

nomical production of feeding cattle, and which may be considered before taking up the maturing of this most excellent steer for which we are to breed, is the milking qualities of the cows. It is true, in the United States, and probably to some extent in Canada, that some sections will continue to produce cattle on cheaper grass lands, and only require that a cow nourish her own offspring. Such sections are limited in area, and if their competition must be considered, it again emphasizes the necessity of stopping all leaks and of exacting fullest returns from farm-raised cattle.

The deep-milking characteristics in cows that produce good feeding stock can be utilized by selling the cream and supplementing the skim milk with nutrients less valuable than butter, but not much less useful to the calf. There is a general prejudice against skim-milk calves, but much less against yearlings that were fed on skim milk the first summer. The backwardness of the skim-milk calf grows less and less evident from weaning to selling time. It must also be remembered that one of the most valuable supplements to skim milk is study and close attention, such as is not needed when the more natural and more extravagant course of running calves and dams together is followed. Hand-raised calves mean more hand labor in feeding, as well as in milking. If this labor is obtainable, it may be used as advantageously here as in specialized milk production. Another plan is to let half the cows suckle all the calves, and milk the other half of the herd. Another plan that requires a minimum of labor, and is very satisfactory where practicable, is to buy in a second good beef calf for each cow in milk, and, if the milking capacity of the cows permits and calves are taught to eat early, a third calf may be placed on the cow after her own and its foster brother are removed. The biggest difficulty in this plan is the buying of calves that are well enough bred for the purpose. In a community where the right kind of cows are kept, a feeder could well afford to furnish free bull service for first chance of purchasing calves sired by his bull.

The various means just discussed have for their object the obtaining of greater returns for a year's keep of a cow, either in more or in better feeders. Some economy may be effected in the finishing of the cattle reared, but not so much as in their first cost. It is practically always true that a period of no increase in live weight is an unprofitable period. The heavier an animal is fed the greater is the proportion of food that goes to make increase of weight, and the smaller the part that goes for maintenance. Forced feeding necessitates large use of concentrates. Less energy is required to prepare for assimilation a pound of digestible material in concentrates than in roughage, because in the latter there is greater bulk and a larger weight of indigestible substance accompanying, and this takes largely from the energy of the digested portion to accomplish its passage through the body. Nevertheless, the quickest and the largest gains are not necessarily the most economical. The lower cost of rougher feeds may make their use more profitable, despite the lower gains, and, therefore, longer finishing period. Several experiment stations have tested the economy of light, medium and heavy grain rations for finishing grown cattle. The smaller grain rations have always produced a pound of increase at a lower cost than have the heavier rations, but at the close of the periods the heavier-fed cattle were worth enough more on the market to more than offset the higher cost of their gains. In the Ontario experiments, however, the heaviest grain ration was no more than the light ration of the Western stations. The cattle were on feed a longer time, and in some cases the light-grain lots were fed some time after the others were sold, in order to bring the same price; but in each of the Ontario experiments the steers that received one-half a pound of grain per day for each one hundred pounds of live weight proved to be the most profitable.

Having effected the greatest economy in the cost of calves by securing better ones and more

## WHO'S WHO IN LIVE STOCK



A. C. McPHAIL

Brandon Exhibition is always of good report. The why of it is partly a secret, but, gentle reader, you may as well be wise to it; also ye exhibition executives of Winnipeg, Regina, Calgary, Edmonton, Victoria, et al. listen: The success of your fair, in so far as the great indiscriminating public is concerned, depends a lot on how well you treat the scribes. Newspaper reporters and editors of farm papers, despite the princely salaries they are supposed to draw, become strangely human about meal time. A hungry man, or one whose inwards are in commotion digesting "hot dog" and "bully wash," isn't half as optimistic as he when through with a full course table d'hôte meal topped off with an imported "secgar." The half-fed fellow is apt to be gloomy, and the gloom is liable to get into his "copy." The secret seems to be to "feed the brutes!" Brandon found that out some years ago. Every day of Brandon Exhibition Archie McPhail and W. Nichols, toddle from the horse judging ring at noon and supper time with the representatives of the realm's fourth estate in tow, and in "saloonology" phraseology "set 'em up" to the best the directors' private eating booth affords.

Archie McPhail has been on the executive of the Brandon Agricultural Society and the Western Agricultural and Arts Association for a number of years, for most of the time director in charge of heavy horses. Under his efforts and those associated with him, the heavy horse show at Brandon has assumed dimensions second to no agricultural exhibition in all Western Canada. The Interprovincial has become the great farmers' horse show. More farm teams and farmers' breeding stock are to be seen there than at any exhibition in the prairie provinces. In fact, it is doubtful if the exhibition, in these particulars, is equalled in the Dominion. This condition is due to the fact that Brandon show, while it has become inter-provincial in status, holds the farmers of its immediate vicinity, largely because those farmers, like Mr. McPhail, are interested in the success of the show as exhibitors, members of the association or are on the directorate.

Archie McPhail came to Brandon district in 1883 and worked on farms in summer and in the lumber woods in winter until 1888. In that year he sank his savings into a half section and some farming equipment, and has been raising grain and prospering ever since. Some few years ago he purchased his first purebred Clydesdale and has since been working into Scotch drafters, having now five head of registered horses. Purebred swine also have claimed a portion of his attention in stock, and he keeps a fair-sized herd of Yorkshires, being a successful exhibitor of bacon hogs at Brandon Winter Fair these past three years. Mr. McPhail believes surely in the future of the draft horse business in Western Canada, and despite motor cars and steam and gasoline tractors, believes that it is sound policy at the present for farmers to enlarge their heavy horse breeding interests. Besides holding the offices above mentioned A. C. McPhail has been vice-president of the Western Agricultural and Arts Association, director of the Manitoba Horse Breeders' Association, and director from that association on the Brandon Winter Fair Board, president of the Brandon Farmers' Institute, president of the Brandon branch of the Manitoba Grain Growers' Association, twice one of the representative farmers of Manitoba sent by the government on immigration work to Great Britain, and for four years has served on the municipal council of Elton.

"Work as a hired man first" used to be the advice offered those who came to the Western prairies to tickle the earth's surface and garner the golden grain. The caution isn't heard as much nowadays, but it is a wonderfully sound principle on which to base the learning of prairie farming. At any rate a good many thousands of the most successful farmers in the West got the rudiments of what they know of prairie agriculture from working for somebody else at so much per month, sometimes taking a promise or their pay. They make a good line of citizens—that is if they are all like the subject of the sketch.

of them for the keep of the cows, it remains to choose between different times of year and different ages for marketing. Some feeders are doing well on high-priced land by pushing the calves to have them fat enough to sell at twelve months of age. This necessitates liberal grain feeding, and requires the cows to consume the most of the coarse feed. By using some silage for the cows

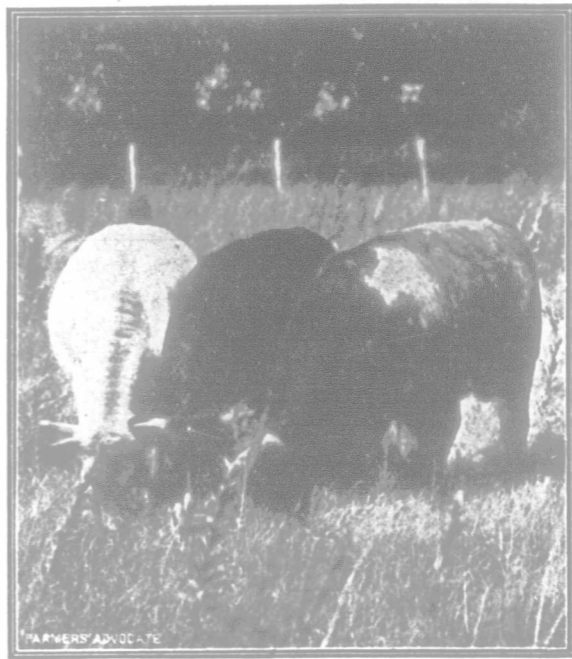
while nursing, the minimum acreage in grass will suffice, and a large amount of manure is secured.

The Hereford steer in the illustration was 24 months old, and weighed 1,300 pounds, when the photograph was taken. He had never had access to grass except for parts of days during two summer months. He has eaten, since weaned, at six months of age, 5,500 pound of grain, a good deal of silage, and some green feed. This amount of grain is more than an animal can consume in that time, and use to the best advantage. The coarse feeds may require a larger part of their value for their own digestion, but they leave the system in a better condition to respond to grain, when its freer use is begun. He is of a type that could have been made ripe for market at eighteen months of age. Cows of breeding to produce such stock, and that are deep milkers, are hard to find, but there has not been any general effort to fix milking qualities during the recent years of strong insistence on early maturity. A steer of this type could be finished with grain or grass during his second summer, or put on feed later and marketed the winter before two years old. Early marketing permits the keeping of a large breeding herd and depends chiefly upon cows to utilize the roughage.

The Shorthorn steer is of a more growthy type, and his dam was a fair milker. He was calved Feb. 9th, 1908, and was sold in a carload on February 1st, 1910, at seven cents per pound. This steer then weighed 1,400 pounds. He was ripe enough for commercial beef, but was purchased from the shipper and fed for show, eight months later, when the photograph was taken. He has, of course, been held back during the most of this last period. The carload with which he was raised were handled on a plan which utilizes a large amount of roughage and a moderate amount of grain. Alfalfa hay would be as good, and much cheaper than some of the grain that was used. This lot of steers was carried through the first winter largely on silage, with some hay and an average of three pounds of corn and cob meal per calf daily. On May 1st they went on good grass, where they remained until December. From October 1st they were fed corn in the pasture, and when taken to the sheds were taking eight pounds each per day. From this time until marketed they ate very heavily of silage, although the corn ration was raised to about twelve pounds and some oil meal was added. Alfalfa might have replaced most of the oil meal, and earlier housing might have secured the same finish with longer use of silage, more hay and less grain.

If, in the case of the Hereford, we make a fair estimate of his original cost and his silage there is small room for profit. The Shorthorn has reached a marketable condition at the weight of 1,400, and has consumed less than 2,500 pounds of grain.

If the breeding of such steers be conducted as economically as it can be, then the passing of beef-making need not be for this nor for the next generation.



"The cattle are grazing. Their heads never raising. The three of them feeding like one"