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good deal own a conlast two th the rehen other practically. ls to the heat. Last or seed to report to McIvor's to bushel), d threshed od one, did he bulk of w grew so it became the acre. the heavy sample. iment, and s. I think ore rapidly ve not fed oken of as e fed conecessary to know of no t will put ith horses, the kernel hull, causughly, with regard to w it, I am ay be sown good crop, e almost a than the nth is even ittle longer rown to a iesota, and rof. Worst, ld me that ding stock, to barley, of. Zavitz, tement to o. I wrote on Experiwing letter

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MR. THOMAS R. BROWN, REGINA, N.-W. T.

One of the Wheat Kings.

As shown by the tabulated statement of some of the big crop growers in our Christmas issue, Thos. R. Brown, Regina, a portrait of whom is herewith reproduced, had a total crop of 27,640 bushels off an area of 1,072 acres. The following further statistics will be of interest. The custom in many parts of the Territories is to take two crops off after a summer-fallow without plowing, and this system Mr. Brown says gives them better results than either spring or fall plowing.

The second crop without plowing is called a stubble crop. Sometimes this follows backsetting, but generally a summer-fallow. The yields cb-tained by Mr. Brown on the several plans of cultivation are instructive, showing strongly in favor of summer-fallow.

WHEAT.			
Cultivation Given. Summer-fallow Breaking Summer-fallow stubble. Breaking stubble.	Acres. 132 160 75 130	Average. 45 36 32 18	Bushel 5,840 5,760 2,400 2,340
Total	. 497	33	16,340
OATS.			
Summer-fallow Summer-fallow stubble Breaking stubble	. 45 . 85 . 75	$90 \\ 50 \\ 40$	4,050 4,250 3,000
Total	. 205	60	11,300

These figures speak plainly enough, but we would just call attention to one item, that of the 160 acres of breaking yielding 36 bushels per acre. Allowing \$4.00 per acre for the breaking and backsetting, and \$7.00 for seeding and harvesting, it would leave \$7.00 per acre to pay for the land, the 36 bushels per acre being worth, at 50 cents, \$18.00. Now, there are thousands of acres all through the West of choice wheat land that can be bought for less than \$7.0, and that, if properly handled, will be as likely to produce enough wheat to pay for them in one year as in the above case. And this is only one instance of thousands that might be cited. Talk of the possibilities of the West !

THE FARMER'S ADVOCATE.

Farm Management.

Prof. J. H. Grisdale, Agriculturist, Dominion Experimental Farms, on January 25th, at Amherst, addressed the members of the Nova Scotia Farmers' Association on the subject of "Farm Management." The subject was well received and opened up an interesting and lively discussion, and a brief review of the address is here given:

Our conception of success in farming to-day is broader, our efforts, therefore, let us hope, shall be more happy in their results. Success to-day to the average farmer means : (1) An increasing income from his farm; (2) an increasing fertil-ity of his farm; and (3) an increasing air of homelikeness, beauty and neatness about his These three conditions, making up our farm. ideal of success, are so closely interwoven in their bearings and connections as to be inseparable. Most things have a limit; the development of the farm, so far as I can see, is limited by no hard line. Like the horizon, the apparent boundary recedes as we advance and is ever in the dim, hazy distance, ever receding. Ours be the joy of hastening its retreat.

Just as the past history of Canadian agriculture has been summed up in the phrases, "grain growers," "soil robbers," so must the future history be epitomized in "clover growers," "farm builders."

Immediately under the dead leaves of our forests lies a more or less deep layer of black material. This is known as humus. The chief reasons why our arable soils are no longer as fruitful as of old is the lack of this humus. The influence of humus upon a soil is most startling. Consisting as it does of decayed vegetable matter, it is exceedingly rich in plant food in very available forms. Its presence prevents the escape of fertility from any soil through washing, and is, therefore, valuable to all soils, not alone as a substance rich in fertility itself, but as a retainer of fertility otherwise likely to be carried off by surface water or worked down beyond the reach of common roots by percolation. In brief, it improves the physical condition of a soil. Humus being so great a factor in soil fertility, how shall we get it? How shall we increase the store, and how retain what we gain? Farmyard manure is a fruitful source, but farmyard manure is scarce, and being scarce, it follows that the increase will be slow. Another source is sod. Everyone knows the rich soil giving such relatively heavy crops after a sod has been turned over. It seems odd that the average farmer has not, generally speaking, availed himself at shorter intervals and with more regularity of this evident means of increasing his crops. Lack of humus or irregular or uncertain treatment of a soil are the two most common and injurious mistakes of present-day agriculture in Canada, but both are easily remedied. The remedy is expressed in one word, rotation. A regular succession of crops. Let me suggest one. It is of four years' duration : 1st vear-roots, ensilage corn, potatoes, and peas; 2nd year-grain seeded down to clover and timothy; 3rd year-hay (chiefly clover); 4th yearhay or pasture plowed in August.

Nature, you will observe, puts her humus on the surface. Judging by the rank growth of vegetable matter in our woods, it is a good plan. Experiment has proven time and again that it is the best plan. The earliest and most important root extensions of any plant are near the surface; the percolation of water tends to carry fertility downwards. Therefore, theory would say keep the rich soil on the surface, the lower soil will look after itself, especially where some deeprooting plant, as clover, is grown at intervals. Nature, experiment and theory unite in recommending that the humus be kept near the surface. Then who shall be so bold as to say nay? The introduction of such a system of rotation and cultivation on any farm has many advantages. To be brief : 1-It increases the fertility or productive power. It has been known to double the returns in a short time.

Clover Culture.

I would say that as a result of observation and some practical experience, the very first essential in successful clover culture is to have the soil in a proper chemical and mechanical condition. It is a common belief in this section that unless the soil be properly fertile a paying clover crop is impossible. But I am inclined to think that probably the mechanical condition has more effect than the lack of fertility. Removal of the forest, successive cropping and other causes have so changed the character of our soil that its moisture-holding power is at a minimum, consequently the natural conditions for the germination of seeds, particularly such fine ones as those of clover, are not present, and the result is a very low percentage of seeds sprout. I have frequently noticed on clover-seeded land that the only place there was any "catch" was in the fissures of the soil (caused by the drying process), where the ascending moisture had produced conditions which enabled the seed to germinate. Again, on our rolling land, it is the rule to find the hollows much better cropped than are the knolls, which, usually having less humus or vegetable matter, dry out more quickly. I have also noticed that damp weather during the germinating period has a wonderfully beneficial effect.

In view of these facts, I think that in the successful growing of clover we should by every means endeavor to increase the moisture-holding power of the soil. And it is probably owing to this cause that our best success in getting a catch is usually on winter wheat, the clover seed being sown on a light covering of snow, or at least before the ground dries up in the spring. This is particularly advisable for light land. On heavier soils in fair tilth, excellent results, are often obtained by seeding with any of the spring grains, but particularly barley, following a hoe crop. This is a favorite method, but conditions as to soil and moisture must be right and cultivation careful.

The after treatment is of great importance. It is often during the hot days, just after harvest of the nurse crop, that the growth of the young clover is retarded. Too many are in the habit of letting the stock graze the life out of the young shoots the first year. Moderate grazing is not always detrimental, and sometimes may even be a help, and no doubt would be really advisable if we could only rely on its being evenly cropped, and not too closely, as it would tend to make the plant stool out more. For this reason, cutting high with the mower in autumn, after the grain harvest, is advisable, and it also leaves a mulch of leaves, stalks and stubble, which protect the tender roots from excessive drouth.

Protection at this time, causing vigorous growth, will also materially help to prevent heaving during the next winter and spring. But the best preventive of this is a well-drained soil. South Perth. J. H. B.

The Benefits of Fasting.

A majority of the diseases, excepting the contagious ones, are due in live stock to mistakes in feeding : sometimes too much feed, sometimes insufficient feed, and more often irregular feeding. As examples we find colic in horses, thumps in pigs, apoplexy and other troubles in poultry. In all cases due to overfeeding, one of the essentials to success in treatment is a fast. Sick horses should not be allowed to eat hay all day, as many of them will do and often hinder nature's efforts at repair. With sick fowls, when the cause and disease is unknown, place in a coop and fast for 36 hours.

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Measuring Rows in Corn Catting.

To the Editor "Farmer's Advocate":

N. R. G. asks, in the "Advocate," for a rule to measure a field of Western corn.

For convenience in measuring the length of the rows, I have a string tied on the wheel of my corn binder, which measures off 10 feet every revolution it makes. I count the turns it makes while I am driving along. Multiply the number of turns by 10, and you have the length in feet. We use the average of 22 rows 40 rods long for one acre, then the distance the rows are apart does not make any difference. Example: If the wheel makes 33 turns, 33 x 10 equals 330 feet or 20 rods; 66 x 10 equals 660 or 40 rods. If the rows are 20 rods long, then 44 of them will make one acre. Eighty rods long will take 11 rows for one acre.

We usually charge \$1.00 per acre for Western corn, but if the rows are under 20 rods in length, or we have to drive one side without cutting, we charge \$1.25 per acre, the farmer supplying the twine or paying for it. A. M. S. Lennox Co., Ont.

As you train the colt to harness and saddle, train it to walk **fast**.

2—It lessens to a minimum the danger of a failure to catch when seeding down.

3—It lessens the labor of cultivation, for there is only one shallow plowing to do once in four years.

4—It facilitates farm operations by having all the work of a certain kind in one field.

5—It lessens the cost of fencing, for there need be only four fields on the farm.

6—It is an incentive to orderliness, tidiness; a little bit of system induces more.

New Use for Windmills.

In a lecture before the students of the College of Commerce and Administration in Chicago, Mr. F. H. Head foreshadowed the establishment of a forty-mile circuit of windmills all around the city, running dynamos which would charge storage batteries with electricity to light the entire city. Edison's new storage battery is said to be capable of storing power successfully, and even though the wind were not constant, enough could be generated when it did blow to supply the electricity needed.



MR. JOHN D, ROSS, ELGIN, MAN