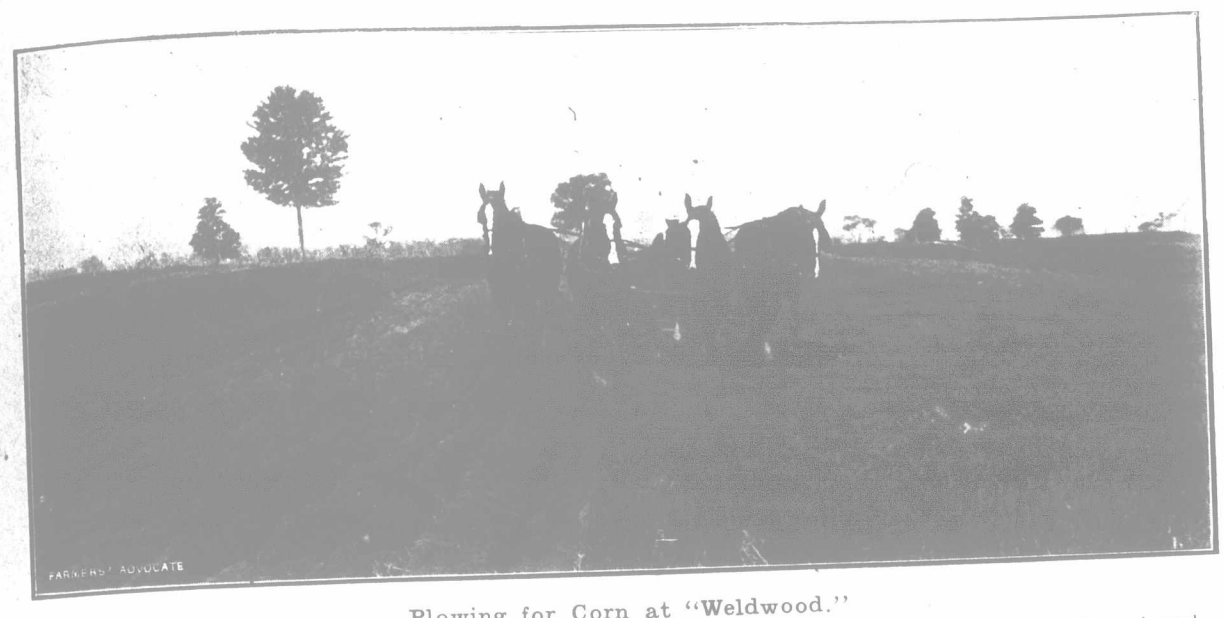


Plowing for Corn at "Weldwood."

Inverting over three acres a day with the two-furrow plow in sixteen-year-old sod, very dry when plowed.

got exactly the same feed as Lot 2, except that from January 1st they received 3 pounds less per day of mixed oats and barley chop, and in its place received 3 pounds of alfalfa hay. Their fattening ration, besides straw, corn and roots, was, therefore, 7 pounds mixed chop, 1 pound bran, 2 pounds oilcake and 3 pounds alfalfa hay per day, at the finish of the test. The average amount of concentrated grain feed for the whole period was thus less than 4 pounds per day.

At selling time, all three lots looked equally well, and were equally saleable. There was not a steer that was not in prime condition. The results obtained are given concisely in the following tabulated statement. The usual custom in balancing labor and interest against manure has been followed. So far as the results of the whole experiment are concerned, this is a safe rule, as the manure is certainly well worth the labor and the interest on capital involved. It is not, however, a fair comparison between outside and inside feeding, as the work involved in handling a bunch of steers in a stable is much greater than it is for the outside lot.

The interest on investment in stabling accommodation is also a considerable item. These points should be kept in mind in comparing these lots.

LOT I.—OUTSIDE.

No. of steers	7	
Average weight, Nov. 15	1,042	lbs.
Average weight May 1	1,257	"
Average gain, 167 days	215	"
Best individual gain	265	"
Poorest individual gain	165	"
Cost of 100 pounds gain (average)		$9.62

Cost.

7 steers, 7,295 lbs., 3.13¾c. per lb.	$228.57

Feed.

12 tons straw, at $1 per ton	$12.00
5 tons mixed hay, at $6 per ton.	30.00
1,596 lbs. alfalfa hay, at $12 per ton	9.58
210 lbs. bran, at $20 per ton	2.10
371 lbs. oilcake, at $33 per ton	6.12
8,501 lbs. oats and barley chop, at $20 per ton	85.01
Total feed cost	$144.81
Total cost	$373.38

Receipts.

7 steers, 8,800 lbs., less 5 per cent. shrinkage, at 6.30c. per lb.	$526.68
Total profit	$153.90
Profit per steer	21.90

LOT II.—INSIDE.

Usual fattening ration. No alfalfa.

No. of steers	7	
Average weight, Nov. 15	1,061	lbs.
Average weight May 1	1,285	"
Average gain, 167 days	224	"
Best individual gain	250	"
Poorest individual gain	160	"
Cost of 100 lbs. gain		$8.82

Cost.

7 steers, 7,430 lbs., at 3.13¾c. per lb.	$232.81

Feed.

9,380 lbs. straw, at $1 per ton	$ 4.69
39,900 lbs. corn silage, at $2 per ton	39.90
18,725 lbs. roots, at $2 per ton.	18.73
371 lbs. oilcake, at $33 per ton.	6.12
210 lbs. bran, at $20 per ton.	2.10
5,727 lbs. oats and barley chop, at $20 per ton	63.37
Total feed cost	$138.91
Total cost	$371.72

Receipts.

7 steers, 9,000 lbs., less 5 per cent. shrinkage, at 6.30c. per lb.	$538.65
Total profit	$166.93
Profit per steer	23.86

LOT III.—INSIDE.

Alfalfa hay as part of ration displacing oats and barley chop, pound for pound.

No. of steers	7	
Average weight, Nov. 15	1,056	lbs.
Average weight, May 1	1,277	"
Average gain, 167 days	216	"
Best individual gain	285	"
Poorest individual gain	145	"
Cost of 100 pounds gain (average)		$8.41

Cost.

7 steers, 7,290 lbs., at 3.13¼c. per lb.	$231.55

Feed.

9,380 lbs. straw, at $1 per ton	$4.69
39,900 lbs. corn silage, at $2 per ton	39.90
18,725 lbs. roots, at $2 per ton.	18.72
371 lbs. oilcake, at $33 per ton.	6.12
210 lbs. bran, at $20 per ton.	2.10
3,902 lbs. oats and barley chop, at $20 per ton	39.02
2,835 lbs. alfalfa hay, at $12 per ton	17.01
Total feed cost	$127.56
Total cost	$359.11

Receipts.

7 steers, 8,905 lbs., less 5 per cent. shrinkage, at 6.30c. per lb.	$532.98
Total profit	$173.87
Profit per steer	24.84

STABLING NOT ESSENTIAL.

The striking results of this experiment are: First, a demonstration of the opportunity for Western farmers to make better use of their straw and coarse grains by fattening steers at a handsome profit.

Secondly, it is possible to get these results without going to the expense of building stables in Manitoba. Though the gains are better when stabling can be used, they are not sufficient to justify heavy outlay for stables to be used for this purpose alone.

Thirdly, probably the most striking illustration is that of the wonderful feeding value of alfalfa. The steers that had their grain ration reduced by three pounds, and got in its place alfalfa hay, looked just as well as the others, and made practically the same gains. They made the gains more economically. Even though the alfalfa hay was valued at $12 per ton, which will seem to most people a high valuation for unbaled, undelivered hay, yet the steers fed partly on it made their gains considerably cheaper than the ones fed chopped oats and barley valued at 1 cent per pound.

In the article, "Bloat in Ruminants," published in the Stock Department, June 1st, reference was made to an instrument called a probang. Through a printer's error, it was set "probary."

Hoard's Dairyman very much favors keeping dry roughage, especially good quality of hay, before the cows when on grass. "It will be found," our contemporary adds, "that a considerable quantity of rough feed will be consumed, and unquestionably it helps to prevent bloating and extreme looseness of bowels.

THE FARM.

Profits of Underdrainage.

To underdrain 10 acres a year for five years, at 25 cents a rod for "digging and laying," or to drain 50 acres in one year at the higher price of 35 cents a rod for the same work—which is the better plan, and how much? This is the problem solved in last issue of "The Farmer's Advocate," but it is not exactly the problem encountered by most farmers to-day. Usually, the price is the same in the two cases. The problem now to be solved is this: How much richer will a man be five years hence to drain 50 acres this year, than if he drains 10 acres a year for five years, the price of drainage being the same in the two methods?

As in the previous article, we shall assume that he borrows the money in either case, at 5 per cent. compound interest; also, that he pays 35 cents a rod for digging and laying. The cost per acre would then be $28, using the same prices as before, and the drains being the same distance apart. The cost (including interest) five years hence for draining the first 10 acres would be

	$280×(1.05)⁵=	$ 357.37
Second ten acres	280×(1.05)⁴=	340.34
Third ten acres	280×(1.05)³=	324.14
Fourth ten acres	280×(1.05)²=	308.70
Fifth ten acres	280×(1.05)¹=	294.00
Total		$1,624.55

Assuming, as before, that the undrained land would produce $15 per acre, and the drained land $25 per acre, we find from the previous article that the returns from 50 acres, together with interest, would in five years amount to.....$5,748.06
Cost of drainage 1,624.55

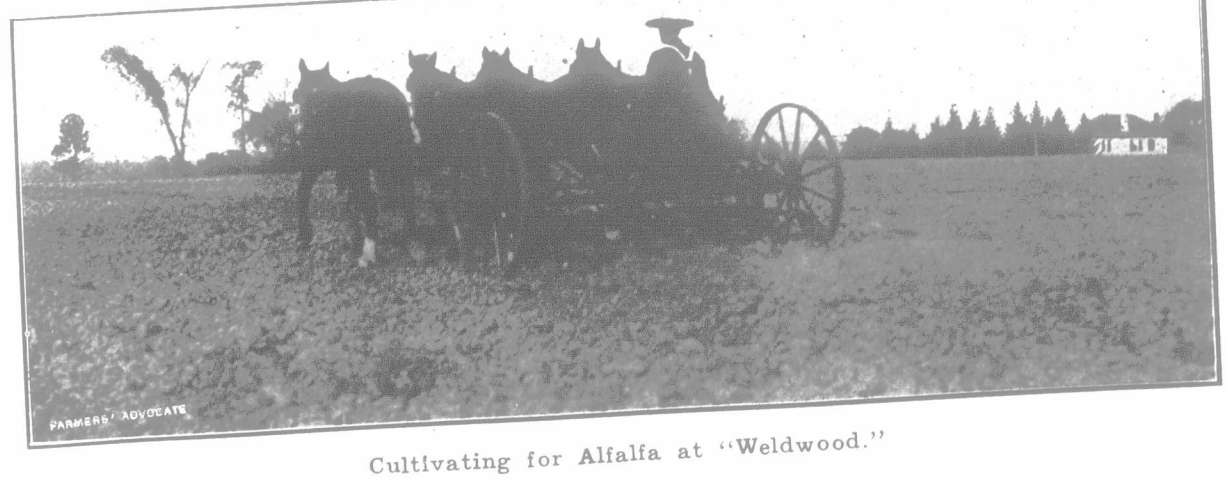
Cash balance, after paying for drainage...$4,123.51

The total cost of draining all at once, the returns, and the cash balance, would be the same as in the last article, viz.:

Cash balance, draining all at once	$5,121.16
Cash balance, installment plan	4,123.51
Difference	$ 997.65

Thus we see that by the speedier plan, cost prices per rod being the same in both cases, the farmer would be $997.65, or practically $1,000 better off five years hence than by the installment plan.

Before leaving this phase of underdrainage, it might be well to make one further calculation, viz., the cash balance at the end of five years if the land were not drained at all. In this case there is no cost of drainage to be deducted, and hence the cash balance is the value of the crop, with interest. At $15 per acre, the crop would be worth $750. As this would not be received till near the end of the year, when the grain or stock is sold, there would be interest accruing on it for four years. Therefore, the value of the first year's crop, with interest, would be



Cultivating for Alfalfa at "Weldwood."