Transform™ WG
Insecticide

ACTIVE CONSTITUENT: 500 g/kg SULFOXAFLOL

GROUP 4C INSECTICIDE

For the control of aphids and other insect pests in canola, cereals, cotton, soybeans, pome and stone fruit and vine crops as specified in the Directions for Use.
DIRECTIONS FOR USE

Broadacre and Fruit Crops (refer to individual Tables 1 and 2 for specific directions).

Do Not use in covered or protected situations such as glasshouses, greenhouses, shade houses or plastic tunnels.

Do Not use this product in domestic situations or areas where the public gathers.

Please note SPRAY DRIFT RESTRAINTS below apply to all uses.

SPRAY DRIFT RESTRAINTS

Except when applying with orchard/vineyard airblast equipment, Do Not apply spray droplets smaller than a MEDIUM spray droplet size category according to nozzle manufacturer specifications that refer to the ASAE S-572 Standard or the BCPC Guideline.

Do Not apply when wind speed is less than 3 or more than 20 kilometres per hour as measured at the application site.

Do Not apply during surface temperature inversion conditions at the application site.

Users of this product Must make an accurate written record of the details of each spray application within 24 hours following application and keep this record for a minimum of 2 years. The spray application details that must be recorded are: 1 date with start and finish times of application; 2 location address and paddock/s sprayed; 3 full name of this product; 4 amount of product used per hectare and number of hectares applied to; 5 crop/situation and weed/pest; 6 wind speed and direction during application; 7 air temperature and relative humidity during application; 8 nozzle brand, type, spray angle, nozzle capacity and spray system pressure measured during application; 9 name and address of person applying this product. (Additional record details may be required by the state or territory where this product is used.)

Do Not apply if there are aquatic and wetland areas including aquacultural ponds, surface streams and rivers downwind from the application area and within the mandatory no-spray zones below:

Aerial application: 20 metres
Ground application: 5 metres (all crops).

TABLE 1 BROADACRE CROPS

Canola, Cereals, Cotton and Soybeans.

DIRECTIONS FOR USE

RESTRAINTS (specific to Broadacre Crops):

Do Not apply more than 2 times to canola and cereals, or 4 times to cotton and soybean in any one season.

Do Not apply consecutive applications of Group 4C insecticides for control of aphids.

Do Not use rotary atomisers when applying aerially.

Note: Monitor crops for pest species by regular field scouting. Target sprays against insect populations when they exceed threshold levels. Make repeated applications at 14-21 day intervals as new infestations occur unless otherwise directed in the CRITICAL COMMENTS.

CAUTION: This product is highly toxic to bees. Read the PROTECTION OF LIVESTOCK section in this booklet before use.

<table>
<thead>
<tr>
<th>CROP</th>
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<th>RATE (g/ha)</th>
<th>CRITICAL COMMENTS</th>
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</thead>
<tbody>
<tr>
<td>Canola</td>
<td>Aphids (including cabbage aphid, green peach aphid and turnip aphid)</td>
<td>48 + wetting agent</td>
<td>Do Not apply after full flowering. Do Not make more than 2 applications per crop. Do Not use on canola grown as a forage crop and Do Not use on dual-use canola prior to grazing.</td>
</tr>
<tr>
<td>Cereals (wheat, barley, oats, triticale and cereal rye)</td>
<td>Aphids (including cereal aphid vectors of barley yellow dwarf virus; oat aphid and corn aphid), grain aphid, rose-grain aphid and green peach aphid</td>
<td>24 - 48</td>
<td>Do Not apply after flag leaf stage. Do Not make more than 2 applications per crop. Use higher rate under heavy aphid infestations and/or when water volume is reduced, such as with aerial application. Some species of aphids tend to infest cereal plants at the base of the plant, often inside the leaf sheath and below the soil surface. These entrenched aphids at the base of the plant may not be adequately controlled by Transform™ WG.</td>
</tr>
<tr>
<td>Cotton</td>
<td>Aphids (including green peach aphid, cotton aphid and cowpea aphid)</td>
<td>96 - 144</td>
<td>Use higher rate under heavy aphid infestations and/or when water volume is reduced, such as with aerial application.</td>
</tr>
<tr>
<td></td>
<td>Green mirid</td>
<td></td>
<td>Use the lower rate when infestation is predominately nymphs. Use higher rate when control of adults and/or residual control is desired.</td>
</tr>
<tr>
<td></td>
<td>Greenhouse whitefly</td>
<td>192</td>
<td>Ensure accurate species identification.</td>
</tr>
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### TABLE 1 BROADACRE CROPS continued
Canola, Cereals, Cotton and Soybeans.

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<tr>
<td>Soybeans</td>
<td>Soybean aphid</td>
<td>48 - 96</td>
<td>Use higher rate when canopy closure may adversely affect application coverage.</td>
</tr>
<tr>
<td></td>
<td>Greenhouse whitefly</td>
<td>192</td>
<td>Ensure accurate species identification.</td>
</tr>
</tbody>
</table>

- Apply by air using a minimum water volume of 30 L/ha.
- Addition of a wetting agent may improve control under less than ideal application conditions. Use the wetter according to its label directions. See WETTING AGENTS section below for recommended products.

### TABLE 2 TREE AND VINE CROPS
Grapes, Pome and Stone Fruit

**DIRECTIONS FOR USE**

**RESTRAINTS (specific to Tree and Vine Crops):**

- **DO NOT** apply with aircraft.
- **DO NOT** apply more than twice per crop per season for all situations except for aphid control on stone fruit.
- **DO NOT** apply more than 4 times per season for aphid control on stone fruit.
- **DO NOT** apply consecutive applications of Group 4C insecticides for control of aphids excluding woolly apple aphid.

Carefully monitor crops for pest species by regular field scouting. Repeat applications at a 14 day interval if a new infestation occurs unless otherwise directed in the CRITICAL COMMENTS.

**CAUTION:** This product is highly toxic to bees. Read the PROTECTION OF LIVESTOCK section in this booklet before use.

**SPRAYING TREE and VINE CROPS:** In the following table, all rates are given for dilute spraying where spray volumes may vary in order to obtain good coverage to the point of run-off. For concentrate spraying refer to the “CONCENTRATE SPRAYING” section on this label.

<table>
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<tr>
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<tr>
<td>Grapes (table grapes)</td>
<td>Longtailed mealybug</td>
<td>20</td>
<td>Apply as part of a spray programme targeting crawlers when they are exposed and before they become entrenched. Best control will be achieved by making two applications 14-21 days apart when crawlers are active early in the season when good coverage can be achieved. Use 20 g/100 L in up to 2000 L water/ha. If using higher application volumes, dilute accordingly. Do not apply more than 400 g of product per ha in a single application. Do not apply after 80% capfall. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control. Addition of an adjuvant may improve control. See GENERAL INSTRUCTIONS.</td>
</tr>
<tr>
<td>Grapes (wine grapes)</td>
<td>Longtailed mealybug</td>
<td>15</td>
<td>Apply as part of a spray programme targeting crawlers when they are exposed and before they become entrenched. Best control will be achieved by making two applications 14-21 days apart when crawlers are active early in the season when good coverage can be achieved. Use 15 g/100 L in up to 1000 L water/ha. If using higher application volumes, dilute accordingly. Do not apply more than 150 g of product per hectare in a single application. Do not apply after 80% capfall. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control.</td>
</tr>
<tr>
<td>Pome fruit, including apples, pears and nashi</td>
<td>Longtailed mealybug and tuber mealybug</td>
<td>20</td>
<td>Apply in spring as part of a spray programme targeting crawlers when they are exposed and before they become entrenched. Monitor for crawler emergence in spring and make two applications of Transform WG 10-14 days apart (or as indicated by monitoring). Good coverage is essential – concentrate sprays are not suitable for this pest. Apply this rate in up to 2000 L of water per hectare. Do not apply more than 400 g of product per hectare in a single application. Monitoring for crawler emergence should continue and, if required, a product from a different mode of action group should be applied (e.g. Applaud®).</td>
</tr>
</tbody>
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### TABLE 2 TREE AND VINE CROPS continued

Grapes, Pome and Stone Fruit

**SPRAYING TREE and VINE CROPS:** In the following table, all rates are given for dilute spraying where spray volumes may vary in order to obtain good coverage to the point of run-off. For concentrate spraying refer to the “CONCENTRATE SPRAYING” section on this label.

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<td>Pome fruit, including apples, pears and nashi continued</td>
<td>Woolly (apple) aphid</td>
<td>20</td>
<td>Apply Transform WG before colonies become clumped or heavily covered in wool. Consecutive applications of Transform WG may be made if required. Continue monitoring throughout the season and apply further control measures as required. Addition of an adjuvant may improve wetting of plant surfaces and wool. Good coverage is essential – concentrate or low volume sprays are not suitable for control of this pest. Apply this rate in up to 2000 L of water per hectare. Do not exceed 400 g of product per hectare in a single application.</td>
</tr>
<tr>
<td>Stone fruit, including apricots, cherries, nectarines, peaches and plums</td>
<td>If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Apple dimpling bug</td>
<td>15</td>
<td>Apply as part of a programme commencing when the pest reaches threshold levels in the lead up to flowering. Further sprays of Transform WG (or another product) may be necessary if pests re-invade. IMPORTANT: Apply this rate in up to 2000 L of water per hectare in a single application. Do not apply more than 300 g of product per hectare in a single application.</td>
</tr>
<tr>
<td></td>
<td>Cherry aphid, green peach aphid, black peach aphid</td>
<td>5</td>
<td>Apply when the pest reaches threshold levels. Good coverage is essential. Aphids that are protected inside curled leaves may not be controlled. Apply this rate in up to 2000 L of water per hectare. Do not apply more than 100 g of product per hectare in a single application.</td>
</tr>
</tbody>
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**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION**

**HARVEST WITHHOLDING PERIODS (WHP)**
- Canola, cereals, table grapes and wine grapes: **NOT REQUIRED WHEN USED AS DIRECTED.**
- Pome and stone fruit: **DO NOT HARVEST FOR 7 DAYS AFTER THE LAST APPLICATION.**
- Cotton and soybeans: **DO NOT HARVEST FOR 14 DAYS AFTER THE LAST APPLICATION.**

**GRAZING AND STOCKFOOD WITHHOLDING PERIODS (WHP)**
- Canola forage (failed crop), straw and stubble: **DO NOT GRAZE OR CUT FOR STOCKFEED FOR 14 DAYS AFTER APPLICATION.**
- Cereals: **DO NOT GRAZE OR CUT FOR STOCKFEED FOR 14 DAYS AFTER APPLICATION.**
- Cotton: **DO NOT FEED COTTON TRASH TO ANIMALS.**
- Soybeans: **DO NOT GRAZE OR CUT FOR STOCKFEED FOR 7 DAYS AFTER APPLICATION.**

**LIVESTOCK DESTINED FOR EXPORT MARKETS**
The grazing withholding period only applies to stock slaughtered for the domestic market. Some export markets apply different standards. To meet these standards, ensure that in addition to complying with the grazing withholding period, that the Export Slaughter Interval, is observed before stock are sold or slaughtered.

**EXPORT SLAUGHTER INTERVAL (ESI) – 14 days:**
After observing the grazing withholding period, livestock that has been grazed on or fed treated crops should be placed on clean feed for 14 days prior to slaughter.

**CROPS FOR EXPORT** – Before using Transform WG Insecticide on crops destined for export it is essential to consult your exporter or Dow AgroSciences to ensure that an appropriate MRL is in place in the importing country.
GENERAL INSTRUCTIONS

INSECTICIDE RESISTANCE WARNING

GROUP 4C INSECTICIDE

For insecticide resistance management, Transform WG Insecticide is a Group 4C insecticide. Some naturally occurring insect biotypes resistant to Transform WG Insecticide and other Group 4C insecticides may exist through normal genetic variability in any insect population. The resistant individuals can eventually dominate the insect population if Transform WG Insecticide and other Group 4C insecticides are used repeatedly. The effectiveness of Transform WG Insecticide on resistant individuals could be significantly reduced. Since occurrence of resistant individuals is difficult to detect prior to use, Dow AgroSciences Australia Limited accepts no liability for any losses that may result from the failure of Transform WG Insecticide to control resistant insects. Transform WG Insecticide may be subject to specific resistance management strategies. For further information contact your local supplier, Dow AgroSciences representative or local agricultural department agronomist.

MIXING

Half fill the spray tank with water, add the appropriate amount of accurately measured Transform WG Insecticide, then complete filling the tank.

Ensure thorough agitation by mechanical or hydraulic action at all times during mixing and application.

Use only clean water within the range pH 5-9 to dilute Transform WG Insecticide.

COMPATIBILITY

If intending to tank mix Transform WG with other agricultural chemicals or plant nutrients consult Dow AgroSciences.

WETTING AGENTS

Not all surfactants or crop oils are of equal quality. Dow AgroSciences does not support the use of alternative products other than those listed below.

Uptake™, Spraying Oil, Agral® Spray Adjuvant, Nufarm Chemwet 1000. If intending to use other wetting agents consult Dow AgroSciences.

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STORAGE OF DILUTED SPRAY MIX

Whenever possible the spray mix should be used immediately after it is prepared. However, if weather conditions or mechanical breakdown prevent immediate use, the spray mix may be stored for up to 72 hours without loss of activity. The spray mix should be agitated thoroughly by mechanical or hydraulic action at regular intervals during storage to prevent sedimentation. Ensure that the stored spray mix is thoroughly agitated at least once every 8 hours. The spray mix must be stored out of direct sunlight.

APPLICATION

Thorough coverage of the crop is essential. Ensure this by increasing water volume with plant growth stage. Do not apply when conditions are unsuitable for water-based spray applications. Avoid high temperature, strong winds, inversion conditions, imminent rain or any conditions that may reduce the quality of spray coverage or result in drift from the target area. Techniques to minimise drift should be employed at all times when aerially applying sprays to, or near, sensitive areas (see RESTRAINTS).

For optimum results follow the application specifications listed below:

Ground Spraying (Broadacre crops): Apply in a minimum of 50 L/ha of water. Increase spray volumes as the crop grows. With spray droplets no smaller than medium category according to nozzle manufacturer specifications that refer to the ASAE S-572 Standard. Increase spray volumes as the crop grows.

Aerial Spraying (Broadacre arable crops only): Apply in a minimum of 30 L/ha of water with spray droplets no smaller than a medium spray droplet size category according to nozzle manufacturer specifications that refer to the ASAE S-572 Standard.

PRECAUTION: (Aerial Application)

DO NOT use human flaggers/markers unless they are protected by engineering controls such as enclosed cabs.

DILUTE SPRAYING

Use a sprayer designed to apply high volumes of water up to the point of run-off and match to the crop being sprayed.

Set up and operate the sprayer to achieve even coverage throughout the crop canopy. Apply sufficient water to cover the crop to the point of first run-off. Avoid excessive run-off.

The required water volume may be determined by applying different test volumes, using different settings on the sprayer, from industry guidelines or expert advice.

Add the amount of product specified in the DIRECTIONS FOR USE table for each 100 L of water. Spray to the point of runoff. If volume to be applied is < 1000 L/ha then use the low volume (concentrate) application method for calculation of chemical rate. For volumes > 1000 L/ha use dilute spray rate.

CONCENTRATE SPRAYING

Use a sprayer designed and set up for concentrate spraying (that is a sprayer which applies water volumes less than those required to reach the point of run-off) and matched to the crop being sprayed. Set up and operate the sprayer to achieve even coverage throughout the crop canopy using your chosen water volume.

Determine an appropriate dilute spray volume (see DILUTE SPRAYING above) for the crop canopy. Consult your local advisor, agronomist or Department of Primary Industries to determine this volume. This is needed to calculate the concentrate mixing rate. The mixing rate for concentrate spraying can then be calculated in the following way:

Concentrate Spraying Example

1. Dilute spray volume as determined above: e.g. 1000 L/ha
2. Your chosen concentrate spray volume: e.g. 500 L/ha
3. The concentration factor is 2X (1000 / 500)
4. If the dilute label rate is 20 g/100 L, then the concentrate becomes 2 X 20, i.e. 40 g/100 L of concentrate spray.

The chosen spray volume, amount of product per 100 L of water and the sprayer set up and operation may need to be changed as the crop grows. For further information on concentrate spraying, users are advised to consult relevant industry guidelines, undertake appropriate competency training. Always follow Industry Best Practices.
RAINFASTNESS
Rain can wash Transform WG Insecticide from treated plant surfaces and result in reduced insect control. Avoid making spray applications if rain is expected before the spray can dry completely.

CLEANING SPRAY EQUIPMENT
After using Transform WG Insecticide empty the tank and completely drain the system. Rinse the tank, pumps, lines, hoses, filters and nozzles by circulating clean water through the system. Drain and repeat the rinsing procedure twice.

PROTECTION OF LIVESTOCK
Hazard:
Highly toxic to bees. Will kill foraging bees directly exposed through contact during spraying and while spray droplets are still wet. May harm bees in hives which are over-sprayed or reached by spray drift.
DO NOT apply this product while bees are foraging in the crop to be treated.
Risk Management:
Treatments made to crops in flower or upwind of adjacent plants in flower that are likely to be visited by bees at the time of application, should not occur during the daytime if temperatures within an hour after the completion of spraying are expected to exceed 12°C. It is recommended that orchard floors containing flowering plants be mown just prior to spraying. Beekeepers who are known to have hives in, or nearby, the area to be sprayed should be notified no less than 48 hours prior to the time of the planned application so that bees can be removed or otherwise protected prior to spraying.

PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT
Very toxic to aquatic life. DO NOT contaminate wetlands or water courses with this product or used containers.

PROTECTION OF NON-TARGET INSECTS
Sulfoxaflor may have adverse effects on parasitic wasps particularly where IPM is practiced.

STORAGE AND DISPOSAL
Store in the closed, original container in a cool well-ventilated area. DO NOT store for prolonged periods in direct sunlight. DO NOT store near food, feedstuffs, fertilisers or seed.
This container can be recycled if it is clean, dry, free of visible residues and has the drumMUSTER logo visible. Triple rinse or preferably pressure rinse containers for disposal. Add rinsings to spray tank. DO NOT dispose of undiluted chemicals on site. Wash outside of the container and the cap. Store cleaned container in a sheltered place with cap removed. It will then be acceptable for recycling at any drumMUSTER collection or similar container management site. The cap should not be replaced but may be taken separately. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose, clear of waterways, desirable vegetation and tree roots, in compliance with relevant Local, State or Territory government regulations. DO NOT burn empty containers or product.

SPILL AND LEAK MANAGEMENT
Sweep up material and contain in a refuse vessel for disposal in the same manner as for the container (see STORAGE AND DISPOSAL section).

SAFETY DIRECTIONS
• Will damage the eyes.
• Avoid contact with eyes.
• When opening the container and preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), and goggles.
• When applying by spraying equipment carried on the back of the user wear cotton overalls, over normal clothing, buttoned to the neck and wrist and elbow length chemical resistant gloves and goggles.
• If product or spray in eyes, wash it out immediately with water.
• Wash hands after use.
• After each day's use wash gloves, goggles and contaminated clothing.

FIRST AID
If poisoning occurs, contact a doctor or Poisons Information Centre. Phone: Australia 13 11 26.

MATERIAL SAFETY DATA SHEET
Additional information is listed on the Material Safety Data Sheet for TRANSFORM™ WG INSECTICIDE which is available from Dow AgroSciences on request. Call Customer Service Toll Free on 1-800 700 096 or visit www.dowagrosciences.com.au

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