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Pest management in Australian sorghum - a success story

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During the past decade there have been dramatic changes in the management of the two main pests of Australian sorghum, the sorghum midge, *Stenodiplosis sorghicola,* and the corn earworm, *Helicoverpa armigera*. More than 95% of sorghum crops now have resistance to sorghum midge. Levels of resistance range from x2 to x12. Insecticide sprays to control midge have reduced from about 20-30% of crops being sprayed to less than 1%. The corn earworm has developed resistance to most of the synthetic insecticides previously used. A *Helicoverpa* specific nucleopolyhedrovirus (NPV), is now widely used with a concurrent marked decline in the use of broad-spectrum chemical insecticides. Currently, more than 95% of the treated crop is sprayed with NPV. Minimal spraying of sorghum crops with hard insecticides has increased survival of natural enemies and changed sorghum from a “source” to a “sink” for corn earworm, and a nursery for beneficial insects, including *Trichogramma*, *Microplitis*, Coccinellidae and Syrphidae. Sorghum’s new attributes are being exploited in area-wide management strategies for corn earworm. A combination of plant resistance for midge and NPV/natural enemies for corn earworm has revolutionised sorghum pest management in Australia.