Biological Control of Corn Borer

Joe Fitzgerald, New Melleray Abbey, Peosta

We sought to control the European corn borer in field corn with timed releases of trichogramma wasps. Our experiment was conducted on two one-acre plots with the assistance of Iowa State University entomologists. Our goal was to control the corn borer without using chemicals.

Michigan State University research indicated a 78 percent reduction of European corn borer larvae with the release of trichogramma wasps (Orr and Landis, 1993). Chemical control of the corn borer was less effective: Dipel, 34% reduction; Pounce, 65% reduction; Lorsban, 66% reduction.

The wagon train at a PFI field day at New Melleray Abbey

The first step in the experiment was to acquaint those involved with the life cycle and effectiveness of the wasps. We hosted a meeting of three neighboring farms and the staff of our own farm early in the 1995 growing season. We involved other farmers in this meeting to expand the public awareness and understanding of integrated pest management. Staff from the Practical Farmers of Iowa and the ISU Department of Entomology led the meeting.

The ISU entomologists scouted fields to locate plots which offered the possibility of corn borer infestation. Once identified, the plots were flagged (marked) for eventual release of wasps. Scouting was later done to determine if enough larvae were present to warrant the first release of the wasps. Fortunately for the farmer but unfortunately for the entomologists there were never enough larvae spotted to trigger a release of wasps.

The experiment was a success in that it highlighted the value of scouting for pests and provided the opportunity to broaden local awareness of integrated pest management. The trial was reviewed at our July 13, 1995 field day with an attendance of nearly 100 persons.