LIMA BEAN (Phaseolus lunatus)  
White Mold: Sclerotinia sclerotiorum  

EVALUATION OF CHEMICAL CONTROL OF WHITE MOLD ON LIMA BEAN - HANCOCK, 1999: A trial was established June 14 at the Hancock Research Station, Hancock, Wisconsin to evaluate treatments to control white mold. Seeds of cultivar Improved Kingston were planted in a randomized complete block design with four replications. Each plot consisted of four 21-foot-long rows spaced 16 inches apart with approximately 10 seeds planted per foot. The design included additional adjacent pairs of drive rows so that soil in treatment rows would not be compacted by pesticide application equipment. Soil type was a Sparta loamy sand with pH 6.0. Susceptible snap beans and soybeans grown in the field the year before had exhibited white mold infection. Apothecia growing from sclerotia in debris from these crops produced a natural source of ascospore inoculum for this experiment. The field received 0-0-60 fertilizer, 100 lb/A, broadcast preplant, April 6, lime, 3 ton/A, May 5 and a sidedress application of 34-0-0, 75 lb/A, July 16. Eptam 20G, 3.0 lb/A, and Diazinon 50WP, 1.0 lb/A were applied June 10, prior to planting, for weed and insect control, respectively. Chemical treatments were applied with a plot sprayer, consisting of a tractor-mounted boom pressurized with an air compressor, at a rate equivalent to 35 gal water/A at 65 psi using Tee Jet Hollow Disc Cone D3-23 nozzles (8 nozzles at 8-inch spacing). Treatments were applied at 10% bloom (July 30), 10% bloom + 4 days (August 3) or 10% bloom + 7 days (August 6) (see schedules in Table 1). Rainfall recorded (inches) was: June (14-30), 4.3; July, 2.5; August, 6.5; and September (1-10), 0.0. An additional 7.7 inches of irrigation was applied in 16 applications June-September, for a total of 21 inches rainfall and irrigation.

A period of extremely hot weather at the end of July and beginning of August was very unfavorable for ascospore production and infection by the white mold fungus. The plants were extremely susceptible to root rot and the warm moist conditions led to severe root rot, stunted plants and failure of the canopy to close which was also unfavorable for white mold development. Plots were examined several times during the growing season, up through September 29, to look for symptoms or signs of white mold and none were seen. The severe root rot symptoms led to very few filled pods and no yield data were taken.