



# ATRANEX® 90 WG

Reg. no. L8138 Act/Wet 36 of/van 1947  
N-AR 1203

A water dispersible granule herbicide for the control of annual broadleaf weeds and grasses, as listed in maize, grain sorghum, sugarcane, pineapples and triazine resistant canola.

’n Benatbare korrel onkruidodder vir die beheer van eenjarige breëblaaronkruiden en grassoorte, soos aangetoon in mielies, graansorghum, suikerriet, pynappels en triasien weerstandbiedende kanola.

**HRAC HERBICIDE GROUP CODE C1 HRAC ONKRUIDDODER GROEPKODE**

### ACTIVE INGREDIENT/AKTIEWE BESTANDDEEL

Atrazine (triazine)..... 900 g/kg ..... Atrasien (triasien)

### NET MASS/NETTO MASSA

..... kg

### REGISTRATION HOLDER/REGISTRASIEHOUER

ADAMA South Africa (Pty.) Ltd.  
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**ATRANEX® is the registered trademark of a company of the ADAMA GROUP.  
ATRANEX® is die geregistreerde handelsmerk van ’n maatskappy van die ADAMA GROEP.**

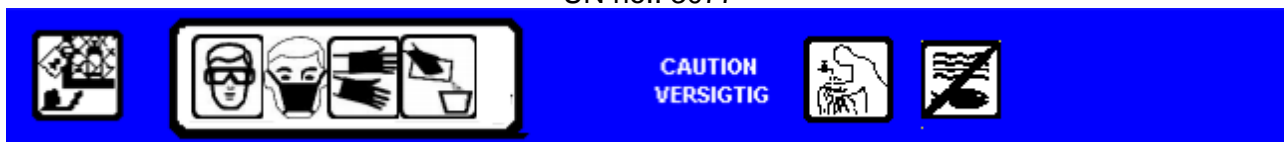
### CONTACT IN EMERGENCY/KONTAK IN NOOD

Griffon Poison Information Centre: +27 82 446 8946  
Tygerberg Poison Information Centre: +27 861 555 777

Batch number .....  
Date of Manufacture .....

Lotnommer .....  
Datum van Vervaardiging .....

UN no.: 3077



## WARNINGS

**Withholding periods** (minimum number of days between last application and harvest):

**Canola** ..... 60 days

- Poisonous when swallowed.
- Store in a cool, dry place away from food, feeds, seed and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- **Aerial application:** Notify all inhabitants of the area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water of adjacent areas.
- **Re-entry:** Do not enter treated field within 1 day after application unless wearing protective clothing.

**Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, climatic and storage conditions; quality of dilution water; compatibility with other substances not indicated on the label and the occurrence of resistance of the weed against the remedy concerned as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, and the environment or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier or registration holder in the event of any uncertainty.**

## PRECAUTIONS

- Avoid inhalation of spray and fumes.
- Wear suitable protective clothing and gloves.
- Wash with soap and water after use.
- Prevent spray drift onto other crops, grazing, rivers, dams or any area not under treatment.
- Prevent contamination of food, drinking water and eating utensils.
- Do not apply where the roots of desirable plants can absorb the chemical.
- Do not mix and load at least 15 m from boreholes, streams, rivers or dams.
- Do not apply within at least 60 m from dams.
- Ensure that no back siphoning to boreholes and dams take place when applied through the irrigation system.
- Thoroughly wash and rinse spray equipment after use and dispose of wash water where it will not contaminate crops, grazing, rivers and dams.

## RESISTANCE WARNING

For resistance management **ATRANEX® 90 WG** is a group C1 herbicide. Any weed population may contain individuals naturally resistant to **ATRANEX® 90 WG** and other group C1 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. The resistant weeds may not be controlled by **ATRANEX® 90 WG** or any other group code C1 herbicide. To delay herbicide resistance:

- Avoid exclusive repeated use of herbicides from the same herbicide group. Alternate or tank mix with products from different herbicide groups.
- For tank mixing or alternation with products in other herbicide groups, refer to applicable product labels.
- Integrate other control methods (chemical, cultural and biological) into weed control programs.

For specific information on resistance management contact the registration holder of this product.

## **SOME WEED SPECIES NORMALLY CONTROLLED BY ATRANEX® 90 WG**

### **BROADLEAF WEEDS**

<i>Acanthospermum australe</i>	Eight-seeded starbur
<i>Acanthospermum glabratum</i>	Prostrate starbur
<i>Acanthospermum hispidum</i>	Upright starbur
<i>Amaranthus hybridus</i>	Common pigweed
<i>Amaranthus spinosus</i>	Thorny pigweed
<i>Amaranthus thunbergii</i>	Red pigweed
<i>Bidens bipinnata</i>	Spanish blackjack
<i>Bidens formosa</i>	Cosmos
<i>Bidens pilosa</i>	Common blackjack
<i>Chenopodium album</i>	White goosefoot
<i>Chenopodium carinatum</i>	Green goosefoot
<i>Cleome monophylla</i>	Single leaf cleome
<i>Cleome rubella</i>	Pretty Lady
<i>Commelina benghalensis</i>	Bengal Wandering Jew
<i>Crotalaria sphaerocarpa</i>	Wild lucerne
<i>Datura ferox</i>	Common thorn apple
<i>Datura stramonium</i>	Large thorn apple
<i>Fumaria muralis</i>	Fumitory
<i>Galinsoga parviflora</i>	Small flowered quick weed
<i>Gisekia pharnaceoides</i>	Gisekia
<i>Hibiscus trionum</i>	Bladder hibiscus
<i>Hibiscus cannabinus</i>	Wild stockrose
<i>Nicandra physaloides</i>	Apple of Peru
<i>Physalis angulata</i>	Wild gooseberry
<i>Polygonum aviculare</i>	Prostrate knotweed
<i>Portulaca oleracea</i>	Common purslane
<i>Richardia brasiliensis</i>	Mexican richardia
<i>Schkuhria pinnata</i>	Dwarf marigold
<i>Tagetes minuta</i>	Tall khakiweed (limited late season control)
<i>Vigna vexillata</i>	Wild sweetpea

## GRASSES

<i>Chloris virgata</i>	Feather top chloris
<i>Eleusine coracana</i>	Goosegrass
<i>Lolium</i> spp.	Ryegrass

## GRASSES continued

<i>Panicum schinzii</i>	Vlei panicum
<i>Setaria pallide-fusca</i>	Garden bristle grass
<i>Setaria verticillata</i>	Bur bristle grass

**If dry conditions prevail for a period of seven to fourteen days after application the following weed species may not be adequately controlled, especially in heavy soils:**

*Bidens formosa*  
*Datura* spp  
*Eleusine coracana*  
*Commelina benghalensis*  
*Panicum schinzii*  
*Chloris virgata*  
*Tagetes minuta*

**Note:** Resistant strains of this weed may not be adequately controlled.

**ATRANEX® 90 WG** provides variable control of the following weeds:

*Tribulus terrestris* Common dubbeltjie

**Note:** This product mainly controls some grasses and numerous annual broadleaf weeds, however, other annual broadleaf weeds that were not present during the development trials with the product, may also be controlled to a certain degree. The registration holder still does not accept any responsibility for the control of weeds not listed on the label.

Under abnormally wet conditions the late season control of weeds may not be adequate. To control a broader spectrum of annual grasses, **ATRANEX® 90 WG** can be applied in a tank mixture or as a separate application in combination with a registered grass killer. **ATRANEX® 90 WG** is compatible in a spray mixture with all presently registered grass herbicides. Consult the labels of the specific grass herbicides for the application rates, as well as for the specific **ATRANEX® 90 WG** application rates to be used when mixtures are applied. The directions for use on labels concerned must be followed closely.

**Note:** Where **ATRANEX® 90 WG** is used in combination with EPTC in maize, at least two-thirds of the recommended rate of **ATRANEX® 90 WG** should be used according to soil type.

**ATRANEX® 90 WG** is compatible with registered wetting agents, pre-emergent graminicides, SIMANEX® 90 WG, TYLLANEX® 80 WG, BROMOTRIL® P 500 SC, 2,4-D Amine®, MCPA®, and most

insecticides and fungicides. When **ATRANEX® 90 WG** is mixed with any of the above products, all information on the label concerned must be carefully consulted and the instructions followed.

## USE RESTRICTIONS

- A** To avoid damage to follow on crops, the following waiting periods should be taken into consideration when applying **ATRANEX® 90 WG**.
- a) **Maize and sugarcane**.....None
  - b) **Grain sorghum**.....12 months
  - c) **Sunflower, Small grain, Dry beans, Groundnuts, Soya beans, Fodder sorghum and Potatoes**.....18 months
  - d) **All other crops (a test planting is however recommended)**.....24 months
- e) Where the total rate of **ATRANEX® 90 WG** applied per season does not exceed 1.1kg/ha (equivalent to 1.0kg Atrazine active), the waiting periods mentioned under b and c can be reduced to 9 months. Except in the case of the sandy soils in the North West province and North West Free State which contain 0-10% clay.
- f) Where the total rate of Atrazine active exceeds 1.0kg/ha, but does not exceed the recommended dosage rate of Atrazine active per ground type, follow the use restrictions a–d.

**Note:** The above-mentioned waiting periods will only be valid if the correct quantity of **ATRANEX® 90 WG** has been applied according to the soil type and an average or above average rainfall has been experienced during and after the season in which the application was made.

- B** If **ATRANEX® 90 WG** is applied to soils which expand on wetting, and crack or crumble on drying, such as turf soils, **ATRANEX® 90 WG** may remain active in the soil for longer than the above-mentioned waiting periods. Thus **ATRANEX® 90 WG** should not be applied if there is a possibility of planting Atrazine-sensitive crops in the foreseeable future. Weeds on these soils may also not be adequately controlled by a pre-emergence application of Atrazine.
- C** Do not apply **ATRANEX® 90 WG** to inbred parent lines of maize and grain sorghum cultivars as well as experimental or newly released cultivars without first consulting the manufacturer or seed supplier.
- D** Under cold and/or very wet conditions, **ATRANEX® 90 WG** can cause damage to grain sorghum.

## DIRECTIONS FOR USE

Use only as directed.

### Mixing

Half fill the spray tank with water. Mix the required amount of **ATRANEX® 90 WG** separately in water and then add to the spray tank. Top up with water. Keep the chemical in continuous suspension by means of agitation. After each day's spraying, flush tank out thoroughly with water.

## APPLICATION

### Ground application

**ATRANEX® 90 WG** can be applied by means of any suitable medium to high volume spray apparatus, provided that the apparatus has an effective mixing mechanism, is able to spray the spray mix evenly over the target area and is correctly calibrated. The use of a flat-fan nozzles is recommended.

**Pre-emergence:** To control the full **ATRANEX® 90 WG** weed spectrum, **ATRANEX® 90 WG** should be applied during or immediately after planting to a freshly cultivated weed-free seedbed that has an even, firm surface, is free of large clods and excessive plant rests. It is preferable that rain should follow within 7-10 days after application in order to leach the **ATRANEX® 90 WG** into the top layer of the soil where it can be absorbed by the roots of the germinating weeds. If, after application, dry weather conditions should prevail for a period of 7-10 days, weeds may germinate and develop. If this happens, a light cultivation should follow to control these weeds and to incorporate the **ATRANEX® 90 WG** into the top layer of the soil.

**Post-emergence:** When application is made post-emergence to the crop and weeds, broadleaf weeds should not be beyond the seedling stage (two-leaf stage) and grasses should not have emerged. Use 200-400 l of water per hectare for overall application and accordingly lesser volumes of water in the case of band treatment.

### Aerial application

Aerial application of **ATRANEX® 90 WG** may only be done by a registered Aerial Application Operator using a correctly calibrated, registered aircraft according to the instructions of SANS Code 10118 (Aerial Application of Agricultural Pesticides). Ensure that the spray mixture is distributed evenly over the target area and that the loss of spray material during application is restricted to a minimum. It is therefore essential that the following criteria be met:

- **Volume:** A spray mixture volume of 30 l per hectare is recommended. As this product has not been evaluated at a reduced volume rate, the registration holder cannot guarantee efficacy, or be held responsible for any adverse effects if this product is applied aerially at a lower volume rate than recommended.
- **Droplet coverage:** 30-40 droplets per cm<sup>2</sup> must be recovered at the target area.
- **Droplet size:** A droplet spectrum with a VMD of 350-450 microns is recommended. Limit the production of fine droplets less than 150 microns (high drift and evaporation potential) to a minimum.
- **Flying height:** Maintain the height of the spray boom at 3-4 m above the target. Do not spray when the aircraft dives, is in a climb or when banking
- Use suitable atomising equipment that will produce the desired droplet size and coverage, but which will ensure the minimum loss of product. The spraying system must produce a droplet spectrum with the lowest possible Relative Span.
- Position all the atomisers within the inner 60 to 75% of the wingspan to prevent droplets from entering the wingtip vortices.

- The difference in temperature between the wet and dry bulb thermometers of a whirling hygrometer, should not exceed 8°C.
- Stop spraying if the wind speed exceeds 15km/h.
- Stop spraying under turbulent, unstable and dry conditions during the heat of the day.
- Spraying under temperature inversion conditions (spraying in or above the inversion layer) and/or high humidity conditions (relative humidity 80% and above) may lead to the following problems:
  - a) reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage).
  - b) damage to other sensitive crops and/or non-target areas through drifting of the suspended spray cloud away from the target field.
- Ensure that the Aerial Spray Operator knows exactly which fields to spray.
- Obtain an assurance from the Aerial Spray Operator that the above requirements will be met and that relevant data will be compiled in a logbook and kept for future reference.

## APPLICATION RATES

### Maize (Pre-emergence and early post-emergence)

% CLAY	ATRANEX® 90 WG (kg/ha)	REMARKS
0–10	1.4 kg	These application rates are for overall application of the herbicide. In the case of band treatment, accordingly lower amounts should be applied.
11–20	1.8 kg	
21–30	2.2 kg	
31–40	2.6 kg	
41–55	2.8 kg	

### Grain sorghum

**Note:** Pre-emergence application is only recommended on soil which contain more than 35 % clay. Post-emergence application is only recommended on soils which contain more than 25 % clay and on sorghum which has at least five leaves at the time of application. Broadleaf weeds should not have developed beyond the seedling stage (two-leaf stage) and grasses and khaki weed should not have emerged.

% CLAY	ATRANEX® 90 WG (kg/ha)	REMARKS
0–25	-	Not recommended.
26–30	2.2 kg	Post-emergence only.
31–35	2.6 kg	Post-emergence only.
36–40	2.6 kg	Pre- and post-emergence.
41–55	2.8 kg	Pre- and post-emergence <b>Grasses already emerged at time of application will not be controlled.</b>

**Note:** Do not exceed the recommended dosage rates. Do not apply to areas likely to become waterlogged. Do not apply to soils with high leaching potential. Do not irrigate directly after application. Under cold conditions and/or where high rainfall is expected after application, **ATRANEX® 90 WG** may damage sorghum, irrespective of the soil type.

**Important for Maize and Grain sorghum:** Make sure that sufficient fertilizer is applied at the time of planting in a band close to the seed to promote the growth of the seedlings.

**Maize and Grain Sorghum** (Post-emergent application of **ATRANEX® 90 WG** plus 2,4-D Amine)

CROP	% CLAY	ATRANEX® 90 WG (kg/ha)	REMARKS
Maize	All	1.1 kg + 0.75 l 480 g/l 2,4-D Amine	Apply to actively growing broadleaf weeds which are not larger than 100 mm. When the crop exceeds 400 mm in height, a direct spray is recommended to ensure improved coverage of the weeds.
Grain Sorghum	More than 15	1.1 kg + 0.75 l 480 g/l 2,4-D Amine	Do not apply under cold, or cold and wet conditions as the crop may be adversely affected under such conditions.

**Maize and Sorghum** (Stale seedbed / Minimum tillage or Stubble mulching):

Where minimum tillage or stubble mulching is practiced, weeds may already have come up at the time of planting. If maize or grain sorghum are planted under such circumstances, or if they are planted into an old seedbed where grasses have already germinated and/or broadleaf weeds have developed past the four-leaf stage, it is recommended that Paraquat be added to the **ATRANEX® 90 WG** spray solution, at a dosage rate recommended by the manufacturer. The Paraquat will destroy the existing weeds and create a clean pre-emergence condition that will allow **ATRANEX® 90 WG** to work effectively.

**NOTE:**

1. When Paraquat is added, the application must take place before the crop emerges otherwise Paraquat will cause damage to the crop after emergence.
2. In case of minimum tillage or stubble mulching, the amount of stubble and humus at the soil surface may reduce the efficacy of **ATRANEX® 90 WG**. The representative of the manufacturer or distributor should be consulted.

**Sugarcane**

For the control of broadleaf weeds on light to medium soils, apply **ATRANEX® 90 WG** as a pre-emergence overall spray immediately after planting and before weed emergence. For best results, apply shortly before irrigation or before rain is expected. For control of annual grasses, a tank mix of **ATRANEX® 90 WG** with a registered grass herbicide, such as SULTAN 500 SC (Reg. No. L6892), is recommended. Consult the label of the specific grass herbicides for application rates.

SOIL TYPE	% CLAY	ATRANEX 90 WG (kg/ha)
Light to medium	0-35	1.1 kg



## Pineapples

% CLAY	ATRANEX® 90 WG (kg/ha)	REMARKS
0–20	2.1 kg + 2.3 kg Ametrex 80 WG	Early post-emergence treatments are recommended where a mixed spectrum of grasses and broadleaf weeds have occurred and also where later germinating weeds are a problem.
21–35	2.9 kg + 3.25 kg Ametrex 80 WG	
Above 35	Not recommended	

## Canola (Pre-emergence or post-emergence)

% CLAY	ATRANEX® 90 WG (kg/ha)	Remarks
All soil types	1.1 kg	<p>For the control of weeds in Triazine resistant Canola, <b>ATRANEX® 90 WG</b> can be applied either as a pre-emergence application directly after sowing or as a post-emergence application when the canola is in the true three to four leaf stage but before weeds have developed beyond the seedling stage.</p> <p>The control of <i>Lolium spp</i> will be erratic by a post-emergent application of <b>ATRANEX® 90 WG</b>.</p> <p><b>NOTE: Do not exceed the dosage of 1.1 kg ATRANEX® 90 WG per hectare.</b></p> <p><b>ONLY FOR USE ON TRIAZINE RESISTANT CANOLA CULTIVARS.</b></p>

## WAARSKUWINGS

**Onthoudingsperiodes** (minimum aantal dae tussen laaste toediening en oes):

**Kanola** ..... 60 dae

- Giftig indien ingesluk.
- Bêre in 'n koel, droë plek, weg van voedsel, voer, saad en ander landbouchemiese middels.
- Hou buite bereik van kinders, oningeligte persone en diere.
- **Lugtoediening:** Stel al die inwoners in die onmiddellike omgewing van die gebied wat bespuit gaan word in kennis en reik die nodige waarskuwings uit. Moet nie oor aangrensende gebiede of water spuit of die spuitnewel toelaat om dit te besoedel nie.
- **Herbetreding:** Moet nie behandelde gebied binne 1 dag na behandeling binnegaan nie tensy beskermende klere gedra word

**Alhoewel hierdie middel omvattend onder 'n groot verskeidenheid toestande getoets is, waarborg die registrasiehouer nie dat dit onder alle toestande doeltreffend sal wees nie aangesien die werking en effek daarvan beïnvloed kan word deur faktore soos abnormale grond-, klimaats- en bergingstoestande; kwaliteit van verdunningswater, verenigbaarheid met ander stowwe wat nie op die etiket aangedui is nie en die voorkoms van weerstand van die onkruid teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registrasiehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effek op mens of dier of vir 'n gebrek aan prestasie van die betrokke middel as gevolg van die versuim deur die gebruiker om etiketaanwysings na te kom of as gevolg van die ontstaan van toestande wat nie kragtens die registrasie voorsien kon word nie. Raadpleeg die verskaffer of registrasie houer in geval van enige onsekerheid.**

## VOORSORGMAATREËLS

- Voorkom inaseming van die dampe of spuitnewel.
- Dra geskikte beskermende oorklere en handskoene.
- Was met seep en water na gebruik.
- Voorkom oorwaai van spuitnewel na ander gewasse, weiding, riviere, damme of enige ander gebied wat nie onder behandeling is nie.
- Voorkom besoedeling van voedsel, drinkwater en eetgerei.
- Moenie spuit waar wortels van gewenste plante die middel kan opneem nie.
- Geen vermenging of volmaak van spuittenk moet plaasvind nader as 15m vanaf boorgate, spruite, riviere en damme nie.
- Geen toediening moet plaasvind nader as 60 m vanaf damme nie.
- Geen terugvloei na boorgate of damme moet plaasvind wanneer deur die besproeiingsstelsel toegedien word nie.
- Deeglik was en spoel die spuittoerusting skoon na toediening en gooi die waswater weg waar dit nie die gewasse, weiding, riviere en damme kan besoedel nie.

## WEERSTANDSWAARSKUWING

Vir weerstandbestuur, **ATRANEX® 90 WG** is 'n groepkode C1 onkruidodder. Enige populasie van 'n spesifieke onkruid kan individue insluit wat 'n natuurlike weerstand teen **ATRANEX® 90 WG** en enige ander groepkode C1 onkruidodder het. Indien hierdie onkruidodders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die onkruidpopulasie oorheers. Hierdie weerstandbiedende onkruid sal waarskynlik nie deur **ATRANEX® 90 WG** of enige ander groepkode C1 onkruidodder beheer word nie. Om weerstand teen onkruidodders te vertraag:

- Vermy die eksklusiewe herhaaldelike gebruik van onkruidodders met dieselfde groepkode. Wissel af met of gebruik tenkmengsels van produkte in verskillende onkruidodder groepkodes.
- Raadpleeg toepaslike individuele produketikette wanneer daar afgewissel word, of tenkmengsels gemaak word, met produkte in ander onkruidodder groepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing en biologies) in onkruidodder programme.

Vir spesifieke inligting oor weerstandbestuur kontak die registrasiehouer van hierdie produk.

## SOMMIGE ONKRUIDE WAT NORMAALWEG DEUR ATRANEX® 90 WG BEHEER WORD

### BREëBLAAR ONKRUIDE

<i>Acanthospermum australe</i>	Agtsadige kruipsterklits
<i>Acanthospermum glabratum</i>	Vyfsadige kruipsterklits
<i>Acanthospermum hispidum</i>	Regopsterklits
<i>Amaranthus hybridus</i>	Gewone misbredie
<i>Amaranthus spinosus</i>	Doring misbredie
<i>Amaranthus thunbergii</i>	Rooimisbredie
<i>Bidens bipinnata</i>	Spaanse knapsekêrel
<i>Bidens formosa</i>	Kosmos
<i>Bidens pilosa</i>	Gewone knapsekêrel
<i>Chenopodium album</i>	Withondebossie
<i>Chenopodium carinatum</i>	Groen hondebosse
<i>Cleome monophylla</i>	Rusperbossie
<i>Cleome rubella</i>	Mooinooientjie
<i>Commelina benghalensis</i>	Bengaalse wandelende jood
<i>Crotalaria sphaerocarpa</i>	Wildelusern
<i>Datura ferox</i>	Groot stinkblaar
<i>Datura stramonium</i>	Gewone stinkblaar
<i>Fumaria muralis</i>	Duiwekerwel
<i>Galinsoga parviflora</i>	Knopkruid
<i>Gisekia pharnaceoides</i>	Gisekia
<i>Hibiscus trionum</i>	Terblansbossie
<i>Hibiscus cannabinus</i>	Wildestokroos
<i>Nicandra physaloides</i>	Basterappelliefie
<i>Physalis angulata</i>	Wilde appelliefie
<i>Polygonum aviculare</i>	Voëlduisendknoop

<i>Portulaca oleracea</i>	Gewone poslein
<i>Richardia brasiliensis</i>	Meksikaanse richardia
<i>Schkuhria pinnata</i>	Klein kakiebos
<i>Tagetes minuta</i>	Lang kakiebos (beperkte laatseisoen beheer)
<i>Vigna vexillata</i>	Wilde akkerboontjie

## GRASSE

<i>Chloris virgata</i>	Witpluim chloris
<i>Eleusine coracana</i>	Jongosgras
<i>Lolium</i> spp.	Raaigras
<i>Panicum schinzii</i>	Vleibuffelsgras
<i>Setaria pallide-fusca</i>	Tuinsetaria
<i>Setaria verticillata</i>	Klitssetaria

**Indien droë weertoestande voortduur vir 'n tydperk van sewe tot veertien dae na toediening, mag die volgende onkruidsoorte nie na wense beheer word nie, veral op swaarder grond:**

*Bidens formosa*  
*Commelina benghalensis*  
*Datura* spp  
*Eleusine coracana*  
*Panicum schinzii*  
*Chloris virgata*  
*Tagetes minuta*

**Nota:** Weerstandbiedende rasse van hierdie onkruid mag dalk nie bevredigend beheer word nie.

**ATRANEX® 90 WG** gee wisselvallige beheer van die volgende onkruidsoort:

*Tribulus terrestris* Gewone dubbeljie

**Nota:** Hierdie produk beheer hoofsaaklik sekere grasse en verskeie eenjarige breëblaaronkruid. Ander eenjarige breëblaaronkruid wat nie tydens die ontwikkelingsproewe met die middel voorgekom het nie, kan egter ook moontlik in mindere of meerdere mate beheer word. Die registrasiehouer aanvaar egter geen aanspreeklikheid ten opsigte van die beheer van ongelyste onkruid nie.

Onder abnormale nat toestande mag die laatseisoen beheer van onkruid nie na wense wees nie. Om 'n breër spektrum van eenjarige grasse te beheer kan **ATRANEX® 90 WG** in 'n tenkmengsel of as 'n afsonderlike toediening in kombinasie met 'n geregistreerde grasdoder gebruik word. **ATRANEX® 90 WG** is mengbaar in 'n spuitmengsel met al die huidige geregistreerde grasdoders. Vir die toedieningshoeveelhede van onderskeie grasdoders, asook vir die betrokke **ATRANEX® 90 WG** toedieningshoeveelhede wanneer mengsels gespuit word, moet etikette van die produkte geraadpleeg word. Die gebruiksaanwysings op die betrokke etikette moet noukeurig gevolg word.

**Nota:** Waar **ATRANEX® 90 WG** in kombinasie met EPTC in mielies gebruik word, moet ten minste twee-derdes van die aanbevole toedieningshoeveelheid **ATRANEX® 90 WG** volgens grondtipe gebruik word.

**ATRANEX® 90 WG** is verenigbaar met geregistreerde benattingsmiddels, vooropkom grasdoders, SIMANEX® 90 WG, TYLLANEX® 80 WG, BROMOTRIL® P 500 SC, 2,4-D Amien®, MCPA®, en meeste insek- en swamdoders. Wanneer **ATRANEX® 90 WG** met enige van bo-staande produkte gemeng word, moet alle inligting op die betrokke etiket noukeurig geraadpleeg word en die gebruiksaanwysings gevolg word.

## GEBRUIKSBEPERKINGS

- A** Om skade aan opvolggewasse te voorkom, moet die volgende wagperiodes toegepas word wanneer **ATRANEX® 90 WG** toegedien word:
- a) **Mielies en suikerriet**.....Geen
  - b) **Graansorghum**.....12 maande
  - c) **Sonneblom, Kleingraan, Droë bone, Grondbone  
Sojabone, Voersorghum en Aartappels**.....18 maande
  - d) **Alle ander gewasse ('n toetsplanting word egter aanbeveel)**..... 24 maande
  - e) Waar die totale hoeveelheid **ATRANEX® 90 WG** per seisoen toegedien nie 1.1 kg/ha (ekwivalent aan 1.0 kg atrasiën aktief) oorskry nie, kan die wagperiodes soos genoem onder b en c verminder word na 9 maande, behalwe in die geval van sanderige grond in die Noordwes provinsie en Noord Wes Vrystaat waar die kleipersentasie 0-10% is.
  - f) Waar die totale hoeveelheid Atrasiën aktief 1,0 kg/ha oorskry, maar nie meer as die aanbevole dosis Atrasiën aktief volgens die grondtipe oorskry nie, volg gebruiksbepelings a-d.

**Nota:** Bogenoemde wagperiodes geld slegs indien die korrekte hoeveelheid **ATRANEX® 90 WG** volgens grondsoort toegedien was en normale of bogemiddelde reënval gedurende die seisoen waarin **ATRANEX® 90 WG** toegedien is en daarna voorgekom het.

- B** As **ATRANEX® 90 WG** toegedien is aan gronde wat uitsit by natwording en kraak of krummel tydens uitdroging, soos byvoorbeeld turfgronde, mag dit wees dat **ATRANEX® 90 WG** langer in die grond aktief bly as wat bogenoemde wagperiodes aandui. Gevolglik moet **ATRANEX® 90 WG** nie op sulke gronde toegedien word indien dit benodig word om Atrasiën gevoelige gewasse in die voorsienbare toekoms daarop te plant nie. Op hierdie gronde mag onkruid ook nie bevredigend deur 'n vooropkom-toediening van Atrasiën beheer word nie.
- C** Moenie **ATRANEX® 90 WG** toedien aan ingeteelde ouerplante van mielie- en graansorghumkultivars sowel as proef of nuut vrygestelde kultivars sonder om eers die vervaardiger of saadverskaffer te raadpleeg nie
- D** Onder koue en/of baie nat toestande kan **ATRANEX® 90 WG** graansorghum beskadig.

## GEBRUIKSAANWYSINGS

**Gebruik slegs soos aangedui.**

### Vermenging

Maak die spuittenk halfvol met water. Meng die benodigde hoeveelheid **ATRANEX® 90 WG** apart in water en gooi in die spuittenk. Vul die tenk verder met water. Hou die middel in die spuittenk

voortdurend in suspensie deur roering. Aan die einde van die dag moet die spuittenk deeglik met water uitgespoel word.

## TOEDIENING

### Grondtoediening

**ATRANEX® 90 WG** kan deur middel van enige geskikte medium of hoë volume spuitapparaat toegedien word, mits die apparaat toegerus is met 'n doeltreffende roermeganisme, in staat is om die spuitmengsel eweredig oor die teikenarea te versprei en korrek gekalibreer is. Die gebruik van platwaaierspuitpunte word aanbeveel.

**Vooropkom:** Om die volle **ATRANEX® 90 WG** onkruidspektrum te beheer moet **ATRANEX® 90 WG** toegedien word tydens of onmiddellik nadat in varsbewerkte grond geplant is op 'n onkruidvrye gelyke, ferm saadbed sonder oormatige kluite en plantreste. Dit is verkieslik dat reën binne 7-10 dae na toediening volg sodat **ATRANEX® 90 WG** in die bogrond ingewas kan word, waar dit deur die wortels van ontkiemende onkruid opgeneem kan word. Indien droë weerstoestande vir 'n periode van 7-10 dae na toediening voortduur, mag onkruid ontkiem en ontwikkel. Waar dit gebeur, word aanbeveel dat 'n ligte bewerking uitgevoer word om die onkruid te beheer en die onkruiddoder met die boonste grondlaag te vermeng.

**Na-opkom:** Waar toediening na opkom van die gewas en onkruid geskied, moet breëblaaronkruid nie groter as die saailingstadium (tweeblaarstadium) wees nie en grasse moet nog nie opgekom het nie. Vir algehele toediening gebruik 200-400 liter water per hektaar. Gebruik dienoooreenkomstig minder water in geval van strookbehandeling

### Lugtoediening

**ATRANEX® 90 WG** kan slegs deur 'n geregistreerde Lugbespuitingsoperateur met 'n korrek gekalibreerde, geregistreerde vliegtuig volgens die instruksies van SANS Kode 10118 (Aerial Application of Agricultural Pesticides) uit die lug bespuit word. Verseker dat die spuitmengsel eweredig oor die teikenarea versprei word, en die verlies aan spuitmengsel tydens toediening tot 'n minimum beperk word. Dit is daarom belangrik om aan die volgende vereistes te voldoen:

- **Volume:** 'n Spuitmengsel volume van 30 l per ha word aanbeveel. Aangesien hierdie produk nie teen 'n verlaagde volume getoets is nie, kan die registrasiehouer nie effektiwiteit waarborg, of verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk teen 'n laer volume as hierbo aanbeveel, toegedien word vanuit die lug nie.
- **Druppel bedekking:** 30-40 druppels per cm<sup>2</sup> moet op die teikenarea herwin word.
- **Druppelgrootte:** 'n Druppelspektrum met 'n VMD van 350–450 mikron word aanbeveel. Beperk die produksie van fyn druppels kleiner as 150 mikrons (hoëdrywing en verdampingspotensiaal) tot 'n minimum.
- **Vlieghoogte:** Handhaaf die hoogte van die spuitbalk bo die teiken op 3-4 m. Moet nie spuit wanneer die vliegtruig duik nie, uitklim of draai nie.
- Gebruik geskikte atomiseringsapparaat wat die vereiste druppelgrootte en bedekking sal produseer, maar die minste verlies van produk verseker. Die spuitstelsel moet 'n druppelspektrum met die kleinste moontlike Relatiewe Span produseer.
- Plaas al die atomiseerders in die binnste 60 tot 75 % van die vlerkspan om te verhoed dat druppels binne-in die vlerkpuntvorteks beweeg.
- Die verskil in temperatuur tussen die nat- en droëboltermometer van 'n swaaihigrometer, moet nie 8°C oorskry nie.
- Stop bespuiting indien die windspoed 15 km/uur oorskry.
- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag.

- Bespuiting onder temperatuur inversietoestande (deur bo of binne die inversielaag te spuit) en/of hoë lugvogtoestande (relatiewe humiditeit 80 % en meer) mag tot volgende probleme aanleiding gee:
  - a) verlaagde effektiwiteit aangesien as gevolg van die suspensie en verdamping van klie druppels in die lug (onvoldoende bedekking)
  - b) skade aan ander sensitiewe gewasse en/of nie-teikenareas as gevolg van wegdrywing van die spuitwolk vanaf die teikenarea.
- Verseker dat die Lugbespuitingsoperateur presies weet watter lande bespuit moet word.
- Dit is noodsaaklik om 'n versekering van die Lugbespuitingsoperateur te verkry dat aan al die bogenoemde vereistes voldoen sal word en dat data van belang in 'n logboek saamgevat is vir toekomstige verwysing.

## TOEDIENINGSHOEVEELHEDE

**Mielies** (Voor-opkom en vroeg na-opkom)

% KLEI	ATRANEX® 90 WG (kg/ha)	OPMERKINGS
0–10	1.4 kg	Hierdie toedieningshoeveelhede geld vir algehele toediening van die onkruiddoder. Vir strookbehandeling moet dien-ooreenkomstig minder van die onkruiddoder per hektaar toegedien word.
11–20	1.8 kg	
21–30	2.2 kg	
31–40	2.6 kg	
41–55	2.8 kg	

## Graansorghum

**Nota:** Vooropkomtoediening word slegs aanbeveel op gronde wat meer as 35 % klei bevat. Na opkomtoediening word slegs aanbeveel op gronde wat meer as 25 % klei bevat en op sorghum wat ten tye van toediening ten minste vyf of meer blare het. Breërblaaronkruid moet nie verder as die saailingstadium (2-blaar stadium) ontwikkel het nie en grasse en kakiebos moet nog nie opgekom het nie.

% KLEI	ATRANEX® 90 WG (kg/ha)	OPMERKINGS
0–25	-	Nie aanbeveel nie.
26–30	2.2 kg	Slegs na-opkom.
31–35	2.6 kg	Slegs na-opkom.
36–40	2.6 kg	Voor- en na-opkom.
41–55	2.8 kg	Voor- en na-opkom

**Grasse wat tydens toediening reeds op is, sal nie beheer word nie.**

**Nota:** Moenie die aanbevole toedieningshoeveelhede oorskry nie. Moenie toedien op areas wat moontlik kan versuip nie. Moenie op grond met 'n hoë logingspotensiaal gebruik nie. Moenie direk na toediening besproei nie. Onder koue toestande en/of waar hoë reënval verwag word na toediening, mag **ATRANEX® 90 WG** sorghum beskadig word, ongeag die grondsoort.

**Belangrik vir Mielies en Graansorghum:** Maak seker dat voldoende kunsmis tydens plant in 'n strook naby die saad geplaas word om die groei van saailinge te bevorder.

**Mielies en Graansorghum** (Na-opkom toediening van **ATRANEX® 90 WG** plus 2,4-D Amien)

GEWAS	% KLEI	ATRANEX® 90 WG (kg/ha)	OPMERKINGS
<b>Mielies</b>	Alle	1.1 kg + 0.75 l 480 g/l 2,4-D Amien	Dien toe op aktiefgroeiende breëblaar onkruid nie groter as 100mm. Indien die gewas hoër as 400 mm is, word gerigte bespuiting aanbeveel om sodoende beter benatting van die onkruid te verky.
<b>Graan Sorghum</b>	Meer as 15	1.1 kg + 0.75 l 480 g/l 2,4-D Amien	Moenie onder koue, of koue en nat toestande toedien nie, aangesien die gewas onder sulke toestande moontlik benadeel kan word.

**Mielies en Sorghum** (Ou saadbed / Minimum of stoppelbewerkings):

Waar minimum- of stoppelbewerking toegepas word, mag onkruid ten tye van plant alreeds opgekom het. Indien mielies of graansorghum onder sulke toestande, of in 'n ou saadbed geplant word, waar grasse alreeds opgekom het en die breëblaaronkruid reeds verder as die vier-blaar stadium ontwikkel het, word aanbeveel dat Paraquat by die **ATRANEX® 90 WG** gevoeg word teen 'n hoeveelheid soos aanbeveel deur die vervaardiger. Die Paraquat sal die bestaande onkruid vernietig en 'n skoon vooropkomtoestand skep wat **ATRANEX® 90 WG** sal toelaat om doeltreffend te werk.

**LET WEL:** Waar Paraquat bygevoeg word, moet toediening plaasvind voordat die gewas opgekom het, aangesien Paraquat die gewas na opkoms sal beskadig.

By minimum- of stoppelbewerkings kan die digtheid van die stoppels en humus by die grondoppervlak die werking van **ATRANEX® 90 WG** benadeel. Raadpleeg dus 'n verteenwoordiger van die verspreider of vervaardiger.

### Suikerriet

Vir die beheer van breëblaaronkruid op ligte tot medium gronde, dien **ATRANEX® 90 WG** as 'n algehele vooropkombespuiting toe onmiddellik na plant en voor opkoms van onkruid. Doen bespuiting onmiddellik voor besproeiing of net voordat reën verwag word om goeie resultate te verseker. Vir die beheer van eenjarige grasse word 'n tenkmengsel van **ATRANEX® 90 WG** met 'n geregistreerde grasdoder soos SULTAN® 500 SC (Reg. No. L6892) aanbeveel. Raadpleeg die etiket van die betrokke grasdoders vir toedieningshoeveelhede.

GRONDSOORT	% KLEI	ATRANEX® 90 WG (kg/ha)
Ligte tot medium	0-35	1.1 kg



## Pynappels

% KLEI	ATRANEX® 90 WG (kg/ha)	OPMERKINGS
0–20	2.1 kg + 2.3 kg Ametrex 80 WG	Vroeë na-opkom behandeling aanbeveel in gevalle waar 'n gemengde spektrum van grasse en breëblaar-onkruid voorkom en waar later ontkiemende onkruid 'n probleem is.
21–35	2.9 kg + 3.25 kg Ametrex 80 WG	
Bo 35	Nie aanbeveel	

## Kanola (Vooropkoms of na-opkoms)

% KLEI	ATRANEX® 90 WG (kg/ha)	OPMERKINGS
Alle grondsoorte	1.1 kg	<p>Vir die beheer van onkruid in Triasiën weerstandbiedende kanola kultivars kan <b>ATRANEX® 90 WG</b> vooropkoms direk na plant of as 'n na-opkoms bespuiting toegedien word. Tydens 'n na-opkoms toediening moet kanola in die drie-tot vierblaar stadium wees terwyl die onkruid nie verder as die saailingstadium moet wees nie. Die beheer van <i>Lolium spp</i> sal wisselvallig wees met 'n na-opkoms toediening van <b>ATRANEX® 90 WG</b>.</p> <p><b>NOTA:</b> Moet nie die toedieningshoeveelheid van 1.1 kg <b>ATRANEX® 90 WG</b> oorskry per hektaar nie.</p> <p><b>GEBRUIK ALLEENLIK OP TRIASIEN WEERSTANDBIEDENDE KANOLA KULTIVARS.</b></p>