**WHAT IS TRANSFORM INSECTICIDE?**

A systemic foliar insecticide with extended residual for control of aphids and greenhouse whitefly in a wide range of vegetable crops. With a novel mode of action and no cross-resistance to any other chemistry, Transform is the only Group 4C insecticide on the market.

Transform contains 240 g/L Isoclast™ active as a suspension concentrate.

**DIRECTIONS FOR USE IN LEAFY VEGETABLES**

Monitor crops for pest species by regular field scouting. Target sprays against insect populations when they exceed threshold levels. Make repeated applications at 7 day intervals as new infestations occur.

**Restraints:** DO NOT apply more than 4 times to any vegetable crop in any one season. DO NOT use Transform in protected cropping situations (greenhouses, glasshouses, etc.)

**CROPS, PEST, RATE, CRITICAL COMMENTS**

<table>
<thead>
<tr>
<th>CROPS</th>
<th>PEST</th>
<th>RATE</th>
<th>CRITICAL COMMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leafy vegetables including: lettuce (all varieties), asian greens, silver beet and spinach</td>
<td>Green peach aphid* and Brown sowthistle aphid</td>
<td>200 to 300 mL/ha</td>
<td>Use higher rate under heavy aphid infestations or if longer residual control (&gt;7 days) is required. Ensure accurate species identification.</td>
</tr>
<tr>
<td></td>
<td>Greenhouse whitefly</td>
<td>400 mL/ha</td>
<td></td>
</tr>
</tbody>
</table>

*Including green peach aphid populations resistant to other insecticides.

**WHERE DOES TRANSFORM FIT IN THE SPRAY PROGRAM?**

Transform can be applied up to four times to any lettuce or leafy vegetable crop.

Transform is not affected by temperature so can be used with confidence in both warm and cold conditions.

Applications should target insect populations before they have built up to damaging levels.

Ideally, if a Group 4A product has been used as a seedling drench or soil treatment, e.g. Actara®, Durivo®, imidacloprid, etc., Transform should NOT be the next aphicide used (acceptable alternatives include pirimicarb (e.g. Pirimor®) and Movento®).

**Compatibility**

Transform is compatible with most commonly used crop protection products used in vegetable production. Always conduct a bucket test when mixing Transform with other crop protection products or adjuvants to confirm physical compatibility in the spray vat. Consult your advisor or Dow AgroSciences representative before making tankmixtures, especially those which require an adjuvant.

**Adjuvants**

Addition of a non-ionic wetting agent is not required but may be added if desired. Agral® and Chemwett 1000 are suitable wetting agents to use with Transform.

**Spray application**

Apply a medium quality spray in a minimum of 250 L/ha water. Increase water volumes for applications to large leafy crops. Thorough crop coverage is essential, especially when targeting whiteflies. Transform is approved for application by aircraft in vegetable crops.

**Safety to predators, parasitoids and pollinators**

Using Transform in preference to older broad-spectrum insecticides will help preserve lacewings, ladybeetles and aphid parasites in the crop. Beneficial insect preservation is the core of all effective IPM programs.

DO NOT apply Transform to flowering crops while bees are foraging. Spray applications made early in the morning or late in the afternoon/evening when bees are not foraging should be safe.
INSECTICIDE

Transform™ insecticide for lettuce and other leafy vegetables

PEST BIOLOGY
Several species of aphids are found in leafy vegetables. Aphids deprive plants of nutrients and, as a by-product, they excrete honeydew which becomes covered in sooty mould, making the produce unmarketable. The presence of aphids (dead or alive) in produce is highly undesirable.

Another major issue with aphids is the transmission and spread of plant viruses. Aphids can invade at any time from crop emergence onwards. Transform controls all vegetable aphid species at the same rate — even those that are resistant to neonicotinoids, organophosphates, carbamates or synthetic pyrethroids.

Safety to crops
Transform is approved for use in a wide range of fruit and vegetables around the world. Crop selectivity has been very well established. Care should be taken when tank-mixing other products and/or adjuvants with Transform as the safety of these mixtures may not have been assessed.

Withholding periods (WHP)
Harvest WHP: 3 days.

NB. For vegetables grown for export markets, consult your exporter before using Transform. Many overseas markets do not yet have MRLs established for Transform.

OTHER APPROVED CROPS AND PESTS CONTROLLED

<table>
<thead>
<tr>
<th>PEST/CROPS</th>
<th>Cucurbitosl</th>
<th>Fruiting Vegetables²</th>
<th>Root and Tuber Vegetables</th>
<th>Vegetable Brassicas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Green peach aphid*</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Melon aphid</td>
<td>✔</td>
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<tr>
<td>Cabbage aphid and Turnip aphid</td>
<td>✔</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Greenhouse whitefly</td>
<td>✔</td>
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</tr>
</tbody>
</table>

* Including green peach aphid populations resistant to other insecticides.

References and further reading
“Good Practice Guide – Vegetables WA – Pest and disease management chapter” compiled with help from the Department of Agriculture and Food, Western Australia (DAFWA), in particular the assistance of Sonya Broughton, Vivien Vanstone, Brenda Coutts, Allan McKay, Helen Ramsey and Georgina Wilson (DAFWA), Gavin Foord (vegetablesWA).

“Lettuce IPM” Dr Sandra McDougall, Technical Specialist (Vegetables), Yanco, NSW. March 2006. PRIMEFACT 154; Published by NSW Department of Primary Industries, New South Wales 2006. ISSN 1832-6668.