MSBA and the University of Missouri Overview-Master Pollinator Pilot Program

Why a Master Pollinator Program

On June 20, 2014, President Barack Obama signed a Presidential Memorandum to bring federal actions to the pollinator issue that will provide increased collaboration, solid science, practical management, and essential research goals. Pollinator losses have been severe. The number of migrating Monarch butterflies sank to the lowest recorded population level in 2013-14, and there is an imminent risk of failed migration. The continued loss of commercial honey bee colonies poses a threat to the economic stability of commercial beekeeping and pollination operations in the United States, which could have profound implications for agriculture and food. Severe yearly declines create concern that bee colony losses could reach a point from which the commercial pollination industry would not be able to adequately recover.

There is a wide-spread phobia when it comes to insects and most people have been educated through commercial entities that the only good insect is a dead insect. There are few courses offered at any level on methods and concepts of Integrated Pest Management and even fewer on how to attract beneficial insects to gardens, landscapes and agricultural properties.

The need is great to develop a plan designed to provide education on pollinators and their role in the environment. This program will offer a broad overview of the relationship between plants, insects, soil and humans. It isn't designed to encourage commercial beekeeping as a profession and will follow the same educational model as that of the Master Gardener Program, offered by the University of Missouri Extension.

Around 1973, Washington State University Cooperative Extension, located in Seattle, WA, started the first trial clinics on gardening to meet the high demand for urban horticulture and gardening advice. This all-volunteer program is now active in all 50 states and, as per the 2009 Extension Master Gardener Survey, has some 95,000 active Master Gardeners who advise and educate the public on gardening and horticulture.

With onset of Colony Collapse Disorder (CCD) and the rapid decline of pollinators over the past six years, there has been an increased demand for more classes and better training on butterflies and honeybees, especially in urban areas, it has become obvious that developing a Master Pollinator Program would be beneficial.

As with the Master Gardener Program, Master Pollinator groups would be affiliated with a land-grant university and one of its cooperative extension service offices.

Initial Partners in the Master Pollinator Pilot Program

The Master Pollinator Program is a cooperative effort between the Missouri State Beekeepers Association, the University of Missouri and county extension offices. The name of this program would be the Missouri Master Pollinator Program and it will be modeled after the Master Gardener program.

University of Missouri will take the lead on developing the curriculum and designing classroom materials. They will provide oversight on concepts and best practices discussed and will update classroom materials as practices change. A memorandum of understanding or similar will be developed between MSBA and MU Extension, to determine a fair state fee to charge. MU Extension's gain would be a new program in an emerging area of interest and a great partnership.

Missouri State Beekeepers Association will provide support for the program by becoming the specialists on honey beekeeping practices. Members can provide students in the program volunteer opportunities to do hands-on hive

examinations and exploration to support classroom concepts. The to-be-determined state fee would likely have to be shared with the beekeepers association, as they would be doing much of the teaching, organizing and promotion. MSBA's gain would be a standardized and quality curriculum as well as a statewide reach to all counties in the state, hopefully protecting more pollinators or their habitat.

County Extension Offices will provide some administrative duties and classrooms for presentations as well as avenues or outreach to the public. With all the concern on pollinators and the decline of honeybees, there may be funding opportunities from corporations, as well as government grants, to assist with curriculum development or outreach.

Modules in the Master Pollinator Pilot Program

1. Insect Overview
    a. Insect Basics
        i. Classifications
        ii. Body Parts
        iii. Life Cycle
    b. Beneficial Insects
    c. Insects as pests
        i. Ants
        ii. Hive Beetles
        iii. Varroa Mites
        iv. Spiders
        v. Wax Moths
    d. Insect control
2. Plant and Pollinator Relationship
    a. Anatomy of a Flower
    b. Taxonomy basics
    c. Seasonal bloom times
    d. Pollination Methods
    e. Types of Pollinators
3. Pollinator Societies
    a. Honeybees
    b. Bumblebees
    c. Mason and other solitary bees
    d. Butterflies and moths
4. Natural and Managed Habitats
    a. Honeybees
    b. Bumblebees
    c. Mason and other solitary bees
    d. Butterflies and moths
5. Disease and Pest Management
    a. Disease Identification
    b. Methods of treatment
    c. How to read a chemical label
    d. Safety Equipment
6. Habitat Management for Attracting and Keeping Pollinators
    a. Honeybees
    b. Bumblebees
    c. Mason and other solitary bees
    d. Butterflies and moths