ARTIFICIAL TRIPPING OF FLOWERS IN ALFALFA IN RELATION TO SEED PRODUCTION

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Considerable research has been conducted to determine the relative importance of artificial tripping in alfalfa in relation to seed production. To secure data on this point a few specially designed experiments were begun in 1926 at the Uintah Basin Alfalfa-seed Experimental Farm, at Fort Duchesne, Utah. The results secured from these studies during 1926 and 1927 have been reported in a previous paper (1). Additional data have been obtained since that time, and another report, together with a summary of the data contributed by other workers, appears to be appropriate at this time.

Table 1 contains data adapted by the writer, but obtained by various investigators, bearing particularly upon the point under consideration. These data have been gathered from regions differing in climatic conditions and some in one year and some in another. In the main, the data are comparable and substantiate similar conclusions.

Piper, et al. (4) found that 16.76% of the alfalfa flowers set pods when developed naturally and 30.68% when tripped artificially. In ratio form this is 1:1.8 in favor of artificial tripping as compared with natural development. When the flowers were enclosed in cloth bags and not tripped by hand or by insects, 5.5% of them formed seed pods. This low percentage was thought to be due to the exclusion of insects, important as agents in tripping alfalfa flowers.

The average number of seeds in each pod was somewhat greater in the case of the naturally-developed flowers, which was attributed

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2Superintendent, Alfalfa-seed Experimental Farm, Uintah Basin, Ft. Duchesne, Utah. The writer wishes to express appreciation for the helpful suggestions offered by Dr. George Stewart, under whose direction these experiments were conducted.
3Reference by number is to "Literature Cited," p. 786.