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South Dakota State College and U. S. Department of Agriculture Cooperating.

PLANTING THE POTATO CROP

bу

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A. The Potato Planter:

Potato planters are mostly of two types - the picker type and the two man type. In the picker type the pieces are picked up on steel points from which they are dropped in the furrow. If the pieces are of uniform size, blocky in shape and the planter is in good condition and set right, it should give a 95% stand or more. Under unfavorable conditions, however, it may often miss as many as 20% of the hills and if there are many small pieces, it will frequently plant two in a hill.

The two-man type drops the pieces from pockets and it is necessary to have an extra man who sits on the seat behind the planter to see that there is a piece in every pocket and that no pocket has two pieces. If the men do their work properly, a stand of 95% or more should be secured with planters of this type.

There is not a great amount of difference in these planters. If the man behind the two-man type is careful it ought to be possible to secure a 100% stand. The picker type has a tendency to spread disease more readily from one piece to another.

B. The Best Date to Plant:

Experiments have been conducted at South Dakota Stations to determine the best time to plant potatoes. The following is taken from S. D. Bulletin No. 176 relative to results obtained at Highmore substation during 1915-16.

"As an average of two years (1915 and 1916) the highest yield for early digging was obtained by planting

Cooperative Extension Work in Agriculture and Home Economics, W. F. Kumlien, Director, Distributed in furtherance of Acts of Congress of May 2 and June 30, 1914.

April 1st, but the highest yield of marketable tubers came from the April 15th planting. The June 1st planting gave the highest yield of marketable tubers for the late digging, but planting May 15th gave the greatest total yield. Apparently the practice of planting for early market as early as possible in spring, and for winter supply during the last two weeks of May is supported by the two years data available."

C. How much seed to Plant:

A wide range exists in amount of seed used in planting potatoes. In the more arid sections as low as 3 to 5 bushels of seed is used per acre. In such sections the rows are usually about 48 inches apart and 18 to 36 inches spacing in the row.

There are occasional growers who use as high as 24 bushels per acre. In some European countries even greater amounts are used. However, in such instances the rows are very close together and spacing within the row is very close.

Most potato fields of South Dakota are planted with rows either 36 or 42 inches apart. The spacing within the row varies from about 8 to 16 inches.

Following is amount of seed necessary to plant one acre at the different spacings with seed pieces of various sizes:

Spacings of Rows and Seed	Seed required in bushels per acre according to size of seed pieces used.			
	$\frac{1}{2}$ OZ.	: 1 oz.	$:$ l $rac{1}{2}$ oz.:	2 oz.
Rows 36 inches apart:	Bu.	Bu.	Bu.	Bu.
8 inch spacing	12.0	24.0	36.0	48.0
12 inch spacing	7.6	15.1	22.7	30.2
16 inch spacing	5.7	11.3	17.0	22.7
Rows 42 inches apart:				
18 inch spacing	4.3	8.6	: 13.0	17.3
24 inch spacing	3.2	6.5	9.7	13.0
30 inch spacing	2.6	4.3	6.5	8.6

D. How Deep to Plant:

Early potatoes should not be planted as deep as late ones. On light soils early varieties may be planted 3 or 4 inches deep and late varieties 4 or 5 inches deep. On heavy soils the depth would ordinarily be about 1 inch less. The depth would also vary as to condition of the soil. If the soil is warm and in good condition as to moisture, the potatoes should be planted deeper than if it is cold and wet. Each grower must regulate the depth of planting to conform to his own peculiar conditions.

References:

"Production of Late or Main Crop Potatoes", Farmers Bulletin No. 1064, U.S. Dept. of Agriculture, Washington, D.C.

"Potato Culture in S. D., S. D. Bulletin No. 176, Agricultural Experiment Station, Brookings, S. D.

"Potato Growing in Minnesota", Agricultural Extension Bulk tin No. 38, University Farm, St. Paul, Minnesota.