Wright\(^1\) the plants were separated into two groups, those having the characteristics of inoculation by (1) effective nitrogen-fixing bacteria, i.e., large pinkish colored nodules clustered about the tap root, and (2) ineffective bacteria, small nodules scattered over the lateral roots or no nodules. The data in table 1 show that only 3 to 6% of the plants obtained from the plots receiving the seed only or the mulch appeared to have been effectively nodulated. Plants in these plots were analyzed for total nitrogen and were found to contain 2.2% nitrogen. The plants from the plots receiving inoculation or straw were 58 to 67% effectively nodulated. The nitrogen content of these inoculated plants was from 3.1 to 3.4%, about half again as much as contained by the ineffectively nodulated plants. Hence, the resident bacteria in the soil were ineffective or parasitic strains, whereas the organisms supplied in the inoculation culture were highly effective.

On May 13, 1952, the subterranean clover was harvested. The yield data are in close agreement with the data for population of healthy plants. The yield responded greatly to inoculation. The influence of seeding rate and mulching were small without inoculation, but increased the yield markedly when used in combination with inoculation.

The results of this field test show that subterranean clover straw is a carrier of effective legume bacteria.—

W. A. WILLIAMS, J. V. LENZ, and A. H. MURPHY, Assistant Agronomist, Farm Advisor, and Associate Specialist in Agronomy, University of California.

SOME FACTORS THAT AFFECT PALATABILITY IN SERICEA LESPEDEZA, 
L. CUNEATA

SERICEA lespedeza, L. cuneata, is used widely in the South as a hay and grazing crop. It is better adapted to the eroded soils of the South than crops such as alfalfa and white clover. However, it is low in palatability. The reason or reasons for this are not definitely known. Since sericea is relatively high in tannin, it is generally thought that this factor may be the cause of low palatability. Wilkins et al.\(^2\), by feeding sericea to sheep, obtained data that indicated that tannin is a factor.

The data discussed herein were obtained by grazing spaced sericea plants that varied in stem type and tannin content. This study was conducted to determine the immediate breeding objectives so that a more palatable variety of sericea might be developed by plant breeding. In the absence of established lines which varied for the factors studied, a more refined study could not be made.

In the summer of 1951, leaves of 1,206 second-year sericea plants of the Arlington variety and a commercial

of plants placed in each category and a description of category follows:

424 Fine = small in diameter and pliable
378 Medium = medium in diameter
335 Coarse = large in diameter, rigid, whether small, medium or large

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