd bulls less than about three years and nine months old at time of service. Less than 15 per cent. of the calves were sired by bulls five or more years old. Let us consider for a moment what these facts mean. A bull must be at least four years old before the breeder can possibly have had any opportunity to test adequately the milk producing capacity of his daughters. But 85 per cent. of all the calves covered in these statistics were sired by bulls under four years and 10 months of age. In other words, in the breeding operations of a large number of Maine's most progressive and wide-awake breeders (for such the co-operators in this record scheme are) more than three-fourths of the calves produced in a given interval of time are sired by bulls about whose ability to transmit milking qualities absolutely nothing definite can by any possibility be known. It is doubtless entirely fair to assume that essentially the same conditions regarding cattle-breeding methods obtain in other places generally. Is it remarkable that progress is so slow?"

A Comfortable Hog Cabin For Hot and Cold Weather.

EDITOR "THE FARMER'S ADVOCATE":

The portable year-round hog cabin now extensively used by swine breeders, should afford reasonable shelter from the extremes of heat and cold. The ordinary single-board cabin placed in a sheltered spot and well supplied with bedding, apparently affords a degree of shelter for aged breeding stock, (several individuals to the cabin) that combined with the accompanying exercise and fresh air, meets admirably with winter health requirements. During the summer when the same cabin is pulled out to the summer paddock or pasture (if need be) similar satisfaction, however, is not afforded. While the ordinary cabin supplies comparative shelter and warmth in winter and is, therefore, welcome—it does not afford cool shade in summer. In fact with tight sides and roof, on a hot day, the interior is oven-like and the least sought-after spot in the paddock by the pigs. If cool, natural shade is elsewhere afforded, this deficiency is not so important. In an otherwise shadeless pasture, however, a cool cabin is a necessity. Every hog man knows the effect of continuous hot sun on a small tender-skinned pig.

Cabins similar to the one illustrated herewith, have given excellent satisfaction at the Experiment Farm at Ottawa this summer, in paddocks where practically no shade was available. While the photograph leaves detailed explanation unnecessary, it might be stated that these cabins are about 6 ft. by 8 ft. in size; portable; built of 2-inch plank floor, 2-inch by 4-inch studs, and

1-inch by 12-inch rough sheathing. The special feature is the hinged sides, which when hooked up afford two side verandahs, as it were, apart from the cool interior. In winter the sides are lowered and securely held by pins driven through heavy iron staples which pass through corresponding holes, three on each side as shown. It is important that the sides be securely fastened when down. For further ventilation, a section of the roof may be hinged at the peak and raised a foot or so. The proof of the pudding is in the eating. Pigs distinctly approve of this cabin.

Central Experimental Farm. GEO. B. ROTHWELL.



An Adjustable Hog Cabin.

This type of cabin is comfortable in summer as well as winter.

THE FARM.

The Two-Furrow Plow.

In the past there has been considerable prejudice against the work of the two-furrow plow; very often due to the fact that the plow was not properly set and carefully operated. At the present time, with the increased demand for a large acreage of crop and the minimum supply of labor, there is little time for single plowing. There are several types of two-furrow plows on the market, which, provided they are properly operated, will do just as serviceable work as will the single plow, and one man with the proper amount of horse-power can turn over just double the acreage. It is generally advisable to strike out and finish with the single plow, although there are those who do not use it even for this important work. Set the plow down in the ground the same depth as you would plow with the ordinary single walking plow and drive carefully, and if the plow is properly adjusted an even, well-turned furrow will result. Acreage will count this fall even more than ever before, but let the work be well done.

The Wheat Midge.

EDITOR "THE FARMER'S ADVOCATE":

After many years of freedom from its attacks, the Wheat Midge has made its unwelcome appearance in the counties of Wentworth, Lincoln and Welland and also in Elgin. On some farms it has injured the crop to a considerable extent and has caused much alarm among the farmers in those sections of the Province.

The parent fly is a very small, two-winged insect, with a yellow or orange colored body, about an eighth of an inch in length. It appears when the ears are formed on the growing grain and lays its eggs at the tip of the chaff covering the soft kernel. In about a week there hatch from them small, dark red maggots, which enter the grain and feed on its milky contents, leaving only an empty shell. When numerous the destruction thus wrought is enormous. When full grown the maggot descends to the ground, aided oftentimes by a rain drop, and there, burying itself a few inches below the surface, changes to the torpid pupal stage in which it passes the winter.

Nothing can be done to destroy the maggots while feeding in the ear, it only remains, therefore, to guard against future attacks. For this purpose it is most important to sweep up and burn at once all chaff and refuse from the threshing machine, which will contain many of these insects. If practicable the stubble in the field should be burnt over, and in any case the whole should be deeply ploughed in order to bury the wintering pupae so deeply that the flies will be unable to emerge next year. Rolling the ground after ploughing will help materially to produce this result. No wheat should be grown on the same field or very near it for one or two seasons.

When the Midge was so terribly destructive, some fifty or more years ago, it was found that certain varieties of wheat were "Midge-proof," due to the flinty character of the straw and the chaff covering the grain, which were too hard for the newly-hatched maggot to penetrate. The general adoption of these varieties saved the situation and the Midge became practically extinct. It would be well for farmers in the localities affected to sow next year only such varieties of wheat as are likely to possess this resistant quality. The Red Fife is one that can be recommended, and probably the Marquis would be equally satisfactory.

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Grain Acreage in the United States.

United States Department of Agriculture recommends the sowing in that country of 47,337,000 acres to winter wheat, and 5,131,000 acres to rye. They also recommend sowing 19,000,000 acres of spring wheat, 5,500,000 acres of spring rye, nearly 8,000,000 acres of barley, over 45,000,000 acres of oats, and over 111,000,000 acres of corn. This will be a 43 per cent. increase in wheat, 5 per cent. in spring wheat, 124 per cent. in rye, 7 per cent. in barley, 22 per cent. in oats, and 7 per cent. in corn, or a total increase of 22 per cent. in the entire acreage to be sown.

Canada's Young Farmers and Future Leaders.

Boys Have a Share in Harvesting Crops.

In every country the war has caused new demands to be made on young people. Boys who ordinarily would be considered too young to drive a team or work in the hay or harvest field have this year fallen in line and are filling men's shoes to the best of their ability. Town and city boys who counted on the summer months for having a good time have this year plied the hoe and fork on a farm. While some found that farm work was out of their sphere and returned to the metropolis, others found the work interesting although hard, and staying with it their efforts have aided in saving some of Canada's "bumper crops." They have come in touch with the fountain of supply for their tables and in the sowing, reaping, storing, threshing, and in marketing through the elevator or in the way of live stock or dairy products, they realize the immense amount of work involved between sowing the seed and getting the returns for their labor. However, the Canadian boys have many advantages over the boys of some other countries. The accompanying illustration shows a number of boys assisting in gathering the hay in Great Britain. Note that the hand-rake is still in use. We understand that the labor-saving devices, as side-delivery rakes, hay-loaders, sliding hay racks, slings, hay forks, etc., have not come into general use as yet. The cradle and reaper are used in some parts for cutting the grain crop, while in parts of Europe the sickle is in common use. Instead of drawing the loads on large wagons, carts are used. Horses are led rather than driven, which necessitates one man to look after the horse while another looks after the machine to which it is hitched.

The work is done by hand rather than by machinery. After being used to large machines and implements drawn by three or four horses, such practices would appear strange to a Canadian farm boy. Where once strength was the main requirement of a farmer, he must now know something about machinery; he must be

able to handle four-horse teams, etc. The hands and back are saved at the expense of brain action. Necessity is the mother of invention. Shortage of help in America led men to invent machines to do the work, and in no country has efficient labor-saving devices for the farm, as well as in commercial establishments, reached such a high status. No doubt in days to come labor-saving machinery will be as common on the farms of Europe as it is in America. However, for the present at least

the farm boys on this side of the Atlantic have advantages which have not fallen to the lot of European boys, although they may have things in other lines which we do not possess. We sometimes feel sorry for the boys and girls of other lands, but we must remember that no one race or class of people is endowed with all the best things of life. The things which all should learn are to be content and to make the best of our opportunities.



School Boys in England Help with the Crops.

These lads are enjoying a lunch in the hay field. Note the old-fashioned hand rakes.