VIABILITY AND COMPOSITION OF "SEED" POTATOES
AS AFFECTED BY CLIMATIC CONDITIONS AND
BY VARIOUS OTHER FACTORS

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INTRODUCTION

The first part of this paper deals with the factors which affect yield and the latter part particularly with the nitrogenous composition resulting from the influence of these factors.

The factors that influence the yields of potatoes may be regarded as operating in two ways, viz., they may directly influence the size of the current crop or they may bring about a condition of the tubers that makes for vigorous production when used for "seed" the following season. The effects of the factors that directly affect the yield are apparent during the growth and harvesting of the crop; the effects exerted by the other factors are not in evidence until the following season. The value of a potato for seed purposes cannot be determined solely from its appearance. At present it is necessary to rely chiefly upon the production history of a potato to judge of its probable value for reproduction.

Certain localities have developed a reputation for producing seed potatoes of superior quality. It is a matter of quite general observation that potatoes which have been grown in more northern localities often produce considerably more than potatoes grown farther south when the two are planted under like conditions. This superiority of northern-grown seed has appeared so often on the plats of the Rhode Island Station, and in many cases has been so marked, that it was decided to attempt to find what factors in the growth of the potato were responsible for this increased vigor.

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