

GRAMOXONE INTEON® INNOVATIVE FORMULATION TECHNOLOGY. Stott Howard, Scott Cully and Chuck Foresman, Syngenta Crop Protection, West Des Moines, IA 50266.

Paraquat products have been successfully used in agriculture for over 40 years. When compared to most crop protection products, it has a favorable and modern toxicological profile; however, paraquat can be fatal if the undiluted product is swallowed. Syngenta scientists have been studying the oral toxicity of paraquat for a number of years and have developed Gramoxone Inteon®, a major advancement in product stewardship and reduced risk. Gramoxone Inteon contains a gelling agent that is activated or triggered at the pH of stomach acid. Once formed, the gel minimizes and slows dispersion and passage of paraquat into the small intestines, thus allowing more time for productive emesis as caused by the emetic in the Gramoxone Inteon formulation. Toxicological data has demonstrated that the Inteon technology results in a greater than 10-fold reduction in toxicity of the undiluted product. Clearly, this is technology that will improve the sustainability of important agricultural products such as paraquat.

The Inteon technology does not influence the excellent performance standards set by Syngenta's paraquat containing products. Gramoxone Inteon, a soluble liquid (SL) that contains 2 lb ai/gallon (240g/l) paraquat, will continue to provide unique benefits to growers and the environment with contributions to: soil conservation, water quality, yield protection, farming efficiency, and control of herbicide resistant weeds. In trials from 2005, Gramoxone Inteon soybean weed control programs outperformed glyphosate-based programs by providing more complete control of Conyza canadensis. In addition, Gramoxone Inteon applied alone, with 2,4-D, or in combination with a residual partner such as Boundary provided an excellent foundation weed control program in no-till soybeans. This excellent efficacy, coupled with consistent performance, excellent tank mix versatility, broad utility, and now improved human safety position Gramoxone Inteon for an excellent future.