

- Weed control: 0 indicates no effect on weeds, no control;
8 indicates commercially acceptable control;
10 indicates complete control or weed kill.
- Crop tolerance: 0 indicates no crop tolerance, complete elimination of the crop;
8 indicates good tolerance with slight, usually temporary, crop injury;
10 indicates full tolerance of the chemical with no harmful effect on the crop.

The weeds were classed into two groups, broadleaf weeds and annual grasses. Separate control ratings were recorded for each. The use of this scale for crop tolerance, the reverse of crop injury, was selected to keep both scales positive in relation to desirable characteristics. Thus, large numerical values represent favorable results on both scales. Conversely, low ratings reflect poor weed control and serious injury to the soybean plants. Intermediate levels describe partial control or crop tolerance and may be interpreted as though each increment were roughly equivalent to 10 percent. Thus each rating, multiplied by 10, gives the approximate percentage weed control or crop tolerance, estimated in terms of both stand and growth of the plants.

Secondary Evaluation Trials

Secondary or advanced herbicide evaluation was accomplished by replicated yield trials conducted during the 1957 and 1958 crop seasons.

In Experiment 57-2, the varieties Lee, Jackson, and CNS-4 were planted on July 2, 1957, using 1 bushel of seed per acre in rows spaced 36 inches apart. The plots were arranged in a split-plot, randomized-block design with four replications. Each of the three variety plots within each block was subdivided into 10 treatment plots involving three rates of each of three herbicides and a cultivated check. The individual treatment sub-plots were four rows or 12 feet wide and 22 feet long. Chemical treatments were as follows: CDAA at 6, 9, and 12 pounds per acre; EPTC at 5, 10, and 15 pounds per acre; and PCP at 10, 15, and 20 pounds per acre. These were all applied broadcast as surface sprays pre-emergent to the soybeans and weeds on July 3 and 4, 1957, using a tractor-mounted weed-control sprayer designed for