SYNGENTA'S RECOMMENDATIONS ON GLYPHOSATE RESISTANCE MANAGEMENT. Dirk C. Drost and Chuck Foresman, Head, Development Planning and Technical Brand Manager, Syngenta Crop Protection, Inc., Greensboro, NC 27419-8300.

Syngenta Crop Protection is committed to the proper use, stewardship and performance of glyphosate herbicides, including its own proprietary brand of glyphosate (Touchdown<sup>TM</sup>). Glyphosate resistance in weeds, now in its early stages in the U.S., presents a threat to the effectiveness and commercial viability of glyphosate and glyphosate-tolerant cropping systems. These systems have been widely adopted in soybeans and cotton; their benefits include efficacy, cost savings, simplicity and reduced environmental impact.

Three weed species have been reported resistant to glyphosate in the U.S., present in at least 8 states. Resistant horseweed (marestail) spread to over 500,000 acres of cropland in 2002. Tolerant or resistant waterhemp in the Midwest is an increasing concern.

Syngenta recommends making no more than two applications of glyphosate per two-year period in corn and soybean cropping systems. In cotton, Syngenta recommends that growers not exceed three applications of glyphosate per season. In all cropping systems, glyphosate should be rotated with other herbicides, full rates of glyphosate should be used, and weed escapes should not be allowed to produce seed or vegetative propagules.

Many farmers believe industry will bring new, effective replacements for glyphosate to the market; however, because of increasing development costs and regulatory hurdles this is not a realistic expectation. Economics and regulatory pressures will also force some older herbicides off the market, meaning fewer alternatives for weed control in the future. Where glyphosate-resistant weeds become established on cropland, land values (rental and sale) may be reduced. With some exceptions, industry and the university/extension community do not appear to be making a high-profile issue out of glyphosate resistance at this time. University weed scientists in particular can play a uniquely powerful role in educating growers and encouraging behaviors that conserve glyphosate as a resource in agriculture. The time frame for action is immediate; delaying actions will make this threat more difficult or impossible to manage.