COMPARATIVE WINTERHARDINESS OF SPECIES AND VARIETIES OF VETCHES AND PEAS IN RELATION TO THEIR YIELDING ABILITY

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One of the main factors determining the selection of species and varieties of leguminous winter annual forage plants is found in the comparative ability of these crops to endure winter conditions. Hairy vetch (Vicia villosa) is grown more extensively than any other vetch variety, due primarily to its high degree of winterhardiness. Some species of vetch, such as varieties of common vetch (V. sativa) and monantha vetch (V. monantha), have some very decided points of advantage over hairy vetch, yet the inability of these types to survive winter conditions constitutes in many localities the limiting factor to their production. Purple vetch (V. atropurpurea) is, according to McKee (2), superior to other types in southern California due to "its ability to make more growth in a cool winter season and be ready to turn under at an earlier date in spring." Funchess (1) in Alabama was able to obtain larger yields and more pounds of nitrogen per acre with the use of monantha vetch at various dates of planting than with hairy vetch. The common vetches are generally considered to produce a more palatable hay than hairy vetch. In view of the above shortcomings of hairy vetch, it was deemed worth while to test the winterhardiness and yielding abilities of several species of vetches and peas.

The vetch and pea variety tests conducted at the Oklahoma Agricultural Experiment Station in the years 1925 to 1927 and 1927 to 1928 showed remarkable differences in the comparative winterhardiness of the different varieties of these crops.

1926-1927 TESTS

The varieties of vetches and peas listed in Table 1 were, with the exception of the plat of Austrian field peas, planted September 6, 1926. Seed of the Austrian field peas was not available till October

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3Reference by number is to "Literature Cited," p. 987.