GUAR TOLERANCE TO VARIOUS POSTEMERGENCE HERBICIDES. Brian L. S. Olson, Multi-County Extension Agronomist, K-State University Northwest Area Research and Extension Center, 105 Experiment Farm Road, Colby, KS 67701; Todd A. Baughman and John W. Sij, Associate Professor and Professor, Texas A&M University Agricultural Research and Extension Center, PO Box 1658, Vernon, TX 76385.

A greenhouse study was initiated at the Texas A&M Research Center located by Vernon, TX to evaluate guar tolerance to various postemergence herbicides. Guar is a drought tolerant legume that does not have a postemergence herbicide labeled for use during the growing season with the exception as a harvest aid. Guar was grown in pots, thinned to one plant per pot, and herbicides were applied three weeks after emergence. A 1X and 2X application of the herbicides were applied at 140 L ha^{-1} at 276 kPa. All herbicide treatments had labeled rates of adjuvants and ammonium sulfate added as needed The study was repeated twice with six replications in each run. Visible injury and the dry weight of all above ground viable biomass for each plant was taken 28 DAT. Data were analyzed and a treatment effect was discovered. No difference was observed between the control which had no herbicide applied and 2,4-DB, bentazon, and imazethapyr in visible injury and dry weight. Imazamox, thifensulfuron, and bromoxynil caused minor visible injury of 8-12% and a reduction in dry weight of 17-27%. Pyrothiobac and chlorimuron caused 39 an 59% visible injury to guar, respectively, and a 42 and 63% reduction in guar dry weight, respectively. Lactofen caused 100% visible injury with 0 grams of viable above ground biomass recovered. Future research should evaluate guar tolerance to 2,4-DB, bentazon, imazethapyr, and possibly imazamox, thifensulfuron and bromoxynil in the field**.** Field trials studying guar control with lactofen in soybeans should also be initiated.

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