

BOETEL, MARK A.<sup>1\*</sup>, AYANAVA MAJUMDAR<sup>2</sup>, ROBERT J. DREGSETH<sup>1</sup> and ALLEN J. SCHROEDER<sup>1</sup>, <sup>1</sup>Department of Entomology, North Dakota State University, Dept. 7650, P.O. Box 6050, Fargo, ND 58108 and <sup>2</sup>Gulf Coast Research and Extension Center, Alabama Extension Service, Fairhope, AL 36532. **Managing sugarbeet insect pests with seed treatment insecticides.**

Several soil-dwelling insect pests are capable of causing major yield losses in North American sugarbeet production systems. Although conventional granular and liquid insecticide formulations have been used to manage these pests for decades, recently labeled insecticidal seed treatments have been widely adopted by producers. This research involved multiple field trials between 2004 and 2009 to compare insecticidal seed treatments with conventional insecticides for efficacy against the following: 1) sugarbeet root maggot (SBRM), *Tetanops myopaeformis* Röder; 2) wireworms (*Limonius* spp.); and 3) subterranean springtails (*Onychiurus* spp.). Poncho Beta (clothianidin + betacyfluthrin at 60:8 g active ingredient [a.i.] per 100,000-seed unit, respectively), Cruiser 5FS (thiamethoxam; 60 g a.i./unit), and NipsIt Inside (clothianidin; 60 g a.i./unit) provided similar levels of springtail control and associated yield benefits to that of Counter 15G (terbufos) applied at either 6 or 8 lb product/ac. Excellent wireworm control was provided by Poncho Beta, Cruiser 5FS, and Counter 15G. All seed treatments were significantly outperformed by Counter 15G with regard to SBRM control, irrespective of whether Counter was applied at its high or moderate (12 or 10 lb product/ac, respectively) labeled rate. The three insecticidal seed treatments we evaluated appear to perform at a comparable level to that of moderate rates of currently labeled conventional soil insecticides for controlling wireworms and subterranean springtails; however, they should not be relied on as the sole control tactic for high SBRM infestations. Postemergence tools to augment SBRM control will also be discussed.