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Thesis

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A STUDY OF THE RELATIVE FEEDING VALUE  
OF EARLY AND LATE MATURING CORN  
IN MANITOBA.

A THESIS

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ROBERT WHITEMAN

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O O M E N S S.

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OF EARLY AND LATE MATURING CORNS.

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I N T R O D U C T I O N .

The increased demand for fodder crops in Manitoba, makes it imperative that a careful study be made of the composition of the various fodders, particularly corn. It has long been a controversial point among feeders as to whether the late corns improperly matured, with their heavy green weight yields have a higher feeding value per acre than the early maturing strains with lower gross yields. This investigation has been conducted with corns commonly grown in Manitoba, where even the late varieties will mature in favorable years. No attempt has been made to utilize southern grown corns, therefore the terms "Early" and "Late" are applied in this case to those corns which will mature in approximately 100 days or well within the frost free season and those which require a somewhat longer period to ripen. Samples of both types were

obtained from four different points in the province via  
Norden Experimental Station, Brandon Experimental Farm,  
Manitoba Agricultural College and from Mr. Hurley of  
Grayville, Manitoba. The harvesting of these corns was  
done at the time the early varieties were in approximately  
the late dough stage or the usual time of harvesting.  
Four to five stalks of each variety, or one hill, were  
taken. The yields have been figured on the basis of ten  
thousand hills per acre.

in total yield of protein was 9.2 percent for the four years  
no marked difference in percentage but the average increase  
planting over the late. Comparison of the protein showed  
in dry weight of 759 lbs. or about ten percent from early  
composition and yield of corn. Results showed an increase  
the object of finding the effect of early planting on the  
corn crop". Four varieties in fifteen tests were used with  
effect of early planting on yield and composition of the  
In 1914 Jones, Slate and Brown (15) published "The

and analysis is on the grain alone.  
on high and low protein and oil strains but all information  
little significance. Smith (18) reviews several years' work  
of plant physiology but for the study under discussion has  
The work of these men was very valuable from the standpoint  
late varieties as to their suitability for feeding purposes.  
stages of growth instead of making any attempt to regre-  
working on the composition of the corn plant at different  
1890, (14) Smith 1896 and (11) Jones and Huston 1914,  
Schweitzer 1889, (4) Ralizer and Willard 1890, (12) Ladd  
a Dent. We, therefore, find (1) Babcock 1883, (19)  
case only one variety was under test and this was usually  
where they carried on their work. Also in nearly every  
due to the fact that corn is the cash crop in the areas  
efforts to the quality of the ear. This, no doubt, was  
Early investigators devoted practically all their

stage and the longtelson had reached the dough stage. The sweet ears were badly formed. White cap was in the medium milk their effect upon the milk yield of corn. The Mammoth Southern Bent and Longtelson. These ears were put into silos to test of corn were used: Mammoth Southern Sweet, White Cap Yellow mature under our conditions. In the year 1915, three varieties quality and take a very heavy yielding variety which will not of the fact that it is a light yielder, or should we sacrifice say, should we select a very early maturing variety regardless and the question is just where to draw the line, that is to much larger yield per acre than the earlier maturing varieties the large, late maturing varieties of corn will give a very as are also the yellow and white corn. We all know that "The pinks and Bents are practically equal in feeding value in 1914, comparing early and late corn for silage says:

Day (2) speaking before the Ontario corn growers' Assn.

Sept. 19, 5.523.

sample of 40 ears, Aug. 15, 3.272%, Sept. 4, 4.982.

Difference in dates of harvesting: Average of composite are given, the difference in one year being 6.10% and 5.66%. and 11.25 percent. Only two years' results on oil content the difference in average yield of protein is 12.83 percent reported to be 453.5 for the high strain and 331.63 for low. protein after four years' tests in pounds per acre are re- strains for high and low protein content. The yields of maturity when harvested. Name, Champion and Local selected from 1914 - 1917. This increase was due mainly to greater