BOBCAT COMBI 600 WG

Reg No L 8618 Act / Wet 36 of 1947

A water dispersible granule herbicide for the pre-and early post-emergence control of annyal grasses and broad leaf weeds in ratoon sugar cane	‘n Benatbare korrel onkruiddoder vir voor-of vroeg na-opkom beheer van eenjarige grasses en breëblaaronkuird in oorstaan suikerriet.

HRAC GROUP CODE HERBICIDE	**C 1 & C2**	**HRAC GROEPKODE ONKRUIDDODER**

ACTIVE INGREDIENTS/ AKTIEWE BESTANDDELE

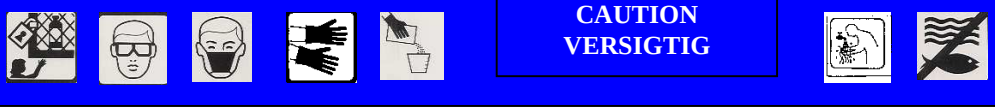
Hexazinone (triazine)	132 g / kg	Heksasinoon (triasinoon)
Diuron (urea)	468 g / kg	Diuron (ureum)

NET MASS / NETTO MASSA

…… kg

REGISTRATION HOLDER / REGISTRASIEHOUER
Adama SA (PTY) LTD
Reg no 1992/001741/07
21 Viben Street
BRACKENFELL
7561
Tel (021) 982 1460
Fax (021) 982 5810
infocpt@za.adama.com

Batch number	…….	Lotnommer
Date of Manufacture	…….	Datum van Vervaardiging



WARNINGS

- Harmful if swallowed.
- May be irritating to nose, eyes, throat and skin.
- Store in a cool, dry place away from food, feed and other agricultural remedies.
- Keep under lock and key, away from children, uninformed persons and animals.
- Avoid overlapping of spray swaths or double applications.
- DO NOT USE ON PLANT CANE.
- **Aerial application**: Notify all inhabitants in the immediate vicinity to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate water or adjacent areas or any other area that is not under treatment.

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 weeds to 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, 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 in the event of any uncertainty.

PRECAUTIONS

- Do not inhale spray mist.
- Do not eat, drink or smoke while handling this product.
- Wear a face shield and rubber gloves when handling the concentrate during the mixing process.
- If in accidental contact with skin, wash with soap and cold water.
- If in contact with eyes, flush out with copious amounts of clean running water
- If clothes are contaminated, take off and wash.
- Prevent contamination of food, feed, eating utensils and drinking water.
- Do not apply near desirable plants and avoid spray drift onto other crops, grazing, rivers, dams or any other area that is not under treatment.
- Avoid overlapping and over spraying when product is applied.
- Shake out the empty container thoroughly over the spray tank. Destroy the empty container and do not re-use for any other purpose.
- Clean out the applicator thoroughly after use and throw the wash water away where it cannot contaminate food, feed, drinking water, rivers, dams or any other area that is not under treatment.

RESISTANCE WARNING

For resistance management **BOBCAT COMBI 600 WG** is a Group code C1 and C2 herbicide. Any weed population may contain individuals naturally resistant to **BOBCAT COMBI 600 WG** and other C1 and C2 herbicides. The resistant individuals can eventually dominate the weed population if these herbicides are used exclusively and repeatedly in progams. These resistant weeds may not be controlled by **BOBCAT COMBI 600 WG** or any Group Code C1 and C2 herbicides.

To delay herbicide resistance the following can be done:

- Avoid exclusive repeated use of herbicides from the same group code. Alternate or tank mix with products from different group codes

- Integrate control methods (chemical, biological, cultural) into herbicide control programmes

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

USE RESTRICTIONS

- Use **BOBCAT COMBI 600 WG** only on ratoon cane and NOT on plant cane.
- Do not use in soils with less than 5 % clay.
- Do not use in water logged areas.
- Do not spray over sugarcane or allow excessive spray contact as crop injury may result.
- Do not use equipment or spraying methods which may cause the spray drift to come into contact with the growing part of the sugar cane.
- Do not plant any other crop except sugar cane within at least 12 months of a **BOBCAT COMBI 600 WG** application. Before planting any other crop, a deep and thorough ploughing should take place.

DIRECTIONS FOR USE

Use only as directed.

GENERAL

BOBCAT COMBI 600 WG is a residual soil herbicide for the control of annual grasses and broadleaf weeds as specified below. It should be applied just before or during weed germination for absorption by the leaves and roots of the seedlings. For optimal weed control, continuous rain or irrigation of at least 15 mm is necessary to leach the herbicide into the soil. The effects of **BOBCAT COMBI 600 WG** on existing weeds may only be noted several weeks after application.

Do not exceed the recommended label rates in sugar cane.

COMPATIBILITY

A suitable adjuvant, such as MCW EOS, may be used with **BOBCAT COMBI 600 WG** for early post-emergence applications.

Avoid using water for spraying that has a high conductivity, a high pH or that contains soil particles.

MIXING

Mix the required amount of **BOBCAT COMBI 600 WG** with a small amount of water to form a smooth cream. Half fill the spray tank with water and then add the creamed herbicide through a sieve, while agitating the contents continuously. Fill the tank the rest of the way with water.

APPLICATION

BOBCAT COMBI 600 WG should preferably be applied pre-emergence of weeds. Should it be applied post-emergence, broadleaf weeds should not be bigger than the 6 – 8 leaf stage and grasses should not be tillering.

BOBCAT COMBI 600 WG applied pre-emergence of ratoon sugar cane, can be applied overall, however, if applied post-emergence of sugar cane, it must be applied as a directed, interrow application avoiding spray over the top of the young ratoon crop.

Ground application:

Application of **BOBCAT COMBI 600 WG** can be done by means of any suitable applicator provided it is:-

- able to distribute the spray mixture evenly over the target area,
- the applicator is calibrated correctly
- and that the applicator is fitted with an efficient agitation system.

Mix in 200 ℓ water per ha. Continuous rain or irrigation of at least 15 mm is necessary to leach the herbicide into the soil.

Aerial application:

BOBCAT COMBI 600 WG may be applied aerially provided the ratoon cane has not germinated or the regrowth has not exceeded 10 cm in height.

Aerial application of **BOBCAT COMBI 600 WG** may only be done by a registered Aerial Spray 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 essential that the following criteria are met:

- Volume: A spray mixture volume of 30 litres 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 to 40 droplets per cm^2 must be recovered at the target area.
- Droplet size: A droplet spectrum with a VMD of 350 to 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 to 4 metres 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:
  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.

RECOMMENDATIONS FOR RATOON SUGAR CANE

CLAY %	APPLICATION RATE / HA	REMARKS
5 to > 35 %	3,0 kg / ha	Apply pre-emergence to early post-emergence in ratoon sugar cane as an early or midsection treatment. Please revert to the section under the use restrictions. DO NOT APPLY TO PLANT CANE.

WEED SPECTRUM

The following weeds are normally controlled by **BOBCAT COMBI 600 WG**:

BOTANICAL NAME	COMMON NAME
Grasses	
Brachiaria eruciformis	sweet signal grass
Digitaria sanguinalis	crab finger grass
Eleusine coracana	goose grass
Panicum schinzii	sweet buffalo grass
**Panicum maximum*	common buffalo grass
Setaria verticillata	stickey bristle grass
Setaria pallide-fusca	red bristle grass
Tragus berteronianus	small carrot seed grass
Broadleaf weeds	
Acanthospermum australe	prostrate starbur
Ageratum conyzoides	invading Ageratum
Argemone mexicana	yellow flowered Mexican poppy
Bidens pilosa	common blackjack
Chenopodium murale	nettle leaved goosefoot
Commelina benghalensis	wandering Jew
Convolvulus arvensis	field bindweed
Cosmos bipinnatus	cosmos
Datura stramonium	thorn apple
Emex australis	spiny Emex
Galingsoga parviflora	gallant soldier
Hibiscus trionum	bladder weed
Portulaca oleracea	purslane
Richardia brasiliensis	Mexican Richardia
Sida rhombifolia	arrow-leaf Sida
Sigesbeckia orentalis	St Paul's wort
Solanum retroflexum	deadly nightshade

Sedges

Cyperus distans	slender Cyperus
** *Cyperus esculentus*	yellow nutsedge
Fimbristylis hispidula	slender sedge
Fimbristylis dichotoma	-

* *Panicum maximum* – established plants in tillering stage will not be controlled
** *Cyperus esculentus* – post-emergence only

WAARSKUWINGS

- Skadelik indien ingesluk.
- Mag irriterend vir neus, oë en vel wees.
- Berg in ‘n koel, droë plek weg van voedsel, voer en ander landbouchemiese produkte.
- Hou onder slot en grendel buite bereik van kinders, oningeligte persone en diere.
- Vermy oorvleueling van spuitbane of dubbeltoedienings.
- MOET NIE OP PLANTRIET GEBRUIK NIE.
- **Lugtoediening:** Stel alle inwoners in die onmiddellike omgewing waar die bespuiting gaan plaasvind in kennis en reik die nodige waarskuwings uit. Moet nie oor of toelaat dat spuitnewel dryf om water of aanliggende gebiede of enige ander gebied wat nie onder behandeling is, te besoedel nie.

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 onkruide teen die betrokke middel sowel as die metode, tyd en akkuraatheid van toediening. Verder aanvaar die registraisehouer nie verantwoordelikheid vir skade aan gewasse, plantegroei, die omgewing of vir nadelige effek op mens en 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 in geval van enige onsekerheid.

VOORSORGMAATREëLS

- Moet nie die spuitmis inasem nie.
- Moet nie eet, drink of rook terwyl hierdie produk hanteer word nie.
- Dra gesigskerm en rubber handskoene wanneer die produk hanteer word tydens die vermengingsproses.
- As vel per ongeluk besoedel word was met koue water en seep.
- Indien dit per ongeluk in die oë kom, spoel met groot hoeveelhede koue water uit.
- Indien klere besoedel word, trek dit uit en was dit.
- Verhoed besoedeling van voedsel, voer, eetgerei en drinkwater.
- Moet nie in die omgewing van gewenste plante toedien nie en vermy die wegdryf van spuitstof na ander gewasse, weidings, riveiere, damme of enige ander gebied wat nie onder behandeling is nie.
- Vermy oorvleueling van spuitbane tydens toediening.
- Skud die leë houer deeglik uit oor die mengtenk. Vernietig die leë houer en moet dit vir geen ander doel gebruik nie.
- Maak die toediener deeglik skoon na gebruik en gooi die waswater waar dit nie voedsel, voer, drinkwater, riviere, damme of enige ander gebied wat nie onder behandeling is, kan besoedel nie.

WEERSTANDSWAARSKUWING

Vir weerstandsbestuur word **BOBCAT COMBI 600 WG** as ‘n Groepkode C1 en C2 onkruiddoder geklassifiseer. Enige populasie van ‘n spesifieke onkruid populasie kan individue insluit wat ‘n natuurlike weerstand teen **BOBCAT COMBI 600 WG** of enige ander groepkode C1 en C2 onkruiddoder het. Indien hierdie onkruiddoders herhaaldelik aangewend word, kan die weerstandbiedende individue uiteindelik die onkruidpopulasie oorheers. Hierdie weerstandbiedende swamme sal waarskynklik nie deur **BOBCAT COMBI 600 WG** of enige ander groepkode C1 en C2 onkruiddoder beheer word nie.

Om weerstand teen onkruiddoders te vertraag:

- Vermy die eksklusiewe herhaaldelike gebruik van onkruiddoders met dieselfde groepkode. Wissel af met of gebruik tenkmengsels van produkte in verskillende onkruiddoder groepkodes.
- Integreer ander beheermaatreëls (chemies, verbouing en biologies) in onkruiddoder programme.

Vir spesifieke inligting oor weerstandsbestuur kontak die registrasiehouer van hierdie produk

GEBRUIKSBEPERKINGS

- **BOBCAT COMBI 600 WG** mag alleenlik op oorstaan suikerriet en glad NIE op plantriet gebruik word nie.
- Moet nie op gronde met minder as 5 % klei gebruik nie.
- Moet nie op gebiede toedien wat aan versuiptoestande onderhewig is nie.
- Moet nie bo-oor suikerriet spuit of toelaat dat oormatige kontak met spuitoplossing plaasvind nie, aangesien beskadiging mag voorkom.
- Moet nie spuitapparaat of spuitmetodes gebruik wat mag veroorsaak dat die groeipunte raakgespuit kan word nie.
- Moet nie enige ander gewas, behalwe suikerriet, plant binne 12 maande nadat **BOBCAT COMBI 600 WG** toegedien is nie. ‘n Deeglike diep ploegbewerking moet uitgevoer word voordat enige ander gewas geplant word.

GEBRUIKSAANWYSINGS

Gebruik slegs soos aangedui.

ALGEMEEN

BOBCAT COMBI 600 WG is ‘n onkruiddodder met ‘n nawerking in die grond en beheer sommige eenjarige grasse en breëblare soos hieronder aangedui. Dit moet verkieslik toegedien word voor- of tydens ontkieming van onkruide. Dit word geabsorbeer deur die blare en wortels van saailinge. Vir optimale onkruidbeheer moet aanhoudende reën of besproeiing van minstens 15 mm plaasvind om die onkruiddoder in die grond in te loog. Die effek van **BOBCAT COMBI 600 WG** op bestaande onkruide, sal eers verskeie weke na toediening waargeneem word.

Die voorgeskrewe toedieningshoeveelheid moet onder geen omstandighede oorskry word nie.

VERENIGBAARHEID

‘n Geskikte bevorderingsmiddel, soos MCW EOS, kan by **BOBCAT COMBI 600 WG** gevoeg word vir vroeë na-opkom toedienings. Vermy die gebruik van water met ‘n hoë opgeloste sout konsentrasie of water met ‘n hoë pH of water met gronddeeltjies.

VERMENGING

Vermeng die verlangde hoeveelheid **BOBCAT COMBI 600 WG** met ‘n klein bietjie water om ‘n gladde room te vorm. Vul die spuittenk half met water en voeg die verroomde **BOBCAT COMBI 600 WG** deur ‘n sif by terwyl die inhoud van die spuittenk geroer word. Vul die spuittenk terwyl gedurigdeur geroer word.

TOEDIENING

BOBCAT COMBI 600 WG moet verkieslik vooropkom van onkruide toegedien word. Sou dit toegedien word, moet breëblaaronkruide nie die 6 – 8 blaarstadium oorskry nie, terwyl grasse nie moet begin stoel nie.

Indien **BOBCAT COMBI 600 WG** vooropkom van oorstaan suikerriet toegedien word, kan dit algeheel toegedien word. As dit egter na-opkom van die orstaan suikerriet toegedien word, moet dit as 'n gerigte tussenry bespuiting gedoen word sodat toediening bo-oor die ry van die jong plante vermy kan word.

Grondtoediening:

Toediening van **BOBCAT COMBI 600 WG** kan deur middel van enige geskikte spuitapparaat gedoen word mits:-

- dit in staat is om die spuitmengsel eweredig oor die teiken te versprei,
- die toediener korrek gekalibreer is
- en oor 'n doeltreffende roermeganisme beskik.

Gebruik in minstens 200 ℓ water per ha. Aanhoudende reën of besproeiing van ten minste 15 mm is nodig om die onkruiddoder in die grond te loog.

Lugtoediening:

BOBCAT COMBI 600 WG kan deur middel van lugtoediening toegedien word, mits dit vooropkom of vroeg na-opkom van oorstaan suikerriet geskied indien die hergroei nie hoër as 10 cm is nie.

Lugtoediening van **BOBCAT COMBI 600 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 Minimum spuitmengsel volume van 30 liter per ha word aanvebeel. Hierdie produk is nie teen 'n verlaagde volume getoets nie. Die registrasiehouer kan nie effektiteit waarborg, of verantwoordelik gehou word vir enige nadelige effekte indien hierdie produk teen 'n laer volume, as hierbo aanbeveel, toegedien word nie.
- Druppel bedekking: 30 tot 40 druppels per cm^2 moet op die teikenarea herwin word.
- Druppelgrootte: 'n Druppelspektrum met 'n VMD van 350 – 450 mikron word aanbeveel. Beperk die produksie van druppels kleiner as 150 mikrons (hoëdrywing en verdampingspotensiaal) tot 'n minimum.
- Vlieghoogte: Handhaaf die hoogte van die spuitbalk bo die teiken op 3 tot 4 meter. 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 8ºC oorskry nie.
- Stop bespuiting indien die windspoed 15km/uur oorskry.
- Stop bespuiting tydens turbulente, onstabiele en droë toestande gedurende die hitte van die dag.
- Bespuiting onder temperatuur inversie toestands (deur bo of binne die inversie laag te spuit) en/of hoë lugvog toestande (relatiewe humiditeit 80% en meer) mag tot volgende

probleme aanleiding gee:

a) verlaagde effektiwiteit aangesien die druppels as ’n wolk in die lug bly hang en moontlik verdamp (onvoldoende bedekking op teiken)
b) skade aan nie-teiken gewasse of sensitiewe areas as gevolg van wegdrywing van die spuitwolk na nie-teiken area.

- 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.

AANBEVELING VIR OORSTAANSUIKERRIET

KLEI %	TOEDIENINGS HOEVEELHEID / ha	OPMERKINGS
5 to > 35 %	3,0 kg / ha	Dien vooropkom tot vroeg na-opkom in oorstaansuikerriet as ’n vroeë of middelseisoen bespuiting toe. Verwys assbelief na die afdeling onder gebruiksbeperkings. MOET NIE OP PLANTRIET TOEDIEN NIE.

ONKRUIDSPEKTRUM

Die volgende onkruide word normaalweg deur **BOBCAT COMBI 600 WG** beheer:

BOTANIESE NAAM	ALGEMENE NAAM
Grasse	
Brachiaria eruciformis	litjiesinjaalgras
Digitaria sanguinalis	kruisvingergras
Eleusine coracana	jongosgras
Panicum schinzii	soetgras
**Panicum maximum*	gewone buffelsgras
Setaria verticillata	klitsborselgras
Setaria pallide-fusca	rooiborselgras
Tragus berteronianus	kleinwortelsaadgras
Breëblaaronkruide	
Acanthospermum australe	kruipsterklits
Ageratum conyzoides	bokkruid
Argemone mexicana	geelblombloudissel
Bidens pilosa	gewone knapsekêrel
Chenopodium murale	muurhondebossie
Commelina benghalensis	Bengaalse wandelende Jood
Concolculus arvensis	akkerwinde
Cosmos bipinnatus	kosmos
Datura stramonium	olieboom
Emex australis	Kaapse dubbeltjie
Galingsoga parviflora	knopkruid
Hibiscus trionum	Terblansbossie
Nicandra physaloides	baster appelliefie
Portulaca oleracea	porslein

Richardia brasiliensis	Meksikaanse richardia
Sida rhombifolia	taaiman
Sigesbeckia orientalis	Pauluskruid
Solanum retroflexum	nastergal

Uintjies

Cyperus distans	Skraal Cyperus
** *Cyperus esculentus*	geeluintjie
Fimbristylis hispidula	fynbiesie
Fimbristylis dichotoma	biesie

* *Panicum maximum* – gevestigde plante in die stoelstadium sal nie beheer word nie
** *Cyperus esculentus* – net na-opkom