

the time to do that. It takes 1½ to 2 tons of coal and from 65 to 75 barrels of water per day to run the outfit. We need five men—engineer, steersman, plowman, waterman and coalman, one team on water tank and one on coal wagon.

I consider plowing hard work on an engine in the general condition of land. If you have gumbo to contend with you want all the steam you can produce. We run a 42 inch cylinder, 70-inch body, Avery threshing machine and consider threshing a great deal easier than plowing.

Yours truly,
Lachlan MacLean,
Fillmore, Sask.

Ran Day and Night.

I have not had much experience as yet in traction plowing, as I only purchased my rig last fall and after threshing did some fall plowing.

My engine is a 25 h.p. Case, and I drew a Cockshutt 7 bottom gang, also a five section drag harrow behind the plows. We ran the outfit day and night, had two crews of four men each; one shift going on at 12 o'clock at night and one at 12 o'clock at noon. Each crew was comprised of engineer, steersman, tankman and plowman. We only used two teams of horses, one for each shift. The tankman coming out at noon brings out 24 tons of steam coal which is sufficient for the 24 hours' run. We only have to haul the water about a mile, so you will see that it is not hard work for the tank team. We never use more than about 45 barrels of water during a run of 12 hours.

We plowed and harrowed twice 270 acres in nine days of 24 hours. This is the extent of our experience in traction plowing thus far. We hope to be able to write you a better letter next year as we have about 1500 acres to plow in 1910.

Yours truly,
A. H. Maclean,
Kronau, Sask.

A Good Engineer Necessary.

Our experience with the steam plow in the field has been limited, but having spent thirty days in actual work with the outfit, we have had a valuable experience, as now we know what breaking the virgin prairie means in its fullest sense.

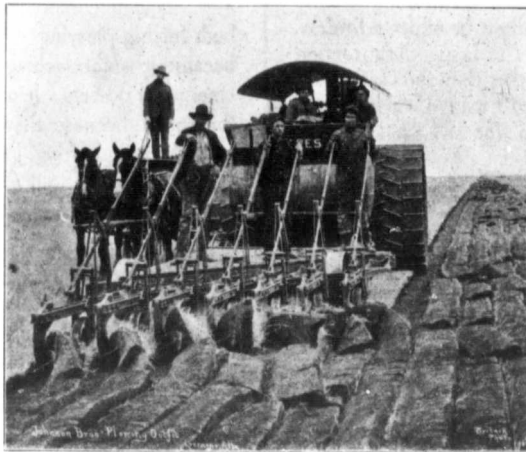
We have a 25 h.p. J. I. Case engine and pull a John Deere engine gang of eight fourteen-inch bottoms and a roller. I might say that the roller is a splendid part of the whole, leaving the ground smooth for after work.

I am not an engineer, but my experience very plainly proves to me that you do not have a paying institution with a poor engineer. Every



engineer who can run an engine threshing cannot run successfully the same engine breaking. Then the first thing to do is to secure an engineer of wide experience and practical every-day knowledge at steam plowing. In other words, the engineer is the "whole thing."

Our crew consists of engineer, steersman, plowman, waterman,

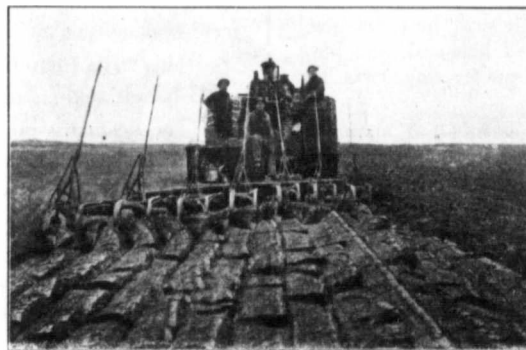


A Reeves 32 H.P. cross compound Steam Tractor pulling a 7 bottom Cockshutt Engine Gang at Lorrain, Alta.

cook for cook car, and coal and general utility man. Two teams do all the work ordinarily. Coal in Alberta is cheap, and we haul it direct from the mine at a cost of \$3.00 per ton. Six tanks of water will run the engine for an ordinary day of twelve hours. An average of 20 acres per day is good, but we have broken up to 30 acres per day. We don't travel fast, but steady and waste no time at the ends.

Steam plows are all right for experienced men, but otherwise they are not.

Yours respectfully,
E. J. Middleton,
Lethbridge, Alta.



Wm. Lackies outfit near Lethbridge. A Case 25 H.P. Steam Tractor pulling a John Deere 12 bottom 14 inch Engine Gang.

Plowing Easier Than Threshing

We have a 20 h.p. simple Case traction engine and an eight-furrow John Deere engine gang. We plowed 200 acres summer fallow and 200 acres of stubble last fall. As we have about 1600 acres to cultivate, the steam outfit certainly looks good to us.

Our land is level and free from stone, and this, along with being situated in the best part of Southern Manitoba, is perhaps particularly favorable for traction plowing. We had no trouble handling the eight furrow plow five inches deep and, in fact, it is easier than threshing.

Two of us operate the engine and

ten furrow, fourteen-inch Cockshutt gang. We drew eight plows and a packer, but some of the

time we only pulled seven plows. We never plowed more than four inches deep and plowed some very rough land, in fact some places where it was scarcely fit to put horses. We loosened stones over five feet across that were buried out of sight, tore some out over 24 feet in diameter, went over knolls that would upset an engine that was at all top heavy, and went up sharp hills. In these places we never got stuck with seven plows. These are places where an engineer learns to handle his engine to the best advantage.

We burned straw most of the time as coal was hard to get at the first of the season. We had no trouble in keeping up steam, even with very poor stuff. We make about 16 acres per day on it quite easily. Later on we burned coal. It took 4500 pounds of Souris per day and 3250 pounds of Edmonton per day and 4500 pounds of Galt per day. We found that the best coal was the cheapest in the long run.

We plowed in all 400 acres, seeded 150 acres and threshed 40 days and I know that the engine worked nearly as hard on the 40-inch cylinder while threshing as it did plowing but, of course, not so steadily. All breakages on engine for the season would not exceed \$1.00. These were mostly bolts.

I think that in places where the ground is comparatively level, where water and fuel is handy and the climate is rather dry, that steam plowing is the most economical and most reliable means of cultivation.

As we engaged our men for the summer by the month, our expenses were as follows:

Engineer	\$ 4.00
Fireman	1.25
Strawman	1.25
Waterman	1.25
Two teams	4.00
Oil and grease	.50
Shares sharpene!	1.20

Total

This brings our expenses somewhat below \$1.00 per acre.

Yours truly,
John L. Henderson,
Adanac, Sask.



Experience Necessary.

I have a 45 brake h.p. Hart-Parr tractor, which is all right. We did not get our engine until August and then it was very dry for breaking. We have an eight-furrow Cockshutt plow and at this time broke about 50 acres.

We kept no record of the amount of oil used, but I feel sure that

