PERFORMANCE OF DOW AGROSCIENCES HERBICIDE TOLERANCE TRAIT IN CORN. Mark A. Peterson, David M. Simpson, Cory Cui, Eric F. Scherder, David C. Ruen, John S. Richburg, Sam M. Ferguson, Patricia L. Prasifka and Terry R. Wright, Dow AgroSciences, Indianapolis, IN 46268.

Dow AgroSciences has introduced two new herbicide tolerance traits, commonly referred to Dow AgroSciences Herbicide Tolerance (DHT) traits. DHT1 trait is currently being developed in corn. The DHT1 trait is a synthetic gene developed by Dow AgroSciences from *Sphingobium herbicidovrans.* *In planta* this gene produces an enzyme that metabolizes several herbicides having an aryloxyalkanoate moiety, including Phenoxy auxins (e.g., 2,4-D, MCPA) and aryloxyphenoxypropionates (e.g., quizalofop, haloxyfop). DHT1 corn events have been tested in the field and demonstrated robust tolerance to preemergence, single postemergence, and sequential postemergence applications of 2,4-D at 1120, 2240 and 4480 g ae/ha. Postemergence applications of quizalofop of up to 184 g ai/ha have also been well tolerated by DHT1 corn events. Corn growth, development, maturity and yield of individual events are equivalent to iso-lines. DHT1 may also be stacked with other herbicide resistance traits to improve and enhance the performance of current weed control systems, improve the control of “hard to kill” broadleaf weeds, and prevent or delay the onset of herbicide resistant weeds.