

MECHANIZATION IN RELATION TO THE ORGANIZATION
OF FARMS 1/
(Northern Coastal Plains Area)

By

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INTRODUCTION

The mechanization of agriculture has far reaching implications and is closely associated with changes in the agricultural pattern. The substitution of tractors for animal power has been by far the most important technological change affecting farming systems in recent years. In most instances, where tractors have supplanted mules, substantial reductions have been realized in man labor requirements, and in workstock numbers. These changes have made the farm organization more flexible and increased the farm's capacity for producing other kinds of livestock.

Increased demands for agricultural products during wartime has focused attention on economy in the choice of power. The loss of farm labor has been only one of many factors that encouraged the rapid adoption of mechanical power. The demand for tractors during the war has been so great that restrictions on manufacture as well as rationing and price control were necessary in order to secure the best possible distribution of available supplies.

1/ This is the second publication dealing with mechanization in the Northern Coastal Plains. The first bulletin covered specifically the cost of power and production requirements for mechanized and non-mechanized methods of farming. See "Power Costs and Production Requirements for Mechanized and Non-mechanized Methods of Farming in the Northern Coastal Plains."

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With conversion from war to peace-time conditions, restrictions on production, prices, and purchases of farm machinery will very likely be eliminated. This means that, in the next few years, most farmers will have an opportunity of mechanizing their farm operations. The purpose of this report is to discuss some of the important economic considerations that apply to eastern North Carolina and particularly to the Northern Coastal Plains Type-of-Farming Area.

This bulletin presents two situations in which tractor power may be substituted for mules. In one, the conditions for lowest per acre costs are examined. This entails the maximum use of the tractor within the practical limits of the representative farm. In the other case, minimum requirements for successful tractor operation are considered. The problem in this situation is to determine how small a farm may be and yet find mechanical power practical.

The importance of price level variations is extremely important in the relative economy of tractors and mules. In periods of high prices, mules are relatively expensive as a source of power and vice versa. These questions are discussed in detail in the section on price level fluctuations.

It is misleading to infer that changes in the organization of farms are the result of mechanization. There is no such simple relationship. The changing organization of farms is the result of numerous conditions, and the importance of any one is difficult to assess. It is the purpose of the final section to discuss these issues and to enumerate some of the apparent problems of mechanization.