spray date, increasing the rate of dicamba or 2,3,6-TBA, above 1 lb/A caused an increase in defoliation, but this effect was not always observed using picloram. (Cooperative investigations of Crops Research Division, Agricultural Research Service, U.S. Dept. of Agriculture, and New Mexico Agric. Expt. Sta., New Mexico State University, Las Cruces).

Herbicide evaluation studies for the control of tarbush (Fluorensia cernua). Gould, W. L. and C. H. Herbel. Tarbush is a deciduous desert species which is found in dense stands on silty or clay loam sites on flood plains. The date of leaf emergence is dependent upon adequate soil moisture, so in some droughty years it may not leaf out until the summer rains occur.

The studies reported were carried out on the Jornada Experimental Range near Las Cruces, New Mexico from 1961 through 1965 to determine the best time for treatment and the best herbicides for selective control. Treatments were applied semi-monthly on 1/100 A plots using a simulated aerial application from July through October in 1961 and 1965. Treatments were initiated in August in 1962, on May 7, 1963, and on June 3, 1964. Defoliation estimates were made approximately two years after treatments were applied.

The 1961 treatments included 2,4-D, 2,4-DP, 2,4,5-T, silvex, 2,3,6-TBA and amitrole-T at 1/2 lb/A. Dicamba was added to the list of test materials in 1962, and picloram was added in 1963. Herbicides were applied on all spray dates at 1/2 lb/A in 1962, 1 lb/A in 1963, and at 1 1/2 lb/A in 1964 and 1965. Additional treatments with higher rates of herbicides were applied on one spray date in 1962, 1963 and 1964.

The degree of defoliation was quite variable between dates of application with the September treatments being most toxic generally. At rates up to 2 lb/A the phenoxy herbicides and amitrole-T usually gave less than 30 percent defoliation. Dicamba was the most toxic material, causing 70 percent defoliation on one or more spray dates each year. Increasing the rate of dicamba from 1/2 to 2 lb/A, increased the degree of defoliation only when treatment was not on the optimum date. At comparable rates of picloram and 2,3,6-TBA were much less effective than dicamba. (Cooperative investigations of Crops Research Division, Agricultural Research Service, U. S. Dept. of Agriculture, and New Mexico Agric. Expt. Sta., New Mexico State University, Las Cruces.)

Evaluation of aerial treatments for the control of creosotebush (Larrea tridentata). Gould, W. L. and C. H. Herbel. Creosotebush frequently occurs in almost pure stands in areas of the Southwest where it has invaded. Selective chemical control of creosotebush offers a means for natural revegetation where remnants of perennial grasses remain. This study was initiated to evalute the response of creosotebush to aerial application of materials which had appeared promising in small plot tests.