EARLINESS OF MATURITY AS A FACTOR INFLUENCING
SEED PRODUCTION IN VETCH

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Probably no single factor has impeded the progress of the winter legume program in Alabama more than the inability of the most commonly grown variety, hairy vetch (Vicia villosa L.), to produce seed in abundance in the state. Other vetches, such as Hungarian (V. pannonica Crantz.) and common (V. sativa L.), are also unsatisfactory and uncertain seed producers in Alabama.

Certain cultural methods can be applied when vetch is planted for seed production which lead to more certain and usually to greater seed yields. These include reduced rates of seeding, support of vines by small grains or, preferably, by dead cotton stalks, application of sufficient quantities of phosphorus, potassium, and lime, and timely harvests.

No strains of hairy or of Hungarian vetch which are significantly more prolific than the commercial strains available have been developed by the Alabama Agricultural Experiment Station. Some high seed-producing strains of common vetch have been developed, but most progress has been made with woollypod vetch (V. dasycarpa Ten.) and monantha vetch (V. monantha (L.) Desf.). It is believed that highly prolific varieties of vetch suitable for use in Alabama can be developed only in those species which are normally early in maturity or which lend themselves to selection of early maturing strains.

METHODS

Each fall during the period of 1936-40, inclusive, new vetch introductions and selections were planted in 50-foot rows spaced 4 feet apart. Two or three rows were planted whenever seed stocks permitted. All rows were thinned when the plants were in the seeding stage to assure a uniform stand in each row.

The date of first bloom, full bloom, and harvest of seed of each vetch strain was recorded each year. Any one of these can be considered as a criterion of maturity in the vetches. Early maturing strains were selected at one or all stages of development.

Thus far, selection has been the only plant breeding technic employed with success in the Alabama vetch-improvement program. All efforts to produce hybrids in the vetches have failed, but sufficient variation appears to exist in the various species of the genus Vicia to make selection a valuable method in the improvement of vetches.

The vetches were harvested upon maturity and the seed was threshed and weighed. The strains were classified according to their date of maturity as either early, intermediate, or late. The early vetches were usually harvested late in May, the intermediate early in June, and the late vetches in mid-June or late in June.

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3Figures in parenthesis refer to "Literature Cited", p. 666.