

sufficient to prove a reduction in yield as a result of the use of herbicides.

Experiment 58-2.—Although weed control was slightly less perfect in this 1958 trial, it was again commercially adequate with all chemicals and rates tested. The natural weed population, as counted in the check plots before cultivation, was limited primarily to three annual species, as follows:

Goosegrass (<i>Eleusine indica</i>).....	80%
Purslane (<i>Portulaca oleracea</i>).....	9%
Spiny amaranth (<i>Amaranthus spinosus</i>).....	10%
Miscellaneous species	1%

A summary of the weed control and crop tolerance observations is given in Table 9. PCP was inferior to the other three chemicals in this trial, especially with regard to control of goosegrass. CDEC, not included in the 1957 experiment, performed very well, giving slightly better broadleaf weed control than CDAA (Fig. 5). Response to EPTC, notably erratic following surface spray applications, was again very satisfactory in this test. This was possibly due to the fact that the soil was fairly dry at the time of application, permitting rapid absorption of the EPTC by the soil particles. Subsequent rainfall during the next few days assisted the downward chemical movement into

TABLE 9.—WEED CONTROL AND SOYBEAN TOLERANCE RATINGS FROM HERBICIDE SECONDARY EVALUATION TRIAL—EXPERIMENT 58-2.

Treatment	lb/A	Weed Control Ratings*		Crop Tolerance Ratings*
		Broadleaf	Grass	
CDAA	4	8.2	9.2	10.0
	6	8.4	9.3	10.0
CDEC	4	9.5	9.0	10.0
	6	9.8	9.1	10.0
EPTC	8	9.1	9.4	10.0
	12	9.5	9.8	10.0
PCP	8	7.0	6.4	10.0
	12	8.0	7.2	10.0
Check - cultivated		8.5	8.5	10.0
L.S.D. (5% level)		1.1	0.9	N.S.

* Weed control and crop tolerance ratings were based on a 0 to 10 scale, with high values indicating favorable results. Data are means of 12 observations from two varieties, three replications, and two record dates, August 4 and 12.