

Monarch Butterflies and Transgenic Bt Corn

Will corn engineered to kill insect pests also significantly cut the population of monarch

How might Bt corn harm Monarchs? Bt corn has a gene to make a protein called Bt, and Bt can kill caterpillars that eat it. If the pollen of Bt corn makes Bt, and if the pollen falls on leaves of milkweed, then Monarch caterpillars eating the milkweed might get sick from the Bt pollen and die.

How can we test this idea?

What kinds of questions do scientists ask to help them figure out if Monarchs are threatened by Bt corn?

How much corn pollen sticks to milkweed leaves?
Maybe as much as 300 pollen grains per square inch

How much Bt corn pollen is needed to quickly kill a caterpillar?
About 3000 pollen grains per square inch

What will be the subtle effects if Monarchs eat Bt pollen for a long time?

Could it decrease their viability?

What about other insects that may live near cornfields?

Research is now underway to address such questions.

How much evidence do we need to be satisfied that Bt corn is not likely to harm the population of Monarchs?

How safe is safe enough?

What should Bt corn be compared to?

Should Bt corn have to be as safe as growing corn with sprays?

Should Bt corn have to be as safe as growing corn organically?

Original photo Kent Eickler, Cornell University, 1999



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