

The Production of Tetraploid *Lotus purshianus*
for possible rangeland use in California

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In cooperation with Jeanne Larson of the San Joaquin Experimental Range, Coarsegold, California, colchicine treatments of seeds of Lotus purshianus (Spanish clover) were undertaken to produce an improved legume forage plant for the annual rangelands of central California. Native wild diploid plants of L. purshianus lack vigor, have an indeterminate flowering habit and low seed production. However, since the plant matures in late spring and summer (unlike most winter annuals that mature in spring), has high forage value and does not cause bloat, it has potential as a range forage plant. Tetraploid plants would increase the green grazing season for cattle and wildlife.

Tetraploid plants ($2n = 4x = 28$) have been produced (confirmed cytologically). A comparison between the tetraploid and diploid plants is being carried out on the basis of morphology, including stomatal and pollen measurements, cytology and agronomic value.