Canola and Mustard Chapter XVI

Cabbage Seedpod Weevil

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Weevil adult, left; larva, right.

Cabbage seedpod weevil was first detected in Montana in 1999 and has been in southern Alberta since 1996. It has been an important pest of canola in the northwestern US.

Identification (and Life cycle/seasonal history)

The adult CSW is a small, 2.5 – 3 mm, gray or black beetle with a strongly curved beak. Adults overwinter in protected sites or just below soil surface becoming active in the spring. After emerging from overwintering site adults feed on early growing weedy mustard family plants. Females move into and lay eggs on canola pods. Eggs begin hatching within 5 days. Larvae burrow into the pod where they feed on developing seed, consuming between 5-7 seeds. When feeding is completed the larva chews a round exit hole at the base of the pod and drops to the ground to pupate. New adults emerge within 2-4 weeks and may feed lightly on canola plants before seeking out a protected site to overwinter.

Plant Response and Damage

CSW was found to be the major late season pest of rapeseed in Idaho in 1992. In 1993, the major late season pests were aphids and diamondback moth. An estimate of the combined insect damage in those years was 37% yield reduction. Unsprayed fields where CSW is common generally suffer 15-35% yield loss (Univ. Idaho).

Polish, Argentine and brown mustard (Brassica juncea) are susceptible to CSW while yellow/white mustard (Sinapis alba) is resistant.

Sampling

Sampling adult CSW should occur between bud stage and the end of flowering. Each sample consists of 25, 180^{o} sweeps. Sampling should be conducted at weekly intervals until pods have formed and flowering is completed. CSW can be more abundant on the field edge so samples taken at least 200ft or more from edge will be more representative of the whole field.

Management Strategies

When 3-6 adult weevils per 180-degree sweep are detected or when 2 or more insects can be found per plant on young pods treatment is warranted.

Product List for Cabbage Seedpod Weevil:

Pesticide	Product/Acre	Preharvest Interval, Remarks
Capture 2EC[R,1]	2.1 – 2.6 fl oz	35 days. 12 hr REI. Do not apply more than 5.12 oz /A /season. Do not make applications less than 14 days apart. See label for minimum gallonage.
Gaucho 600 [3]	15.36 – 25.6 fl oz/cwt	
Lambda-cyhaolthrin[R,1,2]	1.92-3.84 oz (Warrior with Zeon) 1.92-3.84 (Lambda T)	7 days, 24 hr REI. Avoid application when bees actively foraging by applying early morning or evening. Do not apply more than 0.72 pt/A /yr. See seasonal use rates for gamma and lambda cyhalothrin.
Proaxis[R,1,2]	1.92 - 3.84 oz	7 days, 24 hr REI. Do not apply more than 0.72pt/A/season. See seasonal use rates for gamma and lambda cyhalothrin.

1 Label allows chemigation,
2 Generic active ingredient, several formulations available, see labels for rates
R Restricted use pesticide

Categories: Canola, Mustard, Insects, Cabbage seedpod weevil

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