Farming for Native Pollinators

Delaware Department of Agriculture

More than 120 commercial crops are dependent upon insect pollination. Most growers rely on colonies of the honey bee, *Apis mellifera,* for pollination services. Beekeeper-managed colonies are necessary for commercial yields. Many of these colonies have been affected by mites and diseases, resulting in weaker colonies and fewer beekeepers able to supply growers with quality pollination colonies. The "crisis" in the pollination of both cultivated crops and native vegetation has attracted national attention. The Delaware Department of Agriculture, University of Delaware Cooperative Extension, and a number of Delaware growers are cooperating in a project, "Farming for Native Pollinators" that aims to develop solutions to this crisis for Delaware's growers.

Cucurbit crops are an important segment of Delaware agriculture, with revenue estimated between $16-$21 million/year. Cucurbits (e.g. pumpkins, cucumbers, and melons) are highly dependent upon insect pollination. Honey bee colonies supply the majority of these crops' pollination needs, although native bees also play a significant role in pollination. Therefore, maintaining cucurbits as a viable segment for Delaware agriculture requires maintaining adequate populations of both honey bees and native bees. While growers may be aware of honey bee problems, many are unaware of the role that non-managed, wild bee species play in pollination needs. Furthermore, they are not generally aware of on-farm management practices that can enhance native pollinator populations.

During 2006, the Delaware Department of Agriculture is funding a baseline survey of native bees in cucurbits. Over the following 2 years, additional surveys will be conducted, and life history information developed for the native bees. In 2008, interested farmers will be encouraged to implement buffer strip and field margin recommendations that will favor native bees. In 2009, refined recommendations will be proposed for incorporation into CREP and WHIP programs and a booklet and series of educational information on native bee management will be developed. Project results will be presented at grower workshops and field days. Recommendations will also be posted to Cooperative Extension and DDA websites.

Lister Acres is playing a vital role in the "Farming for Native Pollinators" project by serving as a both a test and survey site. A special "Pollinator Mix" of native grass and flower seeds was developed and planted on the farm. The mix is designed to provide season-long pollen and nectar resources for bees and other important pollinators, such as butterflies. The suitability of the Pollinator Mix will be evaluated as part of the project. Through special displays in its agritourism program, Lister Acres is also providing an important educational link to the general public. The displays, including a butterfly garden and insect exhibits, will highlight the importance of Delaware's agricultural lands as habitats for native bees and butterflies.