



Result Demonstration Report

Year: 2003

Efficacy of Dimilin 2L on Grasshoppers in Pasture, Ellis County, Texas

Cooperator: Steve Beakley

Glen C. Moore
Extension Agent-IPM

Ellis County

Summary: A replicated strip trial was conducted in South Central Ellis County during 2003 to monitor the efficacy of Dimilin 2L @ 2.0 ozs./acre on grasshoppers in a pasture situation. Grasshopper numbers in the Dimilin 2L treatment were significantly lower than the untreated check over a 5 week period from May 23 to June 27, 2003. Grasshopper numbers in the untreated strips declined after June 11, 2003 as immature forms moved into Dimilin treated strips. During early August, as residual activity from the Dimilin 2L treatment deteriorated and immature grasshoppers of late season species became more abundant, there was no significant difference in hopper numbers between the Dimilin 2L treatment and the untreated check. Dimilin 2L @ 2.0 ozs. + Ag Spray 80 @ 1 qt./100 gallons of water provided effective grasshopper control for at least 5 weeks at a cost of \$3.28/acre.

Objective: The primary objective was to assess the efficacy of Dimilin 2L on grasshopper numbers in a pasture situation. An additional objective was to monitor the residual control of Dimilin 2L.

Materials & Methods: On May 14, 2003 a replicated strip trial was implemented on the Bob and Steve Beakley Farm, near Rankin, Texas in south Central Ellis County to evaluate the efficacy of Dimilin 2L on grasshoppers in an improved pasture. A photo of the trial site is illustrated (Plate 1). The high rate of Dimilin 2L @ 2.0 ozs./acre + Ag Spray 80 @ 1 qt./100 gallons of water was applied in 4 strips of 100 ft. in width across the pasture. An untreated check measuring 100 ft. in width was left between each treatment. Treatments were applied with a RoGator 1254 equipped with air induction tips and calibrated to deliver a total spray volume of 10 (gallons per acre) gpa.

Extension programs serve people of all ages regardless of socioeconomic level, race, color, sex, religion, disability or national origin. The Texas A&M University System, U.S. Department of Agriculture, and the County Commissioners Courts of Texas Cooperating. Pretreatment sampling taken on May 13, 2003 indicated an average infestation of 14 immature

(2nd and 3rd instar) grasshoppers/sq. yard. The initial post-treatment sampling was taken on May 23, 2003 or 9 (days after treatment) DAT. Additional samples were taken on May 30, June 11, 20, 27 and August 13, 2003. Sampling was done with a standard 15 inch sweep net by making 3 sweeps (1sq. yd.) at 3 random sites in the middle of treated and untreated strips.

Results & Discussion: Grasshopper numbers in the Dimilin 2L treatment were significantly lower than the untreated check over a 5 week period from May 23 to June 27, 2003 (Figure 1). Grasshopper numbers in the untreated strips declined after June 11, 2003 as immature forms moved into Dimilin treated strips. During early August, as residual activity from the Dimilin 2L treatment deteriorated and immature grasshoppers of late season species became more abundant, there was no significant difference in hopper numbers between the Dimilin 2L treatment and the untreated check. Dimilin 2L @ 2.0 ozs. + Ag Spray 80 @ 1 qt./100 gallons of water provided effective grasshopper control for at least 5 weeks at a cost of \$3.28/acre. Labeled rates range from 0.5 to 1.0 oz./acre, therefore, lowering the cost of treatment to \$1.03 to \$1.78/acre respectively.

Acknowledgments: Much appreciation is extended to Bob and Steve Beakley for serving as demonstrating cooperators. Special thanks is due Dr. Jeff Tomberlin, Associate Professor and Extension Entomologist for securing Dimilin 2L, technical support and data.

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