

TRANSGENIC Bt CROPS AND PESTICIDES – THE IMPACT ON ENVIRONMENT AND HEALTH

S u m m a r y

Insect pests are a major cause of damage of the world's commercially important agricultural crops. Current strategies aimed at reducing crop losses rely primarily on pesticides. One of the commonly used organic zoocides is rotenone. It is used in gardens for both insect control and fish eradication as part of water management. Chronic exposure to rotenone can be toxic to animals and people. It has been shown that rotenone can induce the major symptoms resembling the Parkinson's disease. The scale of both the economic and environmental costs of insect control in agriculture is high. On the other hand, transgenic crops with intrinsic pest resistance offer a promising alternative. The first generation of insect-resistant trans-

genic plants was based on insecticidal proteins from *Bacillus thuringiensis*. *Bt* toxins are part of a large and still growing family of proteins showing insecticidal properties. More than ten *cry* genes have been transformed into different crops. Plants expressing *Bt* toxins were among the first biotechnology products to be approved for commercial use. However, the picture is not altogether positive – there is ecological concern of releasing transgenic *Bt* plants. Are there any unforeseen effects of the toxin on organisms that are not pests of the crop itself? The issue is discussed in the article.