

### Value of Sprouted Wheat for Feeding Purposes.

In consequence of the excessive moisture during harvest time and the wheat sprouting in the shocks, the question has arisen in the minds of some Ontario farmers how they can dispose of their fall wheat to the best advantage if it is not fit for milling purposes or for seed. As commonly grown in Ontario this crop is meant to be sold and not fed, but if there be no other outlet except through feeding it to live stock or selling it for that purpose, the product, which is not saleable through the ordinary channels must be quoted at a lower figure on the market than is number one. Farmers desire to know the true value of this damaged wheat for feed in order that it may be sold for what it is really worth or fed at home. Regarding this phase of the question experimental data is lacking, and perhaps some of our readers from their own experience may be able to enlighten others on this matter. The entire wheat crop of Ontario has not been injured for milling purposes, but to those unfortunate enough to have unmarketable quantities the following information may be of value.

To understand the feeding of wheat and to be able to arrive at a fair estimate of the injury which will vary in extent in different fields, it is necessary to know something of its composition and what changes have taken place as a result of the germination while yet in the straw. The following analysis is given by the Dominion Chemist for No. 1 hard, which will serve by which to judge all wheat of normal quality. The constituents named may vary in amount in different samples, but they are the chief ingredients of wheat, and to understand them is important in this discussion:

Water.....	13.02%
Protein.....	13.68%
Fat.....	1.98%
Carbohydrates.....	67.50%
Fibre.....	2.21%
Ash.....	1.61%
Total.....	100.00%

Due to its high percentage of carbohydrates wheat is considered a fattening feed. Compared with corn it carries slightly more carbohydrates (starches and sugars) in the form of starch, more crude protein and much less fat. It is considered superior to corn for building bone and muscle in young growing animals. Henry in "Feeds and Feeding" says: "Fed alone to fattening animals wheat yields about 10 per cent. less returns than corn, but when mixed with corn, oats or barley the combination is superior to any one of these feeds." Averaging the amounts of meal fed to produce 100 pounds of gain in hogs at five different Stations in the United States it is shown that 6 lbs. more of cornmeal than wheatmeal were required to effect the gain. The difference is so slight it may be considered that wheatmeal and cornmeal have equal value when used for this class of stock. At the Maine Station 6 cows were fed for three 21-day periods. Each one received 2 lbs. of cottonseed meal daily along with either 5 lbs. of wheatmeal or 5 lbs. of cornmeal. The returns in milk and fat were practically the same for both rations, and wheat and corn were considered equally valuable as feed for the dairy cow. For fattening lambs some experiments have shown that wheat does not have the feeding value of corn, but for fattening cattle there is little difference.

Results of experiments with feeding frosted wheat as offered for sale show it to be almost as good as the properly-matured article, and to compare very favorably with the coarse grain as feed for hogs. When fed along with bran or roots to fattening cattle it also had a value quite equal to other grains, especially when mixed with them.

These brief comparisons afford a working basis. They show that wheat of almost any quality is equal to corn, especially when mixed with corn or other grains. Neither corn nor wheat should be fed alone at any time if the best results are looked for, so the necessity of combining injured wheat into a ration with other feeds has no depreciating effect as applied to the injured product at this time.

The germination of the wheat kernel causes some changes in the different constituents to take place. Some of the albuminoids are changed into amides. These ingredients both come under the head of proteins and sprouting to a certain extent decreases the feeding value of that part of the kernel, as amides are not considered as useful in

the building up of the body as are albuminoids. Some of the starch and fats will also change into sugar, and to a small extent pass into the young shoot as food. In addition to this a portion of these substances are lost through the respiration of the tiny plant which has sprung from the grain. The loss in one kernel of wheat due to germination is evidently insignificant, yet in the entire yield the depreciation might be appreciable if the young shoots acquired any size. Kellner, another authority on feeding, says: "A loss of 15 per cent. or more of valuable food material can be lost according to the extent to which germination has taken place."

It should be remembered when this matter is being considered that the injury in consequence of sprouting is dependent very largely upon the extent of germination, and that no definite percentage of loss can be stated. However, in samples seen that sprouted in the stock we would consider the loss in feeding value as almost insignificant, and class that wheat with the ordinary product in the bin.

We do not include in this statement, of course, wheat which has heated in the bin. When the ordinary process of sweating does not occur in the mow this sprouted product is hard to preserve after threshing, and bin-burning would result in more injury than would the simple process of sprouting. Analyses of sprouted wheat were made at Guelph by A. J. Galbraith, and in the table indicating the constituents there is little difference between the sprouted and normal grain.

At time of writing corn is quoted at 84¢ cents per bushel on the track, which would mean 91 cents for 60 lbs. We have used corn only by way of comparison to arrive at a market value for a bushel of damaged wheat, but by feeding it at home in the proper proportions with other grains and roots or silage the grower might realize even more than this amount, at present prices for live stock. Practical feeders have declared that wheat was worth over \$1.00 per bushel to feed to hogs, and that was when they were selling for less than they command this season.

The man who has a small quantity of sprouted wheat should not look upon it as of little value. If fed to live stock the grower may not realize on it quite so quickly, but in the end the returns should be quite as good.

### More Beef and Less Veal.

It is reported that down in Virginia bankers are beginning to take more interest in how the farmer farms. Difficulty has been experienced in getting stock cattle each fall, and this difficulty has increased year after year. Now, the banker comes forward and says: "breed a better class of cattle and save all the good calves. Naturally, under such a plan the difficulty of getting good stockers would be largely overcome. Then, as of old, each farmer would raise his own steers. Conditions of the stocker and feeder trade appear to be about the same in Virginia as they are in Ontario. The cattle feeder here has been depending too much upon buying his stock in the recent past. By all accounts this is the same disease from which the live-stock business in Virginia has been suffering, until now, in one case at least, a bank has purchased a pure-bred Shorthorn bull of good type, and placed him at the disposal of the farmers in the vicinity. The services of this good bull are free, and the bank urges all farmers living within reach of him to breed all their cows to this good sire. After breeding the cows they are further urged to save the calves. This should prove sufficient of an object lesson to induce farmers, notwithstanding the high price of veal, to rear the good calves. A good sire means more beef and less veal.

Besides, this shows how much importance the financial institution places on the success of the stock business. If it is good business for the banks to encourage the breeding of good stock surely it is good business for the stock breeder himself.

### Fall Rye for Pasture.

Pasture has been good, but in some cases a very nice bite of green feed later on this fall might be produced by sowing some fall or winter rye early after harvest. It comes on fast and makes a far better late fall feed than old, dry grass. It is particularly suitable for dairy cows and young pigs. There is no better way of growing and, given shelter here in the fall they will do far better with an outside run than in the close confinement of a pen. It might be a good time right now to sow a little rye for this purpose.

## FARM.

### The Simplification of Government.

Editor "The Farmer's Advocate":

If one holds a stick horizontally in a doorway, through which a flock of sheep are passing and if after the first sheep has jumped over the stick, removes it, all the rest of the sheep will jump over the place where the stick was. Carlyle refers to this peculiarity and remarks that mankind is very similar. Very few individuals make any original observations or do any original thinking. We continue to jump over the place where the stick was, not observing that it is no longer there.

It seems to me that this is particularly true in reference to our social institutions. Somebody once said that Ontario's public school system was the best in the World, and thereafter, for many years this statement continued to be believed in and quoted. One day someone was bold enough to call the statement in question, and straightway we awoke from our delusion and discovered that the World had meanwhile changed, and that other school systems had been brought into harmony with changed conditions while ours had not.

Not many years ago I heard a man explaining and defending his devotion to the "Liberal Party" by reciting what great things the "Party" had done in getting "responsible government" for us, several generations ago. That it was possible for "The Party" and social conditions generally to change very materially in the interval did not seem to occur to this "Liberal." He continued to jump over the place where there was a stick 50 years ago, and only his grey hairs saved him.

Some people are very fond of lauding "The British System" of responsible government by party, forgetting that the very genius of the British constitution is that it is unwritten, and continually changing to suit changed conditions. One of the recently discredited Manitoba politicians was particularly emphatic in his declarations of devotion to the "British System"; and I have not infrequently heard politicians gain cheap applause by congratulating their hearers that we were loyal to "British Institutions"; both speaker and audience being apparently ignorant of what British Institutions really are. It is not the mark of intelligence to be so disdainful of other systems that we are unwilling to study them with a view to adopt any good features which they may possess.

Bearing these things in mind I make bold to offer certain suggestions which, if adopted, would, I believe, tend greatly towards the simplification of our governmental machinery and the increase in its efficiency.

Of late years there has been a good deal of interest aroused in what is known as the "commission plan" of Municipal government. The change from a large body of "representatives" elected for a short term, and with no special qualifications for their public work, to a smaller, more permanent, better paid and better qualified "commission," in which the responsibilities are definitely fixed upon certain individuals has been shown to give much greater efficiency in government. There is only one serious objection to it from the democratic standpoint, and that is the natural and quite proper hesitation which electors feel in entrusting large powers to a few individuals. To many this difficulty has been insuperable, and they have, therefore, been content to endure the evils which they have, rather than to run the risk of others that they know not of. But the difficulty vanishes with the adoption of the Initiative, the Referendum and the Recall. The Initiative provides for the direct proposal of legislation by the people, thus overcoming the danger of sins of omission on the part of elected representatives. The Referendum supplies a complete and continuous check upon legislation, thus overcoming the danger of sins of commission. And the Recall enables the electors to remove any incompetent or dishonest official. This combination of direct control by the people over a small body of well-qualified, permanently employed and well-paid experts, secures at the same time efficiency and continuity of government and continuous popular control.

The same idea may be extended to our provincial and federal governments. Let the number of members be greatly reduced. Let them be elected on the proportional plan in multiple member districts. Let them be required to give their whole time to the work of government, and let them be well paid. And finally let them be subject to continuous popular control through the Initiative, Referendum and Recall. If a man wished to build a beautiful house he would not employ a large and heterogeneous crowd of architects, with unlimited power to thwart their employer's will during a definite specified period. Rather would he employ a small and select body of men with the provision that they should combine their wisdom, evolve and discuss plans, and carry them into effect only after their employer's sanction, either explicit or implicit. So in build-