Corn as a Forage Crop

With a Comparison of Varieties

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IN only a very restricted area of this country can corn be grown satisfactorily as a grain crop, but in most parts of Ontario, and in large areas of other provinces, corn is one of the most highly valued of forage crops. Its large yield of feed, the palatability of the fodder it provides, and the opportunity it affords for checking the growth of weeds, through cultivation, all tend to give it a most important place in our agriculture.

It is as a silage crop that corn especially commends itself to the farmers of this country, and even in the corn belt of the United States we find numerous silos coming into use. For years it has been a disputed point whether it is more profitable to put the whole corn plant into the silo or to first remove the ears, in districts where corn will mature sufficiently for husking, and feed the stalks separately. This matter was tested at both the Wisconsin and Vermont Experiment Stations, and at both stations results were decidedly in favor of putting the whole crop into the silo instead of first removing the ears and putting only the stalks in the silo. At the Vermont Station it was found that one acre of green corn fodder, including ears, reduced to silage, was equal in feeding value to 1.26 acres of silage from stalks stripped of their ears and fed with the meal made by grinding the dry ear corn which was produced by the crop. So far, therefore, as the part of the crop which has to be fed at home is concerned, it would evidently be the part of wisdom to put the whole crop, ears and all, in to the silo instead of going to the trouble of first removing the ears.

Quality of Silage.

In our northern latitude the selection of suitable varieties of corn for silage becomes very important. We all know that the large, late maturing varieties of corn will give us a very much larger yield, per acre, than the early maturing varieties, and the question is just where we should draw the line. That is to say, should we select a very early maturing variety, regardless of the fact that it is a light yielder, or should we sacrifice quality and take a very heavy yielding variety, which will not mature in our locality, or should we follow an intermediate course and secure a moderately large yield with a moderate degree of maturity. During the summer of 1915, we started some work along this line, and Mammoth Southern Sweet, White Cap Yellow Dent, and Longfellow varieties of corn were put in our silos, and their effect upon the milk yield of cows was tested. The summer of 1915 was wet and the corn was, in consequence, rather late in maturing. On the Mammoth Southern Sweet the ears were barely formed. White Cap was in the medium milk stage, and the Longfellow had reached the dough stage. The silage from the Mammoth Southern Sweet was very sour, and it took several days, as a rule, to get the cows to eat it satisfactorily after being fed other silage. The silage from both the other varieties was quite satisfactory.

Two tests were made to compare Longfellow silage with that from the Mammoth Southern Sweet. In one of these tests Longfellow silage proved worth $1.43 a ton more than that from Southern Sweet.

Two tests were also made with White Cap silage against Southern Sweet silage. In one of these tests White Cap silage proved to be worth $1.11 per ton more than the silage from the Southern Sweet, and in the other experiment the White Cap silage was worth $1.64 per ton more than the silage from the Southern Sweet.

Both these comparisons were made on the basis of $1.60 per hundred for milk, which is a reasonable valuation under prevailing circumstances.

So far as these tests are concerned, the evidence is strongly in favor of the intermediate variety, which gives a good quality of silage combined with a large yield. Apparently there is no advantage obtained by having the corn nearly mature at the time it is put in the silo. On the other hand, the very late variety produced such sour silage that it was entirely unsatisfactory, and the difference in yield did not compensate for the difference in quality.

ensilage, green clover, and green peas and oats, for the purpose above mentioned. Ensilage 30 pounds, and hay six pounds, form the daily roughage ration for this herd at all times. For a period in 1915, ensilage and hay were replaced by 60 pounds of green peas and oats, and for one period in 1916, all the hay and part of the ensilage were replaced by 20 pounds of green alfalfa, while during a second period a repetition of the 1915 experiment was carried on. The results are given in the following table:

Year	1915		1916 A.		1916 B.	
Succulent Ration Fed	Ensilage & hay	Green feed (peas & oats)	Ensilage & hay	Ensilage & gr. alfalfa	Ensilage & hay	Green feed (peas & oats)
Milk produced per cow, per day, lb.	31.5	30.7	26.7	26.2	25.8	21.
Cost to produce 100 lb. milk cents .	67.8	68.2	63.3	67.4	69.9	103.8
Cost to produce 1 lb. of fat, cents .	17.	17.3	16.2	17.1	17.8	25.3

The above figures serve to show that in almost every case the cost of production of milk and butterfat was considerably higher when ensilage formed the sole ration. This is one point made in favor of ensilage. However, we have not taken into consideration the cost of putting these feeds before the cows. In the case of ensilage the silo is filled the fall before at a comparatively low cost per ton, and the matter of throwing out the day's feed and giving it to the cows is a small item. On the other hand the preparation of a suitable rotation of green feed crops to ensure having such at all times, and the cutting and hauling of the same to the barn or feeding paddock, take much valuable time at busy seasons of the year, making another point in favor of the ensilage. Still another point in its favor is that it is always uniform in quality, whereas the quality of a green feed crop is uncertain, particularly in a season such as we have just experienced.

All the evidence then would seem to prove that the most profitable form of succulence to use to supplement the pastures for dairy cattle is corn ensilage of the previous year's growth. Now is the time, therefore, to begin to prepare by all the means at your disposal, for a large crop of corn next year, and either fill your present silo to its utmost capacity or build another small one especially for summer feeding.

A pure bred Clyde mare and her foal; both of a type always in demand.

This mare is owned on The Colony Farm, Essendale, B.C. Note the combination of quality and substance, most marked in the mare and passed on to the foal. Stock from mares such as this, when properly mated, need never beg for a market no matter how slack may be the demand for "just horses."

Supplementary Feeding on Pasture

Corn Silage Proves Its Worth

MANY of our best dairymen in Eastern as well as in Western Canada, have reached the conclusion that, especially on valuable and expensive land, it is unprofitable to follow the old practice of depending on pastures alone for the summer feeding of their dairy cows. The hot, dry summers and consequent burnt-up grass, the hordes of flies, and the realization of the fact that much more feed can be grown from the same land if cultivated, have all been factors forcing the above conclusion. The question then is, how to overcome these obstacles to the profitableness of our dairy industry.

During the past two summers, the experimental dairy herd at the Central Experimental Farm, Ottawa, has been working to solve just such a problem. This herd is stabled during the entire summer, making it possible to carry on a fairly conclusive test of the comparative value of corn

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Sometimes we determine in our own minds that a certain cow or cows in our herd are giving very rich milk. We may be right, but by testing the milk we can have no doubt about it. A dairyman with a herd of 20 cows recently decided to put each cow in his herd to a test to determine which were not as profitable as the others. To his surprise he found that six out of the 20 cows were robber cows. He sold the robbers, reduced his feeding just that much, and after deducting the price of the feed saved, found that he was making a greater profit than ever before, with less work. The value of cow's milk varies so as to butter fat content, that the only way to be absolutely sure is to test.