NOTES

THE RELATIONSHIP BETWEEN TANNIN AND CRUDE PROTEIN OF SERICEA LESPEDEZA

SERICEA lespedeza, *Lespedeza cuneata* (Dum. de Cours.) G. Don., has been found to contain considerable and varying amounts of tannin which suggests that the lack of palatability of the crop may be directly associated with high tannin content. Sericea will grow on relatively poorer soils than most other perennial legumes and for this reason has been quite generally recommended for use on low-fertility soils in the southern states to help bring about soil improvement. During the course of investigations on the tannin content of sericea lespedeza, analyses for crude protein also have been made and these data are here brought together to show the relationship between protein and total tannin.

The relation between tannin and protein in the leaves of samples collected from Georgia, Mississippi, Missouri, New Jersey, North Carolina, Tennessee, and Virginia is illustrated in Fig. 1. From this scatter diagram and regression line it is evident that the amount of tannin in the leaves is low when the protein content is high. The correlation coefficient between tannin and protein for the 71 leaf samples is -0.77. The samples were harvested at heights varying from 6 to 40 inches and represented first, second, third, and fourth cuttings. The leaf samples were grouped according to height of plant at harvest. Analysis of covariance was determined and no evidence was found, indicating that size of plant affected the tannin-protein relationship. The tannin content of the leaves varied from 1.5 to 17.8% and the protein from 9.9 to 26.1%.

Stems from 54 of the samples were analyzed for both tannin and protein. The tannin in these stems was relatively low, varying from 0.5 to 4.1%, and averaging 2.7%. The correlation coefficient of -0.28 indicates no relationship between tannin and protein in the stems. The crude protein content of stem samples varied from 4.6 to 12.8% and 4.4-4.8%.

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*Cooperative investigations by the Division of Forage Crops and Diseases, Bureau of Plant Industry, Soils, and Agricultural Engineering, the Hides Tanning Materials, and Leather Division, Eastern Regional Research Laboratory, Bureau of Agricultural and Industrial Chemistry, Agricultural Research Administration, U. S. Dept. of Agriculture; the North Carolina Department of Agriculture, and the North Carolina Agricultural Experiment Station.*

*Tannin was determined according to the American Leather Chemists Association's method of extraction.*

Published May, 1946