Crop(s)	**Sweet corn**
Insect(s)	**Corn earworm (*Helicoverpa armigera*) aka Heliothis**

Guidelines

1. If Fall armyworm is the dominant pest, refer to the Fall armyworm (*Spodoptera frugiperda*) strategy. Many insecticides used for Heliothis control will also place a selection pressure on Fall armyworm.
2. The critical stage of infestation is during silking. Even low levels of Heliothis infestation are unacceptable at the silking stage. Because sweet corn is less attractive to Heliothis before flowering and it is picked soon after silking is completed, there is a relatively short period of protection required.
3. Control of Heliothis at the tasselling stage (occurs prior to silking stage) can be important in some regions as the tassel can act as a nursery for Heliothis, which can then move onto the young developing cobs. Control of Heliothis at this stage is not as difficult as at the silking stage. Use of biological insecticides, Bt and Nuclear Polyhedrosis Virus (NPV), in the early stages of crop development is encouraged.
4. Monitor crops regularly, at least weekly during silking and **do not** spray unless pest thresholds are exceeded.
5. Labels of new products place a limit on the number of applications. If further control is required on one planting, chemicals from different mode of action groups within the same window should be used.
6. **Do not** retreat a spray failure with a product from the same chemical group.
7. **Do not** use mixtures of insecticides for controlling Heliothis.
8. Cultivation after harvest to destroy pupae will greatly assist in managing Heliothis.
9. Seek local advice on pest incidence and on the risk of resistance developing from insecticide programs used to control Heliothis in crops other than sweet corn.
10. To help prevent the development of resistance to any one specific active ingredient (see table below), observe the following instructions:
    a. Use in accordance with the current IRMS for your region;
    b. Apply a specific active ingredient using a "window" approach to avoid exposure of consecutive insect pest generations to the same mode of action. Multiple successive applications of a specific active ingredient are acceptable if they are used to treat a single insect generation;
    c. Following a "window" of a specific mode of action product, rotate to a "window" of applications of effective insecticides with a different mode of action;

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d. The total exposure period of any one mode of action "active window" applied throughout the crop cycle (from seedling to harvest) should not exceed 50% of the crop cycle;
e. Incorporate IPM techniques into the overall pest management program; and
f. Monitor insect populations for loss of field efficacy.

MoA Group*	Chemical subgroup	Active ingredient	Delivery method	No. applications permitted per crop per season
1A	Carbamates	methomyl (eg. Lannate® L), thiodicarb (eg. Larvin®)	Foliar	not specified
3A	Pyrethroids	synthetic pyrethroids (various – eg. Dominex® Duo, Sumi-alpha® Flex)	Foliar	not specified
5	Spinosyns	spinetoram (Success® Neo), spinosad (eg. Entrust®)	Foliar	4
6	Avermectins	emamectin benzoate (eg. Proclaim® Opti)	Foliar	4
11A	*Bacillus thuringiensis*	*B. thuringiensis subsp. kurstaki* (eg. Dipel®)	Foliar	not specified
22A	Oxadiazines	indoxacarb (eg. Avatar® eVo)	Foliar	3
28	Diamides	chlorantraniliprole (eg. Coragen®), tetraniliprole (Vayego®)	Foliar	3 and no more than 2 consecutive applications
31	Nucleopolyhedrovirus	NPV of *H. zea* or *H. armigera* (eg. Gemstar®, Vivus® Max)	Foliar	not specified

** Refer: CropLife Australia Expert Committee on Insecticide Resistance Mode of Action Classification for Insecticides*

Notes regarding the application of insecticides:

To ensure the most effective control of the pest:

a) Product labels should at all times be carefully read and adhered to;
b) Full recommended rates of registered insecticides should always be used; and
c) Ensure good coverage of the target area to maximise contact.

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Region	January		February		March		April			May	June		July		August						September	October			November		December	
North Queensland	No Crop				Vegetative phase		Emamectin Benzoate				Methomyl, Thiodicarb, SP's				Chlorantraniliprole								Spinetoram						No Crop	
Heliothis pressure	L	L	L	L	M	H	H	H	H	M	L	L	L	L	M	H	H	H	H	H	H	M					L	L
South East Queensland	Spinetoram		Chlorantraniliprole				Methomyl, Thiodicarb, SP's			No Crop											Vegetative phase		Emamectin Benzoate				Spinetoram	
Heliothis pressure	H	H	H	H	H	H	M	M	L	L	L	L	L	L	L	L	L	M	M	H	H	H					H	H
Central NSW / Northern Victoria	Spinetoram				Chlorantraniliprole				Methomyl, Thiodicarb, SP's		No crop										Vegetative phase		Emamectin Benzoate					
Heliothis pressure	H	H	H	H	H	M	M	L	L	L	L	L	L	L	L	L	L	L	M	M	M	M					H	H
Tasmania	Chlorantraniliprole				Spinetoram						No crop												Emamectin Benzoate					
Heliothis pressure	M	M	M	M	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L	L		
In all regions	Nuclear Polyhedrosis Viruses (NPV's), *Bacillus thuringiensis* (Bt) and Methomyl at the ovicidal rate can be used season long with no resistance management implications																											

H: High pressure period; M: medium pressure period; L: Low pressure period