A NEW SYSTEM FOR VARIETY TEST PLATS

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Many agronomists believe that cultivated alleys between plats are a source of error. The differences in plat yields arising from contiguity to an alley are greater with long and narrow plats than with short ones. This is so obvious that it scarcely needs any explanation. On the other hand, the long plat has been proved most satisfactory because of affording a better sample of varying soil conditions than a plat which approaches the square shape.

In variety testing of cereal crops, the alley should be of sufficient width to permit of harvesting with the grain binder without mixing. Consequently, a very narrow alley cannot be used if strains are to be kept pure. In addition there is a difference in the feeding power of different varieties. For these reasons alleys between plats should be fairly wide, not less than 3 feet and preferably 4 feet. The alley itself should be planted in order to utilize plant food and moisture. Planting to another cereal crop has been tried, but this is not satisfactory because of possible mixing and of border effect, owing to relative differences in feeding power for two different grain crops.

In an effort to overcome these difficulties, at least in part, the plan outlined below was tried, under the writer's direction, at four of the Wisconsin branch experiment stations, viz., Ashland, Spooner, Marshfield, and Sturgeon Bay.

As illustrated in Fig. 1, plats were laid to measure 1/4 rod x 20 rods, after ends and alleys were cut out, the area to be 1/32 acre. The machine used was a single-disk drill, sowing 16 rows 6 inches apart. An 8-row drill has also been used which requires one round of the drill per plat instead of one-half.

Fig. 1 explains the method of planting. Note that one full plat and the halves of two alleys were sown at once. The fourth and ninth feed spouts were plugged up in order to leave a blank row on each side of the plat in which to run the grain binder point when harvesting.

Fig. 2 is a photograph of the alley taken when the grain was about 6 inches high.

Fig. 3 shows a section of a variety plat of oats at harvest time. In this case four rows were planted in the alley and two left blank. One full plat and one-half of each alley was planted in one-half round of the drill, all sown to one variety.

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