The University of Vermont Insect Agroecology Laboratory:


Anna R. Grubb  
Environmental Studies Undergraduate  
agrubb@uvm.edu

Advisors:  
Dr. Yolanda Chen  
Assistant Professor, Department of Plant and Soil Sciences  
yfanslow@uvm.edu

Jason Shaw Parker, Ph.D.  
Research Assistant Professor, Department of Plant and Soil Sciences  
jparker7@uvm.edu

Abstract:  
The University of Vermont’s Insect Agroecology Laboratory is currently researching the invasive insect pest, Swede Midge (*Contarinia nasturtii*) that is originally native to Europe and southwestern Asia that is now a serious threat to *Brassica* crops such as cabbage, cauliflower and broccoli. Recently, swede midge have caused staggering losses within the Northeastern US (especially in upstate New York) as the larvae feed on, disfigure and destroy the growing tip of the plant. There is a critical need to develop sustainable pest management strategies prior to an onset of major economic losses to farmers within this region. *Brassicas* are vital crops for Northeastern vegetable growers; New York is the top producer of fresh cabbage nationwide, and second in processing cabbage (a total value of $62 million per year). Currently, major pest management recommendations, aside from long and widely-spaced rotations, is to use systemic neonicotinoids at planting, followed by weekly applications of neonicotinoids. There are few alternatives to conventional insecticides, so organic growers are particularly at risk with the increase in swede midge damage in the Northeastern US. The Swede Midge Alternative Strategy Survey was designed to gauge the interest, willingness and ability of New England farmers to adopt and potentially implement alternative strategies to managing swede midge if University of Vermont’s Insect Agroecology Laboratory were to find a successful alternative management strategy. The survey also included basic questions about the knowledge of swede midge, to determine if farmers throughout New England are aware of the pest and its affects on *Brassica* plants. This survey will be essential to the research at the Insect Agroecology Lab to aid in the development of alternative strategies, based on farmers willingness to adopt alternative pest management strategies to deter swede midge.