

## Alternative Insecticides to Methoxyfenozide Registered for Use on California Rice

COMMON TRADE NAME <sup>1</sup>	ACTIVE INGREDIENT	CLASS OF CHEMICAL	WATER-HOLD TIME	PRE-HARVEST INTERVAL (PHI)	RESTRICTIONS
<b>INSECTICIDES:</b>					
Javelin® WG	<i>Bacillus thuringiensis</i>	Biological	0-days	0-days	None. Effective on early armyworm instars only.
Sevin® Brand 4F	Carbaryl	Carbamate	0-days	14-days	Carbaryl application 15 days before or after propanil will cause severe phytotoxicity. Rate of 1-1 ½ qts./acre up to 2 applications per crop per year may be made but not more than once every 7 days. No more than 3 qts./year.
Dimlin® 2L Insect Growth Regulator	Diflubenzuron	Insect Growth Regulator	14-days	80-days	FIFRA Section 2(ee) label for yellow-striped armyworm. 80-day PHI restricts use to early season.
DeBug® Turbo	Neem Oil	Biological	0-days	0-days	None. An alternative with no reported use.
Mustang® Max Insecticide	(s)-cypermethrin	Pyrethroid	7-days	14-days	Apply at 7-day intervals. A maximum of 16 fl. oz. of product (0.10 lb. ai.) (1.0 pts.) may be applied per acre per season. Poor armyworm control.
Warrior® II Insecticide Various Names	Lambda cyhalothrin	Pyrethroid	7-days	21-days; 27-days at the higher rate	Not known for effectiveness on larger worms. Apply 5-7 day intervals. Do not apply more than 0.12 lb. ai. (7.68 fl. oz. or 0.48 pt. of product) per acre per season. Do not apply more than 0.04 lb. ai. (2.56 fl. oz. or 0.16 pt. of product) per acre within 21 to 27 days of harvest. Poor armyworm control.
<b>Rice insecticides not registered for armyworm control:</b>					
DuPont™ Coragen® with RynaXpyr®	Chlorantraniliprole	Anthranilic diamide	14-days	N/A soil app.	Label prohibits foliar application to rice. FIFRA Section 2(ee) specific to soil application for rice water weevil control, and expired December 2, 2018.
Belay® Insecticide	Clothianidin	Neonicotinoid	14-days	Up to 3 <sup>rd</sup> leaf	Not registered for use to control armyworm, and residue data supports applications up to 3 <sup>rd</sup> leaf stage of growth for seed midge and rice water weevil. No activity against armyworm.
Fyfanon® 8 Lb Emulsion Cheminova Malathion® Various Names	Malathion	Organophosphate	4-days	7-days	Not registered for use to control armyworm. Do not apply propanil within 15 days and bispyribac-sodium within 7-days of application of this product or plant injury will result. Maximum applications are 2 per year and the minimum treatment interval is 7 days.

<sup>1</sup>Restrictions apply to all rice pesticides sharing the same active ingredient and are not exclusive to the common trade name. Listing common trade name is not a recommendation of one product over another if both share the same active ingredient. This list is meant for reference and does not replace the use directions and restrictions on the registered pesticide label.