KEY FACTS ABOUT

Belt® and Movento® use in vegetables

BELT	**MOVENTO**
BELT is a powerful insecticide which is 'soft' on most beneficial species and pollinators, but is extremely effective on key lepidopteran pests when used as directed. Highly active, it is very fast-acting and has a very long residual effect.	**MOVENTO** insecticide brings a unique advantage to the control of sucking insect pests and chewing insect diamondback moth. Moving through the plant in two directions instead of just one, it protects the underside of leaves and other parts of the plant that conventional products never reach.
TARGET PESTS	
Lepidoptera (larvae of moths), chewing insects.	Sucking insects (sap feeders), e.g. aphids, whitefly, thrips and chewing insect diamondback moth.
EFFECT ON BENEFICIAL SPECIES	
Low impact to almost all, including parasitic wasps, beneficial beetles and bugs, hoverfly, lacewings and predatory mites.	Low impact to almost all, including parasitic wasps, beneficial beetles and bugs, hoverfly, lacewings. Moderate impact on some predatory mites.
EFFECT ON BEES	
Safe to bees and beehives when used according to good agricultural practice.	Safe to bees and beehives when used according to good agricultural practice.
MODE OF ENTRY INTO PEST ORGANISM	
Ingested when plant tissues (e.g. leaves, flowers, fruit) are eaten by grubs. Very little contact activity.	Ingested when sap feeders suck up plant sap. Diamondback moth larvae controlled through ingestion. Very little contact activity.
SPEED OF EFFECT	
Super-fast. Feeding stops almost immediately after first intake. Feeding damage stops as soon as the insect ingests the active ingredient in BELT, flubendiamide.	Slow. Takes time to penetrate into leaf tissue, then into plant sap flow, then into the insect's gut, then into the insect's lipid production systems. Then it takes time for the shortage of lipids in the insect's body to become fatal. Often 7-10 days or more for full effect.
TARGET ZONE	
BELT needs to be retained either ON or INSIDE the plant tissue on which the grubs will feed.	Movento MUST get into sap flows before it is possible to be taken up by sucking insects. If Movento does not penetrate into leaf tissue, it will not be effective against most insects.
BARRIERS TO PERFORMANCE	
BELT is fully effective in mixtures with many other insecticides, fungicides and nutritional additives. Penetrant and/or super-spreader adjuvants may be required if moths lay eggs on the underside of leaves (so that translaminar action needs to be enhanced) or if the crop is extremely hard to wet (e.g. many brassica crops).	1. Nil or inappropriate adjuvants reduce performance. 2. Heavy deposits of dust, suspension concentrate and powder sprays and fertiliser can create barriers to penetration of Movento into the plants, thus compromising efficacy. 3. Penetration and translocation of Movento is inhibited if plants are severely stressed.
CROP SAFETY	
Generally very safe to registered crops in most mixtures. Safe with copper fungicide mixtures.	Do NOT use with Du-Wett®, Amistar®, Amistar Top. Do not use in tank-mixtures with chlorothalonil-based products if emulsified oil adjuvants are used.

USING ADJUVANTS WITH BELT AND MOVENTO IN VEGETABLES.

Adjuvants are always helpful, but not always essential for effective use of BELT.

They improve the coverage (i.e. spreading), adhesion, and penetration you can achieve, which is an advantage in all crops and necessary on hard-to-wet crops like brassicas.

Adjuvants are critical to help MOVENTO penetrate leaf tissue.

The most effective adjuvants are the penetrant types with emulsified oils (e.g. Agridex® and Hasten®), with the organosilicones next best. Non-ionic wetters do add to performance, but not to the same level as penetrant-type adjuvants.

	PRODUCT	DESCRIPTION/ACTION	OK with BELT?	OK with MOVENTO?
EMULSIFIED CROP OILS (CROP OIL CONCENTRATES) Primarily penetrants, the adjuvants in this group assist with the penetration of BELT and Movento directly through leaf epidermis into the leaf tissue. Penetrants assist Movento to move into plant sap flow, and assists with the translaminar activity of BELT, which is important when eggs are laid on lower leaf surfaces. These adjuvants improve rainfastness.	Agridex	emulsified paraffinic oil	✔✔✔✔✔	✔✔✔✔✔
	Hasten	ethoxylated canola oil	✔✔✔✔✔	✔✔✔✔✔
	Kwickin®	esterified canola oil	✔✔✔✔✔	✔✔✔✔✔
	Uptake®	methoxylated canola oil	✔✔✔✔	✔✔✔✔
	Rocket®	methoxylated canola oil	✔✔✔✔	✔✔✔✔
	Synertrol®	ethoxylated vegetable oil	✔✔✔	✔✔✔
	Protec® Plus	emulsified vegetable oil	✔✔	✔✔
	Codacide®	vegetable oil	✔	✔
ORGANOSILICONES Most organosilicone-based adjuvants are penetrants and also have an enhanced capability to assist spreading of spray deposits ("super-spreaders"). Those that contain other components (polymers and latex) which are intended to aid in droplet deposition, such as Du-Wett and Designer, are less suitable for use with Movento.	Maxx Organosilicone Surfactant®	organosilicone adjuvant penetrant and 'super spreader'	✔✔✔✔✔	✔✔✔✔✔
	Du-Wett*	organosilicone-based 'super spreader', aids deposition	✔✔✔	Do NOT use
	Designer®	organosilicone + latex polymer sticker, aids deposition	✔✔✔	✔
NON-IONIC WETTERS Non-ionic wetting agents help improve the spreading and sticking behaviour of spray droplets. As penetrants they are much less effective than emulsified oil adjuvants or the organosilicones, although they can still be highly effective with BELT. To achieve any penetrating effect for Movento, spray volumes need to be relatively higher than with the true penetrant-type adjuvants.	Agral®	non-ionic wetter	✔✔✔	✔
	BS1000	non-ionic wetter	✔✔✔	✔
	Activator®	non-ionic wetter	✔✔✔	✔
	Chemwet 1000	non-ionic wetter	✔✔✔	✔
BUFFERING (OR ACIDIFYING) AGENTS	LI700®	buffering agent, some aid to penetration	✔✔✔	✔
	Liase®	buffering agent, reduction of spray "fines" drift	?	No effect
	Ammonium sulphate	buffering agent, reduction of spray "fines" drift	?	No effect
CROP OILS	Sacoa Biopest® oil	"fast break" emulsion high grade paraffinic oil	✔✔✔	✔✔✔

Note: The information in this document is intended as a guide to choose the most effective adjuvants for use with BELT and MOVENTO. However, this in no way implies that the use of the adjuvants should contradict the directions on the adjuvant label in any way. * Risk of crop damage. Phytotoxicity noted in trials with Du-Wett mixtures in some crops.

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