GM insect-resistant Bt eggplant could help Philippines prevent as much as 73% crop losses, cut 'almost daily' pesticide use

Eggplant production in the Philippines suffers severe yield losses from insect pests, diseases, and extreme environmental conditions. The most destructive insect pest of eggplant in the Philippines and other Asian countries is the Eggplant Fruit and Shoot Borer (FSB). Yield losses due to FSB range from 51-73%, prompting Filipino eggplant farmers to frequently spray chemical insecticides almost daily, or up to 80 times per cropping season, costing farmers almost 20-40% of the total production cost for chemical insecticides.

It is also a common practice among Filipino farmers to dip unharvested eggplant fruits in a cocktail of chemicals to ensure the marketability of their crops.

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Due to time and resource constraints, farmers need pest control methods that are effective against the target insect pest that does not require additional labor and material inputs. Labor intensive control methods such as manual removal of infested shoots, trapping of insects, and netting are ineffective. Intensive pesticide use often leads to environmental and health issues, aside from increasing the total production costs.

At present, there are no existing commercial eggplant varieties with high resistance to FSB in the Philippines, and FSB-resistance is difficult to develop using conventional plant breeding. By using biotechnology to introduce FSB-resistance in eggplant, farmers will benefit from high yields of good quality fruits. They will also save on production and labor costs as fewer or no pesticides will be used ....

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