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DEPARTMENT OF AGRICULTURE
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MEMORANDUM CIRCULAR

No. 08
 Series of 2005

Subject: Strengthening the DA's Science-Based Insect Resistance Management for Bt Corn and Amending Section III.A.(ii) of Memorandum Circular No. 17, Series of 2003

Pursuant to: (1) Section V (Review Provision) of DA MC No. 17, series of 2003 "*Additional Requirements for the Insect Resistance Management (IRM) Strategy in Bt Corn*"; (2) recommendations of technical experts from government, academe, and the scientific community, and (3) indications from the 2005 nationwide survey commissioned by the DA on the "*Feasibility/Acceptability of the 80-20 Bag-in-a-Bag IRM Strategy for Bt Corn*", the IRM strategy for Bt corn is hereby updated to incorporate new knowledge and relevant experiences in the implementation of said strategy for the past two years.

I. Reiteration of the Science-Based High Dose-refuge IRM Strategy for Bt Corn

The combined high dose-refuge IRM system is the most appropriate strategy in the Philippines for delaying development of Asian Corn Borer (ACB) population resistant to Bt corn. The high dose guarantees over 99% mortality of ACB, while the refuge serves as source of Bt-susceptible insects that can mate with the less than 1% resistant individuals that may emerge from Bt corn to maintain susceptibility of the succeeding ACB generation.

II. The Refuge Component of the IRM Strategy

Refuge can either be structured or unstructured depending on the following considerations: (1) level of Bt corn adoption in an area, (2) size of Bt corn farms, (3) presence of alternate host crops and weeds around the corn fields which can support the population of susceptible ACB, and (4) farmer practice of crop rotation or diversified farming such as intercropping which can serve as temporal or spatial refuge.

A. Conditions for a Structured Refuge

The planned structured refuge (planting in the same field 80% Bt and 20% non-Bt corn) as per MC 17, III.A.(i) shall be implemented when all the following conditions are met: (1) a minimum contiguous production area/cluster of 200 hectares planted to corn, (2) adoption rate of Bt corn in the contiguous 200-hectare area reaches at least 80%, and (3) crop rotation is not practiced.

B. Temporal Refuge

Crop rotation as a means of providing temporal refuge involves the planting of a crop other than Bt corn (which can be non-Bt corn) in one planting season within the year to break the cycle of selection for ACB individuals resistant to Bt corn.

III. Industry Monitoring and Government Supervision

To facilitate the effective implementation of the IRM strategy, the concerned industry shall also implement the following measures:

- (1) enhanced monitoring of (a) level of Bt corn adoption particularly by municipality in government-identified areas, and (b) unexpected ACB damage using farmer reporting system and ocular field scouting;
- (2) conduct of seminars or meetings with relevant stakeholders (including informal lenders) who shall assist in gathering data on Bt corn adoption by barangay in identified corn production areas;
- (3) continuous education and training of farmers and other relevant stakeholders on IRM;
- (4) timely submission of periodic reports on adoption rate by municipality and frequency of education and training activities; and
- (5) provision of support for identified policy and technical studies.

The Department of Agriculture shall play an active role in implementing the planned IRM strategy. In addition to exercising supervision over implementation of the IRM strategy and industry monitoring of any resistance development, the DA shall support the conduct of the needed studies, education of all stakeholders, and technical capability building of its agencies.

IV. Monitoring of Insect Resistance

Per monitoring of insect resistance by the Crop Protection Division of the Bureau of Plant Industry for the two-year period following the planting of Bt corn, no confirmed incidence of ACB resistance to Bt corn has been reported. Moreover, Bt corn adoption up to the municipality level has been monitored every cropping season, and a contiguous 200-hectare corn farm exclusively planted to Bt corn has not yet been observed, particularly in the three identified provinces with relatively high adoption rates, namely Isabela, South Cotabato, and Pangasinan.

In view therefore of the non-observance of ACB resistance to Bt corn and the availability of options for unstructured refuge based on locally generated data, the second trigger for the implementation of a structured refuge after the two-year period as prescribed in MC 17 III.a.(ii) is hereby lifted. However, the system of enhanced monitoring on the part of industry and supervision on the part of regulators to monitor possible development of resistance shall be maintained. A technical and scientific advisory committee shall be created to review periodically the implementation of the IRM strategy and recommend appropriate policies.

This Circular shall take effect immediately.

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Secretary