EFFECT OF SIZE OF SEED USED IN COMMERCIAL PLANTING
ON THE INCIDENCE OF LEAF-ROLL AND MOSAIC IN
POTATOES

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When seed potatoes are sorted for market the producer obtains four grades. There are potatoes below 1 1/2 inches in diameter, between 1 1/2 and 1 3/4 inches, above 1 3/4 inches but not over 12 ounces in weight, and potatoes weighing more than 12 ounces. The potatoes below 1 1/2 inches in diameter, commonly called "pig" potatoes, have a certain local sales value as fowl or animal food; those from 1 1/2 to 1 3/4 inches in diameter, commonly called "seconds," are used as seed; those from 1 3/4 inches in diameter to 12 ounces in weight constitute the standard size seed potato of commerce; while potatoes weighing more than 12 ounces have a market value as table stock and may also be used as seed.

The greatest bulk of the gross yield of potatoes falls within the limits of 1 1/2 inches in diameter to 12 ounces in weight, and therefore, the seed producers are more especially desirous of marketing all of their crop that falls within this size range that would prove satisfactory for seed purposes. Certified seed ranging in size from 1 3/4 inches in diameter to 12 ounces in weight is a standard market product, but stock ranging in size from 1 1/2 to 1 3/4 inches in diameter has not an established market value. But is the latter grade less suitable for use as seed stock than the standard grade? It has been shown that whole seed behaves in all respects like cut seed of similar weight, and all things being equal, is just as productive.

There remains, however, the question of the amount of degeneration diseases present in fields grown from certified standard seed and small seed from the same field. It has generally been assumed that the percentage of degeneration diseases would be higher in fields grown from small seed potatoes than in those in which standard size stock was used, and that the employment of small seed was undesirable on this ground. Since the question is an important one, especially from the point of view of the certified seed grower, we thought it would be desirable to determine just what the percentage of mosaic and leaf-roll would be in small seed and standard size seed obtained from the same source.

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