

two red sons, Adventurer and Audacity, a position very creditable to the young men, when the company is considered.

Herd of three animals, any age or sex, the get of one bull, went, first and second, to Edwards, with the get of Marquis of Zenda; third to Barron, with a trio of Nobleman's; the man from Killarney (Hysop) getting the fourth place, with the get of Royal Hope.

Cow and two of her progeny, went to the C.P.R. magnate, for Crimson Rose, her daughter, Nonpareil 61st, and son, Trout Creek Guard; Senator Edwards getting second, with imported Flora, Orange Blossom, and Orange Blossom 2nd, Missie 153 being out of the running, through the bowleggedness of her son, Missie Champion; Barron got third and fourth, with Lady Lorne and Louisa.

The herd, composed of a bull and three females, the latter to be bred in Manitoba, N.-W. T. or B. C., went to Barron, with Nobleman and three daughters (Louisa, Lady Lorne and Laura) of the great Topsman; the blue going to English, for Silver King, Lady Jane, Daisy Bell 3rd and Lady Alice 3rd, all by the Rankin stud bull, General; third to Barron, for Nonpareil Victor, Louisa Cicely, Red Baroness and Lauretta Gem; Hysop getting fourth with Lord Abbotsburn, Ruby Abbotsburn, Primrose 2nd and Queen Abbotsburn, a quartette by Royal Hope.

This brought to an end a lot of hard, and, too often, unappreciated work by the judges; a series of studies in Shorthorn character, invaluable to students of form and type; a display of the cosmopolitan all-purpose breed perhaps never before equalled in the Canadian West, and an exhibit that should be an inspiration and a stimulus to the breeding of better cattle throughout Western Canada. The regrettable feature of the show was the absence of entries from the herds of Washington and Wm. Ryan (Ninga), Chalmers (Brandon), Kinnear (Souris), Greenway (Crystal City), Rankin (Hamiota), Brown (Portage la Prairie), W. S. Lister (Middletown), Beresford and Bennet (Calgary), and many others who have made and are making names in cattle-breeding circles of more or less enduring fame.

FARM.

Take Extra Care of Wheat.

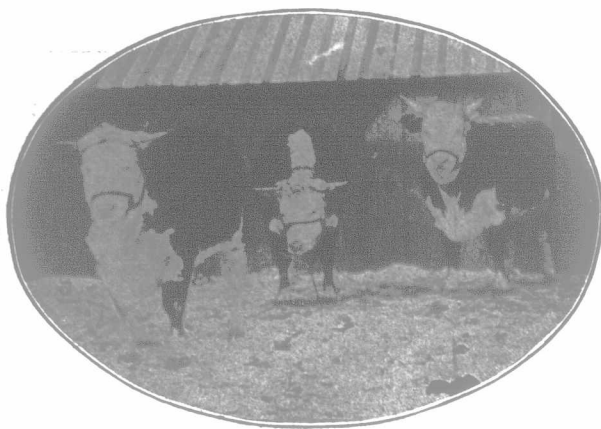
This year's winter wheat crop, over the greater part of the country has been such as to make it of the utmost importance that the preparation of the soil during the next few weeks shall be intelligently and thoroughly carried out. It is not sufficient to simply plow up a sod or stubble field and sow it to wheat. Such land requires, first, shallow plowing, and, afterwards, considerable harrowing and cultivating in order to encourage the germination of weed seeds and the liberation of plant food. The treatment following will then depend upon the nature of the soil with regard to its requirements for drainage. On most soils the deep plowing, or "ridging up," so generally practised a few years ago, although in some places where the subsoil is close and impervious and tile drains have not been put in necessary to carry off surface water, still very often better results would follow if the first plowing were done having regard to the need of surface drainage, and the subsequent cultivation done lengthwise of the plowing, then, after seeding, the shallow water furrows could be run in the lower levels. Where this system is followed, the first plowing can be made a little deeper than if two plowings are to be given before the wheat is sown, for there must be sufficient depth of soil for a seed-bed. In England, a system of cultivation of wheat land has been given a thorough trial, the principles of which might more fully be employed in this country. This system is particularly adapted to the destruction of weeds and the encouragement of growth after seeding. The treatment of the wheat land was, briefly, this: The land was plowed a few weeks before seeding time, and made fine and mellow to encourage weed growth, which was destroyed by plowing (shallow) and cultivation incident to seeding. Afterwards, before the wheat appeared above ground, it was chain-harrowed. Later on, when the wheat was well up, the weeder, an implement resembling our horse rakes, and light harrows were run over the ground; and this was again done in the spring. Similar treatment was given barley and oats with the object of killing weeds when very young and of conserving moisture. In this country we have not yet developed sufficient courage to harrow the young grain, but there is no doubt if it were once adopted the crops would show the benefits of it. One thing is certain, that, as our soils become older more cultivation is required to keep up their productivity than when they were first broken, and more attention to the wheat land is one of the outstanding needs in our present-day methods of farming.

This year also extra care is required in the selection of seed, whatever the variety sown. The winter had a most deteriorating effect on the crop, and rust is very prevalent in most parts, so that the seed cannot be expected to possess its usual vitality. This year seed should be taken from the best crops grown, and should have more than ordinary screening before being sown. Where

possible, a test of the germinating power of the seed should be made before sowing, or the unfortunate experiences of this spring with corn may be repeated with the wheat.

Potato Spraying.

Judging by the frequency with which the question of spraying potatoes to prevent blight is raised by correspondents, it is evident growers are determined to make an effort to insure against loss to the crop. We are again asked to "publish the correct solution for spraying potatoes to prevent blight and rot." This we take to mean the home-mixed solution, for there are several patented preparations on the market, some of which are not without merit. The basis of the homemade solution is the well-known fungicide, bluestone, or copper sulphate. For potatoes,



A Trio of American Invaders.

The type we welcome.

dissolve six pounds of bluestone in water; place the solution in the barrel or tank to be used for spraying, and add about twenty gallons of water. Then make a solution of four pounds of lime, fresh slacked, and add to the bluestone solution, and add water up to forty gallons. This amount will be sufficient to spray one acre. The first spraying should be done about the middle of July, and if the beetle is on the vines, four ounces of Paris green should be added to the solution in the barrel. Spraying should be continued three or four times up till about August 15th, depending upon weather conditions. The operation is best done with a barrel or tank on a cart or light wagon, with a pump and hose attached, so that four or more rows may be sprayed at once.

A Big Revenue from a Small Farm.

In Pennsylvania there lives a man who has reduced to a demonstration the doctrine of intensive farming. In 1881 he began operations on a fifteen-acre farm, two acres of which were occupied with buildings, yards and garden. Dairying was the special branch of farming followed, and pure-bred Jerseys the particular breed of cattle kept. When the farm was first taken over, it was so run down it would not support a horse and two cows, and was saddled with a mortgage of \$7,200. The returns from the first year's operations lacked \$46 of paying expenses, but in the next six years the mortgage was paid off, and recently the total income of the farm has been \$3,000 annually. The owner, in the meantime, attended to his duties as a minister, and employed a man and boy to do the work on the farm. Now the farm carries thirty head of cattle, besides two or three horses. The milk from the cows and some of their offspring furnish the

revenue. Fortunately, good-producing, pure-bred Jerseys are kept, the calves from which have sold for an average of \$100.

The secret of the success of this farm lies in the practising of soiling and the economic use of the stable manure, which is spread directly from the stables upon the fields. The soiling crops consist of corn, clover, peas, oats, timothy, millet and rye. Two or three crops are raised each year on all the land, and four acres has given sufficient fodder to fill two silos with one hundred tons of ensilage. The owner has carefully mastered the principles of economic feeding, and has every operation about the farm reduced to clock-like regularity. The cattle are kept in the stables the year round, even the young things, of which there are always from ten to fifteen. As for weeds, upon this farm there is simply no place for them to grow; the land is all utilized for other purposes. The object lesson of this small farm is striking. It shows the possibilities of intelligent work when applied to the farm. It also emphasizes the importance of study and system. Recently, the little farm has been sold, and the owner is preparing to carry on operations on a large scale, on three hundred and sixty acres, in Chester County, Pa.

DAIRY.

Some Points of a Good Milker.

There are several points that go to making ideal dairy cows. Different judges consider different points as indicative of the flow of milk, but perhaps the udder is the most reliable indication of milking qualities, as well as the value of the cow. True, some put stress on the color of the inside of the ear, length of the tail, shape of the head, neck, or of the body, but the rule seems to hold that poor producers have rarely well-developed mammary glands. The greater the development of that organ the greater will be its product. Of late years breeders of dairy cattle have been led to give more heed to this point of importance in the selection and elimination of dairy cows.

An udder rich in flesh is not productive, and is recognized by the fact that the superfluous flesh it contains usually seems to drop, more or less, to the bottom, making it pendulous. Such an udder is unsightly, and is likely passed on by the cow to her offspring. A productive udder depends on the number of secretive cells it contains, and not necessarily on its size. Its shape should be almost square and well-balanced, and free from much flesh.

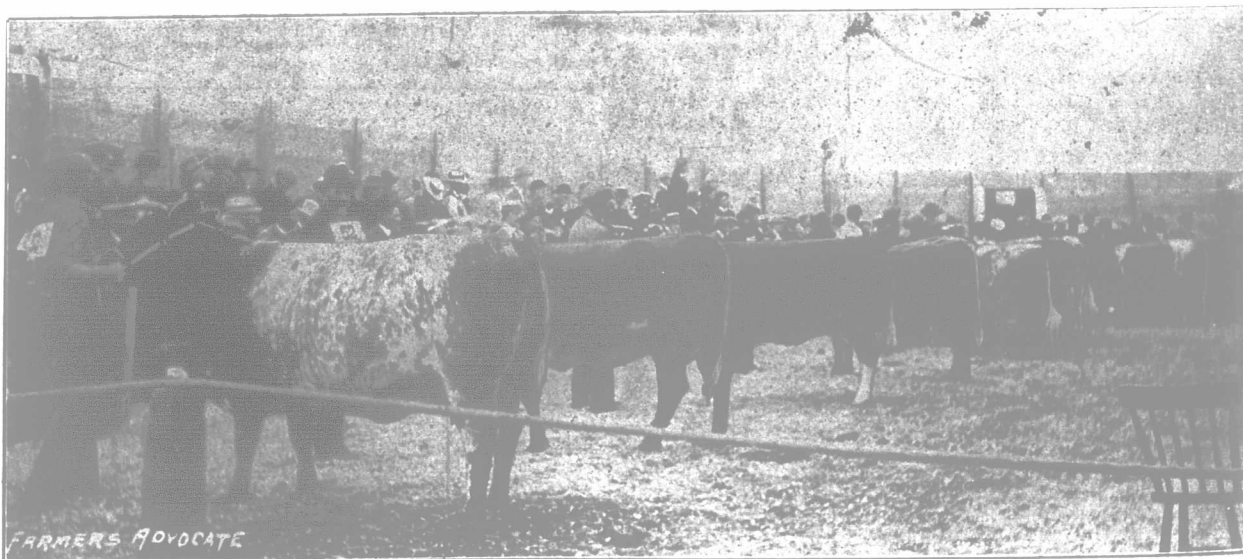
The front quarters of the udder are not infrequently very imperfectly developed, and is a common failing even in whole breeds of dairy cows. The milk got from the fore and rear quarters differs in quality and quantity according to the type of udder. It has been calculated that in ordinary-shaped udders there is a difference of 16 per cent. of the quantity of milk taken from these sources.

To show the difference actually existing in different types of udders, let, say, a dozen cows be taken with their front quarters noticeably undeveloped, and let the milk from the front and hind udders be separately weighed. It will be found that the rear udder produces as high as 57 per cent. more milk than the front udder.

Again, take a well-balanced udder, the variation in quantity of milk got from the hind and front udders is quite insignificant.

These facts show conclusively that a well-balanced udder is of more value than merely to admire in the sale-ring or show-yard. The average cow, of whatever breed, has an imperfectly developed udder, especially in its fore part. Better development would certainly produce more milk, and, consequently, our cows would be of more intrinsic value in the dairy, for it is the last pound of milk that yields the greatest profit.

Much has been said about milk and udder veins of dairy cows, and their relation and activity to the



With the Shorthorn Matrons, (the four-year-olds and up) Winnipeg, Exhibition.

Mayflower 3rd, grand champion female, in the foreground.