

KHAN, MOHAMED F. R., North Dakota State University and University of Minnesota, Department of Plant Pathology, 227 Walster Hall, P.O. Box 5758, Fargo, ND 58108-6050. **Advantages and challenges of commercial production of Roundup Ready® sugarbeet in the US.**

Roundup Ready® sugarbeet became available for commercial production in 2008 and was quickly adopted in all the major sugarbeet growing regions. 'Weeds' is considered as the most important problem for most sugar beet growers and weed control costs is usually higher in states such as Nebraska and Idaho compared to Minnesota and North Dakota. Roundup Ready® sugarbeet is easily produced using two to three timely applications of glyphosate that results in excellent weed control but growers have to pay a technology fee. Effective weed control may also be obtained using three to four timely applications of herbicides in tank mixes on conventional sugarbeet more economically than using Roundup Ready® technology. Some growers were willing to incur a higher production cost for the convenience of the new technology. Adoption of the Round Ready® technology was highest in states such as Idaho (98%) and Wyoming (90 to 95%) where weed control cost is generally higher. Yield of Roundup Ready® and conventional sugarbeet appear to be similar in Minnesota, Michigan and North Dakota where about 50% of the acreage was planted to conventional sugarbeet and 50% to Roundup Ready® sugarbeet. There were some concerns that some of the Roundup Ready sugarbeet may not have as good a disease resistance package as some of the conventional varieties. There were also concerns about increase selection pressure for resistance to glyphosate in areas where only glyphosate tolerant crops such as soybean, corn and sugarbeet will be used in the rotation. If growers are to maximize the benefits of using Roundup Ready® technology, varieties with improved disease resistance will be needed and more research should be done to determine compatibility of glyphosate with other pesticides to improve pest control and simultaneously reduce production costs.