

VPC

MIGRATION AND FORAGING RESOURCES OF *PLUTELLA XYLOSTELLA*, DIAMONDBACK MOTH

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The diamondback moth (DBM) (*Plutella xylostella* Linnaeus) is the most important insect pest of cabbage in Brazil. The larvae feed on the leaves of the cabbage heads leaving holes in them. Because of this damage, consumers reject the cabbage. Cost to control DBM is \$120-340 per hectare of cabbage per growing cycle because the cabbage is sprayed every 3-7 days. Some fields even were sprayed when DBM was not present or was in low numbers. Because of the number of insecticide applications, DBM have developed resistance to many insecticides. During DBM research, it was observed that large numbers of DBM adults would suddenly appear in fields that were previously free of DBM. Pollen analyses are being used to help determine local and/or long distance migration of DBM and to determine if DBM forage on the flowers of native vegetation. Both scanning electron and light microscopy were used to examine the pollen found on these insect pests. In preliminary results, over five pollen and three spore types have been found in the samples. None of the pollen is from crops grown in the area indicating that DBM adults are moving into cabbage fields from native habitats. The spread of the genes for insecticide resistance is greatly increased when insects migrate from one location to another. Therefore, knowledge of DBM migration, source zones, and foraging patterns is important to help prevent insect resistance and help in control methods.