The T/Ha Yield Potential of Simulated Herbicide Drift on Glycine max

Jeckel, Prescott (School: Delavan High School)

The purpose of this experiment was to determine whether simulated drift of Dicamba herbicide would affect soybean yield in tonnes per hectare (T/Ha). The herbicide Dicamba is traditionally used on corn but this research focused on dicamba being applied to soybeans at a dilution rate of 730.78 microliters per hectare (0.01 oz./acre or about 0.3 ml/acre). To start testing, load chosen seed into the planter, and plant the soybeans at 385,500 seeds per hectare in a prepared field. When the soybeans in the field hit growth stage V4 (which was determined in the prior year to be the better spraying stage) and spray the field with Banvel. Harvest the fields separately when the plant matures in the field and the growth stage R8 appears on the majority of the plants. Take the data to the grain elevator to obtain a bushel summary report and compare the summary to the field taken. Take the bushels and divide them by the acres to get bushels per acre and this step for all other fields used. Convert the BPA average to T/Ha average. Compare the averages to find the highest T/Ha yield of the Field. In conclusion, the experiment supported the hypothesis. The fields sprayed with the Banvel chemical had a higher yield than the non-sprayed control fields. This data is especially relevant because, while there were only 2 sprayed fields, we took two fields directly next to each other; one to spray with Banvel the other to be control. This is important because they will have closer soil types and rainfall amounts than fields separated by a larger distance.

Awards Won: