

Educational Programs Team Report

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By

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Introduction: The mission of the educational programs team was to inventory and review educational materials and certification programs that increase the understanding, stewardship and management of pollinators and their importance to production agriculture and the environment. The team was also asked to identify gaps and develop recommendations for consideration by the full steering committee and work group at their August meeting. The preliminary update used in team discussions along with a matrix of educational programs is attached.

A. Pollinator Educational Programs: The team inventoried and reviewed numerous educational resources and reference materials on pollinators and found there is very little curriculum (organized instructional content). A matrix listing the programs that were reviewed can be found in appendix A. Existing curriculum is primarily focused at the elementary with some at middle school. No curriculum was found for high school students. Most educational resources had good content but few had interactive elements or activities for engaging students. Most resource materials could be incorporated into a comprehensive curriculum, made more user friendly, and with appropriate interactive activities or elements could be structured for use by teachers in a classroom setting.

Recommendations:

- 1. Initiate discussions with NAPCC on a collaborative effort to develop a structured pollinator educational curriculum for Grades 7-12.**
- 2. Collaborate with the National FFA Foundation in developing instructional materials to promote pollinator health and agricultural profitability**

Through this program, instructional materials will be developed to promote the increased understanding, stewardship and management of pollinators in agriculture and the environment. Program objectives include:

- Providing resources to students and teachers supporting instruction about science-based pollinator management and the integration of that material into agricultural management.
- Creating partnerships with secondary and post-secondary institutions whose various academic areas who could utilize these instructional materials.
- Developing society ready graduates prepared to make educated conservation decisions that impacting pollinator and other wildlife populations.

To meet these objectives, FFA will partner with interested stakeholders in creating a comprehensive set of tools specifically designed to integrate into educational setting in a scalable fashion. The components of the Program include:

- Task Force to determine needs, provide oversight and support
- Creation of instructional lessons and resources
- Development of student self-paced instructional modules
- Development and validation of related learning standards including cross walks to academic, technical and skill standards
- Pilot testing within agricultural classes
- Team Agricultural Education Learning Center support
- Agricultural Education teacher training
- Promotion of project through various media and publications
- Program evaluation with teachers and students
- Project management / coordination / quality control

A number of the factors underscore the need for the creation of Pollinator Health and Agricultural Profitability instructional materials. Among these are:

- High schools, heavily pressured to achieve passing scores on standardized tests, have less time to devote to pollinator health program.
- Few teachers have been prepared to teach about pollinators and their critical role in agricultural production.
- There are few high school textbooks covering this topic in a comprehensive problem-solving manner.
- Few colleges offer programs dedicated to the pollinator health.
- Varying geographical information, species differentiation and cultural changes make it challenging to keep curriculum up to date and relevant.

Program Description and Deliverables:

Deliverable #1

Development of academically sound classroom-ready instructional materials and building interactive self-paced modules for students.

A core team of FFA Staff, the Native Pollinators in Agriculture Work Group, other pollinator subject matter experts, agricultural educators, and other constituents will be formed to create the body of work that will be known as the Pollinator Health and Agricultural Profitability Instructional Materials. This comprehensive set of instructional assets and self-paced learning modules will form the core body of work about protecting pollinators. These materials will be created to reach

FFA/Agricultural Education students and others through the Team Ag Ed Learning Center.

Materials will be written to address educational needs and learning requirements for grades 7 through 12. Once the scope and sequence of the lesson plans are designed, a rubric, learning outcomes and student assessments will be written. Learning outcomes will be constructed to closely match comparable national standards focusing on pollinator health parameters. Learning outcomes will also be constructed to closely match comparable national standards focusing on pollinator management, preservation, integration of best practices and agricultural education. Thus all lesson plans will include detailed “cross-walk” maps to national agricultural education and academic content standards.

Lesson plans will follow the FFA LifeKnowledge® lesson plan format. This format provides a complete turnkey set of instructions for a teacher to facilitate a class and incorporates specific tactical methods for using brain based, multi-intelligence, and experiential teaching strategies in the classroom. Each lesson plan will also include a set of PowerPoint slides and specific ideas for experiential learning. Lesson plans will be written for agricultural education classes and other audiences.

Deliverable #2

Delivery through a proven tool that reaches teachers called the Team Ag Ed Learning Center.

The Team Ag Ed Learning Center (TAELC) was established to centralize the delivery of on-line curriculum materials. The TAELC is a centralized on-demand online learning portal for agricultural educators. The purpose of the Team Ag Ed Learning Center is to encourage organizations to provide other services and public access materials and to provide a level playing field for all providers of educational curriculum content.

Deliverable #3

Train teachers to successfully integrate and infuse the instructional resources and self-paced modules in their classrooms.

FFA has a network of resources and venues whereby teachers can be trained to use the Pollinator Enhancement instructional materials. A specific training program will be developed to ensure that teachers can effectively utilize these materials.

Deliverable #4

Public and media relations

A public relations and promotion strategy will be developed to ensure team members get a maximum return on their investment. Once development and piloting is complete, the resource will be marketed to agricultural education teachers. The sponsor of the project will be recognized as a leader in the area of improving pollinator health and management.

Deliverable #5

Multi-Year FFA Program Management and Promotions

FFA proposes a multi year partnership with funders. Initially, we recommend either a two or three year program.

B. Pollinator Certification Programs: While there are numerous publications that contained recommendations for maintaining or improving pollinator habitat and populations, actual certification programs having pollinator related criteria are limited. Some state pesticide certification programs contain recommendations to reduce pesticide impacts on beneficial insects and pollinators but such recommendations are primarily limited to honey bees. The Wild Farm Alliance has “*An Organic Certifier’s Guide to Biodiversity Conservation*” with specific criteria for providing habitat for pollinators. There does not appear to be any sufficient economic incentive to warrant creating a separate or stand-alone pollinator certification program.

Recommendation: Work with existing certifying organizations to integrate pollinator educational modules into their continuing education programs (e.g. Certified Pesticide Applicators, Certified Crop Advisors, Professional Groundskeepers Association).