SUSCEPTIBILITY AND RESISTANCE OF WHEAT VARIETIES TO BUNT

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Nearly 200 varieties of wheat were subjected in the fall of 1930 at Corvallis, Oregon, to the usual inoculation trials to determine their resistance or susceptibility to wheat bunt, *Tilletia tritici* (Bjer.) Winter and *Tilletia levis* Kühn. The inoculum used on this seed, however, consisted of a mixture of equal parts of the 10 physiologic forms of bunt reported by the writer. The results were so striking and positive that they are presented at this time.

Most of the seed of these varieties was originally obtained from the U. S. Dept. of Agriculture to conduct a classification and identification nursery at Corvallis. Seed was retained from this nursery, so the varieties are pure and true to type. These varieties represented nearly all of the commercial varieties of wheat. Common, club, Poulard, durum, emmer, spelt, and Polish varieties were included.

All of the inoculum was obtained the previous year from the variety Hybrid 128. A large excess of the inoculum in dust form was added to small coin envelopes containing seed of each variety. The spores and seed were thoroughly mixed by shaking the envelope vigorously. The smutted seed was planted in single rows in the field in the fall of 1930 at Corvallis and head counts were made at harvest time. The mild winter conditions allowed both spring and winter types to survive. The results are given in Table 1.

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