

PREEMERGENCE HERBICIDE SCREENING FOR CUPHEA. Vince M. Davis*, Gordon K. Roskamp, and Winthrop B. Phippen, Student, Professor, and Assistant Professor, Agriculture Department, Western Illinois University, Macomb, IL 61455 USA.

Cuphea is a wild plant that may soon be a mid-western cash crop. Cuphea seed oil is rich in lauric acid. Lauric acid is a medium-chain triglyceride essential in the production of most soaps and detergents. Eight million acres of Cuphea would be needed to meet current US demand. One obstacle of commercial production of Cuphea is weed control. The identification of a preemergence herbicide will be vital to insure Cuphea as a viable commercial crop.

The objective of this project was to conduct a preemergence herbicide screening trial to identify suitable soil applied herbicides for the agriculture production of Cuphea. Preliminary greenhouse studies examined twelve herbicides. Isoxaflutole, mesotrione, benefin, trifluralin, pendimethalin, and imazethapyr were then tested in two randomized complete block field studies. Results indicate isoxaflutole has excellent Cuphea safety and weed control. Benefin, trifluralin, and imazethapyr appear Cuphea safe with mixed weed control, and mesotrione and pendimethalin cause slight concern of slower Cuphea growth. The identification of an effective preemergence herbicide will allow researchers to advance Cuphea as a new commercial crop.