VIABILITY OF VELVETBEAN, *STIZOLOBIUM* SPP., SEED AS AFFECTED BY DATE OF HARVEST, WEATHERING, STORAGE, AND LODGING

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FOR several years the velvetbean has been an important agricultural crop in many of the southern states and its importance seems to be increasing yearly. Records of germination reports on file in the Alabama State Seed Laboratory show that a high percentage of the samples tested over a period of several years were of poor quality. Some of the samples covered by these reports represented locally grown seed, but a high percentage were samples taken by state inspectors from seed being offered or exposed for sale.

During the spring of 1941, 18 lots of velvetbeans were sampled by state inspectors of which only 8 samples (44.4%) germinated better than 80%, 5 samples (27.8%) between 50 and 80%, and 5 samples (27.8%) less than 50%. Such a high percentage of low-quality seed prompted the authors to begin a study on some of the factors affecting the viability of velvetbeans while harvested and stored under local conditions and conforming with local practices.

Although velvetbeans are usually mature by the middle of November, some farmers do not harvest them until late December or even January. Ordinarily, farmers who postpone the harvest date do not intend to use or sell such velvetbeans for seed but often change their plans and do so. After considerable field experience it was decided that the low viability of many lots of seed placed on the market was probably due to exposure to adverse weather conditions during the latter part of November, December, and January.

METHODS AND MATERIALS

The lots of seed upon which the results reported herein are based were harvested from three fields of Ninety-day velvetbeans, *Stizolobium utile* (Wall.) Piper and Tracy, between September 20, 1941, and February 7, 1942. One field was located near Wetumpka, Ala., on light sandy loam soil. These velvetbeans were growing with corn and the vines were rank, containing large plump pods.

The following lots of seed were harvested from this field on the dates indicated: Lot 1, September 20; lot 2, October 4; lot 3, November 8; lot 4, November 15; lot 5, December 13; and lot 6, December 13. All pods harvested from this field were suspended in the air, except that only pods lying on the ground were included in lot 6.

The second field was located 10 miles west of Montgomery on depleted sandy soil. The vines in this field were stunted, bore flaccid pods, and the foliage died prematurely. The following lots of seed were harvested from this field on the dates indicated: Lot 7, October 25; lot 8, November 29; lot 9, December 9; and lot 10, January 24. All pods harvested from this field were suspended in the air.

The third field was located near Opelika, Ala., and the lots harvested from it

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