

CAUTION
KEEP OUT OF REACH OF CHILDREN
READ SAFETY DIRECTIONS BEFORE OPENING OR USING



Dow AgroSciences

Transform™

Insecticide

ISOCLAST™ ACTIVE

ACTIVE CONSTITUENT: 240 g/L SULFOXAFLOR

GROUP 4C INSECTICIDE

For the control of aphids and other insect pests in canola, cereals, cotton, pulses, tree nuts, soybeans and various fruit and vegetable crops as specified in the Directions for Use.

SHAKE WELL BEFORE USE.

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Dow AgroSciences

DIRECTIONS FOR USE

Broadacre, Berry, Vegetable and Fruit Crops (refer to individual Tables 1 to 4 below 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 that apply to all uses.

SPRAY DRIFT RESTRAINTS

Broadacre, Vegetable and Fruit Crops (refer to individual Tables 1 to 4 below for specific directions).

Except when applying with orchard/vineyard airblast equipment, **DO NOT** apply by air or ground application with 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 British Crop Production Council 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.

DO NOT direct the spray above trees or vines during airblast applications. **TURN OFF** outward pointing nozzles at rows ends and outer rows during airblast applications.

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 two (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.)

MANDATORY NO-SPRAY ZONES

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 to avocado	15 metres
Ground application to all other crops	5 metres

TABLE 1 BROADACRE CROPS

Canola, Cereals, Cotton, Pulses and Soybeans.

DIRECTIONS FOR USE

RESTRAINTS (specific to Broadacre Crops):

DO NOT apply more than two (2) times to canola, cereals and pulses or four (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.

CROP	PEST	RATE mL/ha	CRITICAL COMMENTS
Canola	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Aphids (including cabbage aphid, green peach aphid and turnip aphid)	100 + wetting agent Ⓣ	DO NOT apply after full flowering. DO NOT make more than two (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.
Cereals (including wheat and barley) ONLY up to flag leaf stage	Aphids (including cereal aphid vectors of barley yellow dwarf virus; oat aphid and corn aphid), grain aphid, rose-grain aphid and green peach aphid	50-100	DO NOT apply after flag leaf stage. DO NOT make more than two (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.



TABLE 1 BROADACRE CROPS *continued*

CROP	PEST	RATE mL/ha	CRITICAL COMMENTS
Cotton	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Aphids (including green peach aphid, cotton aphid and cowpea aphid)	200-300	Use higher rate under heavy aphid infestations and/or when water volume is reduced, such as with aerial application ❶.
	Green mirid		Use the lower rate when infestation is predominantly nymphs. Use higher rate when control of adults and/or residual control is desired.
	Greenhouse whitefly	400	Ensure accurate species identification.
Pulses (adzuki beans, mung beans and navy beans only)	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Aphids (including green peach aphid, cow pea aphid and blue green aphid)	100	DO NOT make more than two (2) applications per crop.
Soybeans	Soybean aphid	100-200	Use higher rate when canopy closure may adversely affect application coverage.
	Greenhouse whitefly	400	Ensure accurate species identification.
❶ Apply by air using a minimum water volume of 30 L/ha			
❷ 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 VEGETABLE CROPS

Cucurbits, Fruiting vegetables, Leafy vegetables, Root and tuber vegetables and Vegetable brassicas.

DIRECTIONS FOR USE
RESTRAINTS (specific to Vegetable Crops):

DO NOT apply more than four (4) times to any of these crops in any one (1) season, except where otherwise indicated.

DO NOT apply consecutive applications of Group 4C insecticides for control of aphids.

DO NOT use rotary atomisers when applying aurally.

Note: Monitor crops for pest species by regular field scouting. Target sprays against insect populations when they exceed threshold levels. Make repeated applications at 7-10 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.

CROP	PEST	RATE mL/ha	CRITICAL COMMENTS
Cucurbits, field-grown, including pumpkin, squash, melons and cucumbers	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Green peach aphid and Melon (cotton) aphid	200-300	Use higher rate under heavy aphid infestations or if longer residual control (>7 days) is required.
	Greenhouse whitefly	400	Ensure accurate species identification.
Fruiting vegetables, including chilli, capsicum, eggplant, okra and tomatoes (excluding sweet corn and mushrooms)	Green peach aphid	200-300	Use higher rate under heavy aphid infestations or if longer residual control (>7 days) is required.
	Greenhouse whitefly	400	Ensure accurate species identification.
Fruiting vegetables, sweet corn	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Green peach aphid	200	DO NOT make more than two (2) applications per crop. If a second application is required, apply after a 14 day interval.



TABLE 2 VEGETABLE CROPS *continued*

CROP	PEST	RATE mL/ha	CRITICAL COMMENTS
Leafy vegetables, including lettuce (all varieties), Asian greens, silver beet and spinach	Green peach aphid and Brown sowthistle aphid	200-300	Use higher rate under heavy aphid infestations or if longer residual control (>7 days) is required.
	Greenhouse whitefly	400	Ensure accurate species identification.
Root and tuber vegetables, including potatoes, carrots and turnips	Green peach aphid	200-300	Use higher rate under heavy aphid infestations or if longer residual control (>7 days) is required.
Vegetable brassicas, including Asian greens, broccoli, Brussels sprouts, cabbage and cauliflower	Aphids, including cabbage aphid, green peach aphid and turnip aphid	200-300 (+ wetting agent) ❶	Use higher rate under heavy aphid infestations or if longer residual control (>7 days) is required.
	Greenhouse whitefly	400 (+ wetting agent) ❶	Ensure accurate species identification.
❶ 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 3 BERRY CROP

Strawberries.

DIRECTIONS FOR USE

RESTRAINTS (specific to Berry Crop):

DO NOT apply more than four (4) times to this crop in any one (1) season, except where otherwise indicated.

DO NOT apply consecutive applications of Group 4C insecticides for control of aphids.

DO NOT use rotary atomisers when applying aerially.

Carefully monitor crops for pest species by regular field scouting. Repeat applications at a 7 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.

CROP	PEST	RATE mL/ha	CRITICAL COMMENTS
Strawberries	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Green peach aphid	200-300	Use higher rate under heavy aphid infestations and/or when water volume is reduced.
	Green mirid		Use the lower rate when infestation is predominately nymphs. Use higher rate when control of adults and/or residual control is desired.



TABLE 4 TREE and VINE CROPS

Avocado, Citrus, Grapes, Pome fruit, Macadamia nut, Tree nuts 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 use in avocado and aphid control on stone fruit.

DO NOT apply more than four (4) times per season for use in avocado and 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 of this label.			
CROP	PEST	RATE (mL/100L)	CRITICAL COMMENTS
Avocado	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Fruit-spotting bug and banana-spotting bug	40	DO NOT make more than four (4) applications to any one (1) crop in any one (1) season. If making repeat applications, DO NOT reapply before 21 days after each application. Apply as part of a season long spray programme targeting pests when active in the crop. The use of Transform early in the fruiting/flowering stage of the crop will conserve beneficials when used as part of an IPM system. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant, although not critical, may improve control. Apply to the point of run-off.
Citrus, including oranges, lemons, grapefruit, limes, mandarins and tangerines	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Citrophilous mealybug, Citrus mealybug and Longtailed mealybug	40	Apply as part of spray programme targeting crawlers when they are exposed and before they are protected under the fruit calyces or established between touching fruit. Mealybugs in protected feeding sites or protected by dense foliage may not be controlled. Make two (2) applications 14-21 days apart when crawlers are active. Apply to the point of run-off. DO NOT apply more than 800 mL product per hectare in a single application. If using more than 2000 L/ha water, dilute accordingly. (i.e. increase the dilution rate but not the amount of product). Addition of an adjuvant may improve control.
	Citricola scale, Pink wax scale, Citrus snow (white louse) scale and red scale		Apply as part of a spray programme targeting crawlers when they are exposed. Make two (2) applications 14-21 days apart when crawlers are active. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control.
	Kelly's citrus thrip		Apply as part of a spray programme. Monitor crops from flowering onwards and commence applications once local pest thresholds are reached. Continue to monitor crops and make further applications as required. Addition of an adjuvant may improve control. Thrips entrenched under fruit calyces will not be controlled.
	Fruit spotting bug and banana-spotting bug		DO NOT makes more than two (2) applications to any one (1) crop in any one (1) season. Apply as part of a season long spray programme targeting pests when active in the crop. Make two (2) applications 14-21 days apart when pests are active. The use of Transform early in the fruiting/flowering stage of the crop will conserve beneficials when used as part of an IPM system. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 2000 L/ha water, dilute accordingly. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant, although not critical, may improve control.



TABLE 4 TREE and VINE CROPS *continued*

CROP	PEST	RATE (mL/100L)	CRITICAL COMMENTS
Grapes (table grapes)	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Longtailed mealybug	40	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 (2) applications 14-21 days apart when crawlers are active early in the season when good coverage can be achieved. Use 40 mL/100 L in up to 1000 L/ha. If using higher application volumes, dilute accordingly. DO NOT apply more than 400 mL of product per hectare in a single application. DO NOT apply later than 80% capfall . Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control.
Grapes (wine grapes)	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Longtailed mealybug	30	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 (2) applications 14-21 days apart when crawlers are active early in the season when good coverage can be achieved. Use the 30 mL/100 L rate in up to 1000 L of water. If using higher application volumes, dilute accordingly. DO NOT apply more than 300 mL of product per hectare in a single application. DO NOT apply later than 80% capfall . Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control.
Macadamia	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Fruit-spotting bug and banana-spotting bug	40	DO NOT make more than two (2) applications to any one (1) crop in any one (1) season. If making repeat applications, DO NOT reapply before 21 days after the first application. Apply as part of a season long spray programme targeting pests when active in the crop. The use of Transform early in the fruiting/flowering stage of the crop will conserve beneficials when used as part of an IPM system. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant, although not critical, may improve control. Apply to the point of run-off.
Pome fruit, including apples, pears and nashi	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Apple dimpling bug	30	Apply when the pest reaches threshold levels in the lead up to flowering. As Apple dimpling bugs are a highly mobile pest and can rapidly reinvade crops, further sprays of Transform (or another product) 14 days after application may be necessary. Apply to the point of run-off. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 2600 L/ha water, dilute accordingly.
	Longtailed mealybug and tuber mealybug	40	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 (2) applications of Transform 14 days apart (or as indicated by monitoring). Good coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control. Apply to the point of run-off. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 2000 L/ha water, dilute accordingly. Monitoring for crawler emergence should continue and, if required, a product from a different mode of action group should be applied (e.g. Applaud®).



TABLE 4 TREE and VINE CROPS *continued*

CROP	PEST	RATE (mL/100L)	CRITICAL COMMENTS
Pome fruit, including apples, pears and nashi <i>continued</i>	Woolly (apple) aphid	40	Apply as part of a spray programme. Monitor for aphid activity and apply Transform before colonies become clumped or heavily covered in wool. Consecutive applications of Transform may be made if required. Repeat applications of Transform 14-21 days apart will be required if targeting heavy, mature colonies. 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 to the point of run-off. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 2000 L/ha water, dilute accordingly.
	San Jose scale		DO NOT make more than two (2) applications per crop. Apply as part of a spray programme targeting crawlers when they are exposed. Make two (2) applications 14-21 days apart when crawlers are active. Crop scouting 7-10 days after the first application will help determine when the second application should be applied so as to target new crawler emergence. Complete spray coverage is essential – concentrate sprays are not suitable for this pest. Addition of an adjuvant may improve control. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 2000 L/ha water, dilute accordingly.
Stone fruit, including apricots, cherries, nectarines, peaches and plums	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Apple dimpling bug	30	Apply when the pest reaches threshold levels in the lead up to flowering. As Apple dimpling bugs are a highly mobile pest and can rapidly reinvade crops, further sprays of Transform (or another product) 14 days after application may be necessary. Apply to the point of run-off. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 2600 L/ha water, dilute accordingly.
	Cherry aphid, Green peach aphid and Black peach aphid	10	Apply when the pest reaches threshold levels. Good coverage is essential. Aphids that are protected inside curled leaves may not be controlled. Apply to the point of run-off. DO NOT exceed 400 mL of product per hectare in a single application. If using more than 4000 L/ha water, dilute accordingly.
Tree nuts (including almond, cashew, chestnut, filbert (hazelnut), pecan, walnuts and pistachios) except macadamia	If honeybees are present in the target area during flowering see the PROTECTION OF LIVESTOCK directions.		
	Aphids (including green peach aphid and black peach aphid)	10	Apply when the pest reaches threshold levels. Good coverage is essential. Aphids that are protected inside curled leaves may not be controlled. Apply to the point of run-off. DO NOT apply more than 800 mL of product per hectare in a single application. If using more than 8000 L/ha water, dilute accordingly.
PEST NAMES: Apple dimpling bug (<i>Campylomma liebknechti</i>), Banana-spotting bug (<i>Amblypelta lutescens lutescens</i>), Black peach aphid (<i>Brachycaudus persica</i>), Brown sawthistle aphid (<i>Uroleucon sonchi</i>), Cabbage aphid (<i>Brevicoryne brassicae</i>), Cereal aphids (<i>Rhopalosiphum</i> spp. – vectors of Barley Yellow Dwarf Virus), Cherry aphid (<i>Myzus cerasi</i>), Citricola scale (<i>Coccus pseudomagnoliarum</i>), Citrophilous mealybug (<i>Pseudococcus calceolariae</i>), Citrus mealybug (<i>Planococcus citri</i>), Citrus snow (white louse) scale (<i>Unaspis citri</i>) Corn aphid (<i>Rhopalosiphum maidis</i>), Cotton aphid (<i>Aphis gossypii</i>), Cowpea aphid (<i>Aphis craccivora</i>), Fruit-spotting bug (<i>Amblypelta nitida</i>), Grain aphid (<i>Sitobion miscanthi</i>), Green mirid (<i>Creontiades dilutus</i>).			PEST NAMES: Green peach aphid (<i>Myzus persicae</i>), Greenhouse whitefly (<i>Trialeurodes vaporariorum</i>), Kelly's citrus thrips (<i>Pezothrips kellyanus</i>), Longtailed mealybug (<i>Pseudococcus longispinus</i>), Melon aphid (<i>Aphis gossypii</i>), Oat aphid (<i>Rhopalosiphum padi</i>), Pink wax scale (<i>Ceroplastes rubens</i>), Red scale (<i>Aonidiella aurantii</i>), Rose-grain aphid (<i>Metopolophium dirhodum</i>), San Jose scale (<i>Quadraspidiotus perniciosus</i>), Soybean aphid (<i>Aphis glycines</i>), Tuber mealybug (<i>Pseudococcus viburni</i>), Turnip aphid (<i>Lipaphis pseudobrassicae</i>) and Woolly (apple) aphid (<i>Eriosoma lanigerum</i>).

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, macadamia, table grapes and wine grapes:

NOT REQUIRED WHEN USED AS DIRECTED.

Citrus fruit, cucurbits, fruiting vegetables (except sweet corn) and strawberries:

DO NOT HARVEST FOR 1 DAY AFTER THE LAST APPLICATION.

Brassica vegetables, leafy vegetables:

DO NOT HARVEST FOR 3 DAYS AFTER THE LAST APPLICATION.

Avocado, pome fruit, root and tuber vegetables and stone fruit, sweet corn and tree nuts:

DO NOT HARVEST FOR 7 DAYS AFTER THE LAST APPLICATION.

Cotton, pulses 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.

Pulses (except soybeans):

Grazing or cutting for meat product: DO NOT GRAZE OR CUT FOR STOCKFOOD FOR 14 DAYS AFTER THE APPLICATION.

Grazing or cutting for milk product: DO NOT FEED OR ALLOW LACTATING DAIRY ANIMALS PRODUCING MILK FOR HUMAN CONSUMPTION TO GRAZE TREATED FORAGE OR FODDER.

Soybeans:

DO NOT GRAZE OR CUT FOR STOCKFEED FOR 7 DAYS AFTER APPLICATION.

Sweet corn:

DO NOT GRAZE OR CUT FOR STOCKFEED FOR 7 DAYS AFTER APPLICATION.

LIVESTOCK DESTINED FOR EXPORT MARKETS

The GRAZING AND STOCKFOOD WITHHOLDING PERIODS (above) only apply 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 AND STOCKFOOD WITHHOLDING PERIODS, 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 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 Insecticide is a Group 4C insecticide. Some naturally occurring insect biotypes resistant to Transform 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 Insecticide and other Group 4C insecticides are used repeatedly. The effectiveness of Transform 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 Insecticide to control resistant insects. Transform 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

Agitate or shake the container immediately prior to use.

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

COMPATIBILITY

If intending to tank mix Transform 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.

Agral® Spray Adjuvant, Nufarm Chemwet 1000 and Spreadwet 1000 Wetting Agent.

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 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.

Ground Spraying (Vegetable crops): Apply in a minimum of 250 L/ha of water 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 and vegetable crops only): Apply in a minimum of 30 L/ha of water with spray droplets no smaller than a medium 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 run-off. 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 $2 \times (1000 / 500)$
4. If the dilute label rate is 40 mL/100 L, then the concentrate rate becomes 2×40 , i.e. 80 mL/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 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 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

PROTECTION OF HONEY BEES AND OTHER INSECT POLLINATORS

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.

INTEGRATED PEST MANAGEMENT

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.

The method of disposal of the container depends on the container type. Read the STORAGE AND DISPOSAL instructions on the label that is attached to the container.

SAFETY DIRECTIONS

- May irritate the eyes.
- Avoid contact with the eyes.
- When opening the container and preparing the product for use by groundboom and aerial application, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing), elbow length chemical resistant gloves and face shield or goggles.
- If applying by spraying equipment carried on the back of the user, wear cotton overalls, over normal clothing, buttoned to the neck and wrist, elbow length chemical resistant gloves and face shield or goggles.
- Wash hands after each use.
- After each day's use wash gloves, face shield or goggles and contaminated clothing.

FIRST AID

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

SPILL AND LEAK MANAGEMENT

Do not touch or walk through spilled material. Wear a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and footwear. Stop leak when safe to do so. Dam area and prevent entry into waterways, and drains.

Small spills/leaks: Contain and absorb small spills with a proprietary absorbent suitable for chemical spills or inert materials such as sand, soil or sawdust. Collect spilled product and place in sealable container for disposal. Spill residues may be cleaned using water and detergent. Contain and absorb wash water for disposal. Absorb and collect washings and place in the same sealable container for disposal. Dam the area of large spills and report them to Dow AgroSciences Emergency Services at 1-800 033 882.

MATERIAL SAFETY DATA SHEET

Additional information is listed on the Material Safety Data Sheet for **TRANSFORM™ 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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**EMERGENCY RESPONSE
(ALL HOURS)**
RING FROM ANYWHERE IN
AUSTRALIA
1800 033 882
(LOCAL CALL FEE ONLY)

IN A TRANSPORT
EMERGENCY ONLY
DIAL 000
FOR POLICE OR
FIRE BRIGADE



This product is GHS compliant. No additional GHS hazard and precautionary statements are required under the Safe Work Australia exemptions for AgVet products.



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