TIME OF CUTTING WHEAT AND OATS IN RELATION TO YIELD AND COMPOSITION

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INTRODUCTION

Yield per acre and quality are the two most important considerations in crops harvested either for grain or for hay. After a crop is grown, harvest and other operations should be planned so as to secure the best balance between yield and quality. Based partly on inadequate experimental results, two ideas regarding time of harvest of grain crops have become fairly prevalent among growers. Cutting grain crops several days before maturity (a) improves the quality (b) without reducing the quantity appreciably, particularly when the grain passes through the curing process in the shock.

In the northern United States and in Canada it is a common practice to cut grain several days early to minimize or avoid the harmful effects of frost. Due to the protection offered by larger mass, bundle and shock grain is damaged by light frost somewhat less than standing grain of the same moisture content. If the harvested grain has time to dry out somewhat before the frost occurs, it has an additional advantage in escaping damage.

Where large fields must be harvested with limited facilities, the harvesting operations are started early enough so that the work is completed before the last is over-ripe.

Under conditions which make it desirable or necessary to cut grain before maturity, this could be done to better advantage if growers generally knew what results may be expected from cutting at fairly definite stages of development that can be described and easily ascertained. Better descriptions of the stages of maturity of grain at each of the stages that cuttings are made would aid considerably.

With the idea in mind of learning the effect of harvesting wheat and oats at several stages of development and curing them in the shock on the yield and quality of the grain, work was planned and carried out during the summer of 1925. The object was to learn particularly to what extent materials stored temporarily in the leaves and stems are moved along into the grain when the crops are cut at various stages of maturity and placed in shocks.

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