

VARIOUS ASPECTS OF GLYPHOSATE RESISTANT ALFALFA MANAGEMENT. Benjamin L. Fochs*, Gregory K. Dahl, Joe V. Gednalske, Eric P. Spandl, Robert Schoper, and Dennis Gehler, Research Agronomist, Research Coordinator, Product Development Manager, Agronomist and Agronomist, Agrilience LLC, St. Paul, MN, and Forage Product Manager, CROPLAN GENETICS, St. Paul, MN.

The development of glyphosate-resistant alfalfa offers effective weed control, enhanced stand establishment, flexibility, and ease to forage producers. Several studies were conducted to understand aspects of this new management system including the effect of glyphosate applications on weed control, crop tolerance, and successful termination of the stand.

Field research trials were conducted at the University of Wisconsin-River Falls, Mann Valley Farm to evaluate weed control at establishment and crop tolerance. Glyphosate rates of 0.86 and 2.60 kg ae/ha were applied when alfalfa was 20 to 24 cm in height at establishment and after harvest to new growth at 12 to 15 cm in height. . All treatments provided 95% or greater weed control with no visible injury to the alfalfa stand.

A trial was conducted to evaluate the effectiveness of various herbicides in terminating the glyphosate-resistant alfalfa. Tankmix applications of glyphosate and dicamba at 0.86 kg ae/ha and 0.56 kg ai/ha and glyphosate, dicamba, and 2-4D ester at 0.86 kg ae/ha, 0.28 kg ai/ha and 1.12 kg ai/ha respectively were applied to established alfalfa at 30 to 35 cm in height. Herbicides provided moderate control of alfalfa, dandelion and Kentucky bluegrass at 6 days after treatment. Plots were moldboard plowed 17 days after treatment to achieve complete control.

Glyphosate-resistant alfalfa offers a new effective choice in weed control with additional management necessary when terminating stands