WHOOLE VS. CUT POTATO TUBERS FOR PLANTING ON IRRIGATED LAND.—1

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In the United States practices in potato production are very largely sectional and often differ greatly. Probably the greatest difference is noted in the size and nature of the tuber piece planted. In some sections, the whole potato is planted; in others, only cut tubers. Some growers plant a large set, others plant a small one, and some plant culls. Only two of the great potato-producing sections, so far as the writer is able to learn, grow the same variety as a major crop. Climate and length of growing season are large determining factors in potato varietal selection and may also be contributing causes of some of the above mentioned methods of production.

There is considerable printed information available on potato production. Information tending to establish rather definitely the size of tuber piece to plant for the most economical production of the Irish potato, however, is limited and sectional. Practically all the information which is available has to do with potato production under humid or subhumid conditions. The experiments here reported deal entirely with the potato under irrigation.

These experiments were begun on the Aberdeen Branch Experiment Station at Aberdeen, Idaho, in 1913. In 1912 suitable seed stock was grown for the work. As the station work became better organized, more time and money were spent in obtaining data which

1 Contribution from the Idaho Agricultural Experiment Station. Received for publication February 9, 1917. This is the first of two papers on the use of whole or cut potato tubers of various weights for planting on irrigated land, with reference to the total yield and the yield of marketable tubers. The work here described was performed on the Aberdeen substation. The second paper, which appears elsewhere in this issue, describes similar experiments conducted at the Gooding substation by J. S. Welch.