

EPA Pesticide Environmental Stewardship Program Strategic Approach for Banana Production in Hawaii

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Hawaii Banana Industry Association
and the
University of Hawaii College of Tropical Agriculture and Human
Resources
Integrated Pest Management Program**

Strategic Approach

The Hawaii Banana Industry Association (HBIA) is the sole statewide industry association that represents ninety five percent of banana production in the State of Hawaii. The HBIA was convened thirty-one years ago to increase cooperation between industry members, private industry supporters, consumers and affiliated state and federal government agencies. HBIA represents growers in matters that affect banana production in Hawaii. HBIA represents growers in areas such as legislation, chemical registration, research, and marketing. The HBIA plays a vital role in the development of diversified agriculture in Hawaii and continues to be highly competitive in the global economy.

Protection of the environment and human health from the direct and indirect pathways of pesticide exposure has prompted the HBIA to support and implement Integrated Pest Management (IPM) practices. Integrated pest management practices strive to achieve greater harmony between agricultural production and the stewardship and protection of the environment. The HBIA is deeply committed to ensuring public and environmental health by establishing an organizational goal of implementation of IPM on seventy-five percent of banana production acres in a period of one year. To achieve this goal, the HBIA will work with the University of Hawaii College of Tropical Agriculture and Human Resources Integrated Pest Management (UH-CTAHR IPM) Program in developing and adopting an IPM continuum approach to achieve crop prosperity while demonstrating its concern for consumer health and environmentally sound production practices.

Activities

In order to increase grower adoption and awareness of Integrated Pest Management, HBIA in collaboration with UH-CTAHR IPM will establish crop specific IPM practices specifically designed to provide the best management approach for the production of bananas in the State of Hawaii. IPM practices will be supported by guidelines defined by a multi-disciplinary collaboration of faculty from the University of Hawaii at Manoa, College of Tropical Agriculture and Human Resources and the HBIA Research and Development committee. Each practice will be individually weighed according to its level of importance to the program. As a method of measurement, a point system will be utilized. To receive IPM verification status the grower must acquire a total of seventy percent of the total possible points set forth in the IPM program. This approach enables

growers to maintain flexibility and profitability, while demonstrating its concern for consumers and environmentally sound management practices. Guidelines and point values will be used to determine IPM adherence and are subject to change with new IPM developments. Before adoption can take place, the HBIA will develop a comprehensive strategy to increase grower awareness, understanding, and information about the IPM continuum approach that ensures ecosystem integrity and enhances biodiversity.

With the assistance of the UH-CTAHR IPM program, HBIA will promote the adoption of agricultural IPM production practices that retain or enhance production yields without an increase in use of pesticides. Field demonstrations on the effectiveness of IPM practices to manage pest and diseases will be conducted at various sites throughout the state. In addition, UH-CTAHR IPM will train and educate cooperative extension agents statewide to assist the HBIA in promoting the implementation of IPM practices on all major banana production islands. Through grower education, HBIA aims to increase the total number of acres under IPM recommended practices and meet its one-year goal of implementation of IPM on seventy-five percent of the total banana production acres in Hawaii.

Due to the impending threat of losing crop protection chemicals through regulatory action, the HBIA will develop and utilize grower surveys to formulate a baseline on crop protection chemical usage in order to begin focusing on risk reduction in Hawaii's banana orchards. The HBIA's intention is to establish an aggregate profile of the industry's chemical situation which best reflects its current and future needs.

Once high-risk areas are identified, the HBIA is committed to replacing high-risk pesticides with crop protection chemicals that are least toxic to human and environmental health. The industry is currently exploring reduced risk crop protection tools such as horticultural oils and biological insecticides to efficiently manage pest in a manner that is cost efficient and least harmful to the environment. At the present time, diazinon (organophosphate) is the primary chemical used for thrips and banana aphid control. The HBIA has aggressively searched for low risk chemicals such as imidacloprid and spinosad to replace diazinon use and is awaiting final registration approval from the State of Hawaii Department of Agriculture. Furthermore, the HBIA will assess the efficacy of low risk pesticides for vector management. Reduction in high-risk pesticide use will lessen the risk of direct and indirect human exposure, as well as minimize excessive leaching of contaminants into our air, water, and soil resources.

The Hawaii banana industry is actively developing a pesticide resistance program. The HBIA anticipates rotating imidacloprid and spinosad with diazinon. A rotation program for fungicides such as azoxystrobin with fenbuconazole, propiconazole, and mancozeb is already used. These changes will reduce organophosphate, carbamate, and B1 carcinogen usage. Rotation of chemicals will effectively control pest populations and minimize the development of pesticide resistance. However, in order to completely eliminate the use of these chemicals, the HBIA is searching for additional registrations for banana in Hawaii.

Lastly, the HBIA in collaboration with UH-CTAHR IPM will develop an interim program for the management of scales. Although scale insects are not significant

economic pests of banana in Hawaii, scale insect management is of significant importance for banana exports. The recent approval for the export of green banana from Hawaii provides a significant marketing opportunity for the Hawaii banana industry. Live insects detected in banana shipments will lead to rejection.

Progress

No progress to report at this time.