

CATTANACH, ALLAN<sup>1\*</sup>, JEFF DANIELS<sup>2</sup>, MARK A. BOETEL<sup>3</sup> and ROBERT J. DREGSETH<sup>3</sup>, <sup>1</sup>American Crystal Sugar Company, 101 North Third Street, Moorhead, MN 56560, <sup>2</sup>Bayer CropScience, 5421 Boulder Drive, West Des Moines, IA 50266 and <sup>3</sup>Department of Entomology, North Dakota State University, 1300 Albrecht Boulevard, Fargo, ND 58105.  
**Strip trial evaluation of Poncho Beta insecticide in the RRV.**

### ABSTRACT

The sugarbeet root maggot (SBRM), *Tetanops myopaeformis*, is the most serious insect pest of sugarbeet in the Red River Valley. Comparisons of Poncho Beta (clothianidan + beta-cyfluthrin) to other commonly used insecticide treatments for control of the SBRM and other insect pests were conducted at nine locations during 2008. The Poncho Beta insecticide was applied by GTG Inc. at 60 g a.i. clothianidin and 8 g a.i. beta cyfluthrin per 100,000 seeds. Stand counts after 100 % emergence indicated no phytotoxicity from Poncho Beta insecticide with stands equal to Mustang Max treatments and properly applied granular insecticides. Stand counts were improved from 8 to 51 beets per 100 foot of row at 7 of the 10 locations. Improved stand establishment was observed if granular insecticides were improperly applied. North Dakota State University sugarbeet entomologists evaluated 10 roots per treatment for sugarbeet root maggot feeding injury. SBRM ratings were always reduced with Poncho Beta (RI = 2.5) compared to the untreated control (RI = 3.1). Damage ratings at locations with high SBRM infestations were not as effectively reduced as ratings with granular insecticide at maximum label rates. Under severe SBRM pressure a second application of insecticide near peak fly activity must be used to prevent yield loss. Poncho Beta has been determined to be comparable to 8 to 10 lbs per acre of Counter 15G in North Dakota State University trials. Yield with Poncho-B was equal to or greater than yields with other insecticides at locations with low to moderate SBRM pressure. Poncho Beta followed by an application of Lorsban 4E resulted in the highest recoverable sugar per acre at one location with severe SBRM pressure. Yield data was not available from all locations at the time of preparation of this abstract. Poncho Beta gave very good control of springtails at two locations with that insect present. At one location the Poncho Beta seed treatment increased recoverable sugar per acre by about 900 lbs/acre versus the untreated check. Wireworm control was observed to be very good and similar to Mustang Max and Counter insecticides. Increases in revenue per acre more than offset the cost of application at 7 of the 9 locations. Impact of Poncho Beta on storage is being evaluated by USDA scientists Dr. Larry Campbell and Dr. Karen Fugate at the Fargo USDA, ARS center.