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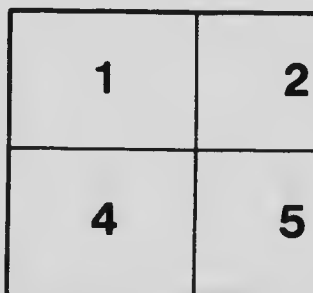
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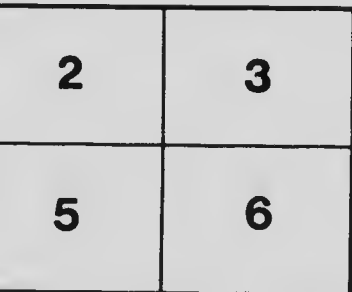
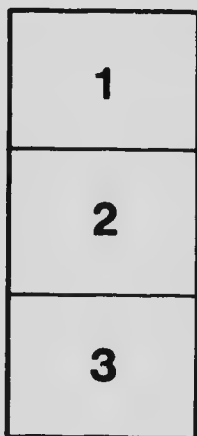
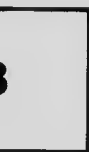
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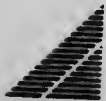
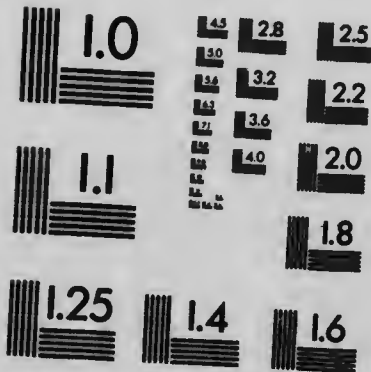
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MANITOBA AGRICULTURAL COLLEGE

Winter Feeding of Cattle

Utilizing Rusted, Unthreshed Grain



Winter Fattened Cattle on a Manitoba Farm

BY F. S. JACOBS, B.S.A.

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The Problems of the Feed

As a result of the damage to crops from rust, the problem of realizing some value from rusted grain is confronting a large number of people. Nor does this problem present itself in the same way to all who have to face it. In some cases the crop is so badly rusted that there is no doubt as to the use of cutting; that part is plain. There may be no grain whatever in the heads, or there may be up to ten bushels of wheat or twenty bushels of oats to the acre, of very poor quality. To cut such a crop is obviously a waste of time and twine, but in many cases the cutting is already done, and so the problem is complicated.

A second division of a crop may be made into a class running from ten bushels to sixteen bushels of wheat of poor quality and from twenty

to thirty-five bushels of oats. Such crops are probably all cut by this time, but whether or not to thresh them is the problem.

A third division may be made of crops that will yield over the amounts mentioned in the second division. Such crops are worth cutting and threshing this year, even though the straw is weak, broken and tangled, but the grain is of poor quality and, if used for feeding purposes, will be comparatively low in feeding value.

The real problem of disposing of damaged crops presents itself when one has crops which fall into either the first or second classifications. With the first mentioned crops one may decide to cut—or the crop may already be cut and there may be enough grain in the heads to constitute considerable feeding value which one is loath to lose. Generally speaking, it may be said that rusted straw without any grain in it, or with from a pound to two pounds of light shrivelled grain to the sheaf, is of less value than clean straw, although, under actual test, the rusted straw contains more valuable food elements than clean straw. The explanation of this apparent contradiction is that rust has arrested and held in the straw much of the food value that would otherwise go to the grain, but at the same time the rust has made the straw so distasteful that animals will not readily eat it and so use the food value of rusted straw.

One cannot say with exact definiteness just what should be done with the rusted crops that carry less than enough grain to make them up to the value of good straw, for the reason that there are great variations in the actual value of such crops and different men are in different positions to use that value. However, it is generally safe to spend little effort on fields that carry less than ten bushels of shrivelled wheat or twenty bushels of light oats. If one has cattle or sheep, or can get them without much trouble, they should be given the run of such fields, but it would be doubtful economy to buy stock especially for such fields, in view of high interest rates and the narrow margin between feeder and butcher cattle. With such fields the loss may as well be made complete with the plow or a fire.

With crops that fall into the second class (that is, that have been considered good enough to cut but of doubtful value for threshing) there is almost a pressing necessity to realize value by feeding. Such crops are of much greater value than threshed straw, but of much less value than green sheaves or hay, and already there has been spent time of cutting and stooking, but to thresh would not pay, and clearly the proper thing to do is to feed. There enter all the secondary considerations in the question of feeding stock: the water supply, shelter, available labor, supply of money, interest rates, supply and cost of stock, market conditions now and in sixty, ninety, a hundred and twenty or a hundred and fifty days. Also, one has to consider whether or not he will make stock feeding a regular practice, for, if he does not, he will have to pay for extra equipment and experience out of one season's operations. With a crop such as we are considering already cut there should be no hesitation to stack, or, if not cut, much of it should be cut to be stacked and the balance left for stock to feed off before the snow falls.



Some fairly well-bred 18 months old stocker steers, photographed in the Union Stock Yards, Sept. 15th, 1916. Many carloads of this type of cattle are leaving the Canadian West each week, mostly going into the United States for further development and fattening. (Photo by Manitoba Dept. of Agriculture)

The Animals to Feed

Having the crop to be fed, there is then the necessity of getting the stock and of caring for them. In some cases cattle may be had locally from those who make a practise of selling feeders in the fall; in other cases one would have to get his stock from the central markets. In the first case, it may be possible to arrange for time for payment, but in the second case the cattle would have to be paid for before they were delivered. To complete such a transaction, it would



Part of a carload of grass-fed steers, too thin for killing, but well-bred and well-grown, mostly about 1 1/2 years old. Sold for \$6.50 per cwt. to go to South St. Paul, Minn., where they were to be sold as "short feeders"—that is they would be put up for fattening for three or four months before selling as "butchers." Photographed in the Union Stock Yards, St. Boniface, Sept. 15, 1916. (Photo by Manitoba Dept. of Agriculture)

be necessary in many cases to arrange with a bank for a loan. This will be a complete barrier to many and a handicap to others for the reason that interest rates are high and Manitoba farmers have not, as a class, established a reputation for making money out of cattle feeding; bankers, therefore, do not readily advance money for feeding operations.

The man who finds himself in a position to buy cattle or sheep for feeding should make careful enquiries as to the sources of feeder cattle supply. It may be that dealers of his acquaintance can get him a lot without a very heavy freight charge or a long railway trip. Such stock is usually more desirable than stuff that has travelled far. On the other hand, one can visit such a market as Winnipeg, make the acquaintance of dealers and sort up a shipment of cattle on the spot. Or arrangements can be made with commission men to select and ship without the trouble of a personal trip to the market. This is being done every day on a considerable scale by both Canadian and American farmers, and reasonable satisfaction is the general result.

In the classification of cattle on the market "Feeders" are a distinct type. They are cattle that are not well enough finished to be called "Butchers." They may be small or well grown, but they are always capable of taking on more flesh. When a dealer is asked to sort up a load of feeders, he has a definite type in mind. The buyer, however, should say whether or not he wants light or heavy feeders and whether "short" or "long" feeders. By "short feeders" is meant well grown cattle in fair condition; "long feeders" are usually thinner and come cheaper. In the market at present "short feeders" sell for about the same as "butchers," so that it is often hard to see where money can be made out of "short feeders." As between "long feeders" and "butchers" or even "short feeders," there is considerable spread, so that it appears quite safe to buy quite thin cattle and simply keep them growing while putting on as much flesh as possible. At present opinion is somewhat divided as to whether it is better to put in thin cattle, "long feeders" or cattle in higher finish—"short feeders." Experienced cattle feeders naturally feel safer with the "short feeders." They can feed and finish them and get them back to market before prices go off very badly, if the market takes a down turn, and, if it tends upwards, they are safe with a quick turnover. American feeders are taking the bulk of this type of feeder from the Winnipeg market at present. Inexperienced feeders are, however, inclined to select cattle that cost less money and so offer a wider spread between buying price and prospective selling price for butcher cattle. It goes without saying, of course, that well bred beef types are much more desirable than dairied bred or nondescript cattle.

Equipment

When a man decides to realize upon the value of his rusted crop by feeding stock, he should seriously consider making feeding a regular practise. He will require to provide a certain amount of shelter, fencing and conveniences for feeding which will serve for more than one year, and also in feeding one requires to test his ability and facilities over a period of years before he can reach a definite



This picture shows a desirable, sheltered place for out-of-doors feeding of steers. Also a type of feed rack for fodder is to be observed

conclusion as to what the practice offers. At the same time, one should not launch into heavy expense and elaborate equipment to feed a bunch of cattle. Provision should be made to keep the cattle on the grain or grass in the field or in a corral if the grain is stacked; water should be always available, and, when cold weather sets in, there should be the natural shelter of a bluff of timber or a light board shed, which may be covered with straw. Conveniently located in such shelter should be feeding tables of plank about three feet wide on which to feed chop when the time arrives and large racks to carry the unthreshed rusted grain, which is to form the bulk of the fodder.

Cutline of Feeding Operations

An outline of feeding operations with the object of utilizing a rusted crop might run something like this: Stack the grain near the place where feeding is to be done, then, as early as possible, let the



In the foreground of this picture is seen a stack of rusted grain which can be fed

cattle have the run of any field that may not be cut or of other stubble. About the time the ground freezes too hard to plow, begin feeding about one sheaf of the rusted grain to each animal three times a day. If there is less than a pound of grain to the sheaf, chop should be fed on the plank tables, in the feeding yard, or in the manger if the cattle are kept inside. In about two weeks give all the sheaves the cattle will clean up reasonably well and continue the chop unless there is more than the pound of grain in each sheaf. This feeding may be kept up, continually increasing the grain as the cattle seem to make weight, until along in February each animal is getting about twelve pounds of grain per day all told, that is from sheaves and as chop or sheaves not rusted. In no case would it be well to feed hay until all the rusted sheaves to be fed had been used up; the taste for hay would destroy the habit of eating the sheaves, but hay may be fed during the last two to four weeks of the feeding period.

During the whole time water and salt should be provided, and the water may be kept from freezing in a large trough by the use of a tank heater. If the cattle are fed outside, they should stand knee deep in straw and the shelter should protect from the prevailing winds.

Cattle, handled as described, should make from a half pound to two pounds per day, depending upon how good the sheaves may be and how well adapted the cattle are for feeding.

The Necessary "Spread" in Price

In feeding enterprises there is generally an attempt made to determine how much spread there should be between the cost of "feeders" and selling price of the finished "butcher" cattle. This spread, of course, should be wide enough to warrant men with average success in feeding in keeping it up. In most calculations this spread is put at two cents. It is very seldom that a profit is made when the spread is two cents, but frequently the spread is as low as one cent per pound. At one cent a pound it may not be possible to make a profit where the feed is given current market values; but much of the feed that may be used this year is without a very definite market value, it borders closely upon the classification of waste, so that, if the spread is less than sufficient to show a profit with the feeds valued at current prices for grain, it may be advisable to feed for the sake of giving a value to waste.

Supplementary Data

Prepared by Manitoba Department of Agriculture

In addition to the information supplied by Prof. Jacobs, the following will be of interest and value to anyone thinking of feeding cattle during the coming winter.

Actual Gains by Manitoba Fed Steers

In the Experimental Farm Bulletin No. 13 (Second Series), Superintendent McKillican, of Brandon Experimental Farm, presents the result of feeding cattle **out-of-doors**, running over a southern slope in a clearing made in a thick oak bluff.

From this bulletin covering the results for five successive winters (1908 to 1912 inclusive), we learn that by starting in the fall with steers which during the five years averaged 10½ lbs. in weight at the commencement of the feeding period, and by fattening them for an average of 156 days (a little over five months), the animals made an average daily gain of 1.21 pounds, attaining an average weight at the end of the period of 1217 lbs.

During the term covered by this report the price of cattle ruled considerably lower than during the past two years, the average autumn cost being \$31.59 per animal, and the average selling price, the spring following, being \$69.23 per animal. Thus, during a period of five years the average spring selling price was more than double the fall buying price of the same animals.

After allowing for the price of feed eaten, and assuming that the cost of care would be repaid by the value of manure (the usual assumption in cattle feeding experiments), the average profit upon these steers was \$9.14. Mr. McKillican further notes that the average prices realized for grains fed to these out-of-doors steers during the five years was as follows:

Oats	per bushel 56 cents
Barley	per bushel 79 cents

It is to be borne in mind, of course, that the straw given during these years was neither rusted nor unthreshed, the principal ration being ordinary threshed straw and chopped grain with a little supply of other feeds, as indicated in the reports for each individual season. Also it is to be remembered that these experiments were all with well grown animals that could be fitted into choice butcher steers in five months. On the other hand, many farmers with abundance of spare feed this season might prefer to feed cattle of the stocker type, say, those calved during the spring of 1915.

The main object of publishing these data is to show authentic results in out door feeding of steers in Manitoba throughout a number of years, the Department believing that these results cannot fail to be instructive.

A Study of Winnipeg Cattle Prices

Through the courtesy of Messrs. Rice and Whaley, of St. Boniface, who have submitted their records for inspection, the Department has made a study of the prices for several seasons past of feeder and

stocker cattle in the fall in relation to the prices of butcher cattle during the spring respectively succeeding. The months chosen for these studies have been September and April, and below are the findings. In these figures extremes have been avoided; for instance, some carloads of extra choice steers have each spring sold higher than the figures quoted. Also there have been lots that fell below the figures shown. In addition, there have been individual days, or even weeks, when cattle were either up or down unduly. The effort of the Department has been to avoid these extremes and strike a fair average.

It is always to be remembered that one can never know the grade of an animal simply by ascertaining its weight; yet there is a generally maintained relationship between grades and weights. "Stocker" cattle, as they are defined at the St. Boniface stock yards, are animals not yet ready to be put up for a period of finishing. Thus a steer of ordinary or thin flesh, 24 months old, and not likely to be finished for beef for the next twelve months, would still be spoken of by the cattle dealer as a "stocker" steer. This might include animals up to 800 or 850 pounds in weight. The class generally referred to as "feeders" will usually be above this weight, though the two classes merge one into the other, and good, well grown stocker cattle and "long feeders" would be very close to the same type.

	Sept. 1910 Price per Cwt.	Sept. 1911 Price per Cwt.	Sept. 1912 Price per Cwt.	Sept. 1913 Price per Cwt.	Sept. 1914 Price per Cwt.	Sept. 1915 Price per Cwt.	Sept. 1916 Price per Cwt.
Stockers	\$2.90-4.00	3.05-3.45	3.75-4.25	4.50-5.00	5.75-6.00	5.50-6.00	5.50-6.15
Good feeding steers	\$3.90-4.60	3.60-4.05	4.50-4.75	5.00-5.50	5.75-6.75	5.90-6.25	6.00-6.40
	April 1911 Price per Cwt.	April 1912 Price per Cwt.	April 1913 Price per Cwt.	April 1914 Price per Cwt.	April 1915 Price per Cwt.	April 1916 Price per Cwt.	
Common to me- dium butcher steers	\$4.00-4.50		5.25-5.75	5.75-6.15			
Fair to good but- cher steers.	\$4.75-5.25	5.00-6.15	6.00-6.50	6.35-6.65	7.00-7.50	7.50-7.90	
Best butcher steers	\$5.50-6.05	6.30-6.65	6.50-7.25	6.65-7.65	7.50-8.25	8.00-8.50	

Study of the table goes to show that at the date of writing prices of stocker and feeder cattle on the St. Boniface market, though a trifle higher, are pretty well in line with the prices for the same classes of cattle during the corresponding month of the past two years.

The stocker and feeder steers at present going through the St. Boniface yards are nearly all being shipped into the United States, there being practically no enquiry whatever from any point in the prairie provinces. Some very fine feeder and stocker steers, that would be admirably suited for feeding at home, are being shipped out of the country just now to be fattened by the farmers of the United States



