The Trailing Wild Bean in Southern Illinois

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The trailing wild bean is a member of the Fabaceae or pea family. Britton and Brown in Vol. II, "The Flora of the United States, Canada and the British Possessions," describe in detail a number of species of this genus. At the present time there are not at hand sufficient data to determine definitely which of these rather numerous species prevail in southern Illinois or to say which one of the several species is the most commonly found in this region. This work deals with one of the species of the trailing wild bean. While this apparently was one of the species commonly seen in this region, no attempt was made to determine the particular species to which it belonged.

Most observations indicate that the trailing wild bean grows almost entirely in the wild state. It has been observed growing in level fields, pastures and on land out of cultivation, on hillsides, roadways, and at the edge of timber lands. It seems to do well on soils which are acid, and grows chiefly during the warm weather from July to early fall.

TABLE I—DRY MATTER AND CHEMICAL COMPOSITION OF TRAILING WILD BEAN COMPARED WITH ALFALFA

	Dry matter lbs./A	Nitrogen		Phosphorus		Potassium		Calcium		Magnesium	
		%	lbs./A	%	lbs./A	%	lbs./A	%	lbs./A	%	lbs./A
Trailing wild bean	1,550	2.43	376.7	.15	2.3	1.41	27.2	1.12	17.4	.24	3.7
Alfalfa	1,550	2.45	379.8	.23	3.6	.96	12.0	1.98	30.7	.39	6.0

The trailing wild bean may prove of value for economic utilization as a pasture plant or hay crop. Cattle relish the plant both as green forage and as dry hay. Horses also eat it readily. Belonging to the legume family the plant should have considerable value for soil improvement purposes, although there is no experimental evidence available along this line.

Some yield measurements were made during September, 1934, of the trailing wild bean grown on untreated soil on the Sparta experiment field, Randolph county, which indicate a probable yield of 1,550 pounds an acre of air-dry hay. The chemical composition of the air-dry hay reported in Table I indicates that the trailing wild bean is somewhat comparable with alfalfa produced on the Raleigh experiment field in Saline county. The total nitrogen content of the wild bean hay was almost identical with that of the alfalfa. The phosphorus content of the alfalfa hay was higher probably because it was grown on soil which had been heavily treated with rock phosphate. Similarly, the calcium and magnesium content of the alfalfa was higher probably also because of the large amount of limestone added to the soil in order to prepare it for the growing of alfalfa.

The soil on the Sparta experiment field where the trailing wild bean apparently flourished was in a relatively low state of fertility. This soil was very acid having a pH of 4.5 which indicates a very high lime requirement. The total nitrogen content of this soil was 1,100 pounds an acre compared to 3,000 to 5,000 pounds an acre for the most productive soils. The available phosphorus and available potassium content of this soil was also extremely low.