

Agri
NOVAGENIX
SETRA

Reg. No. / Nr L11981 Act No. 36 of 1947 / Wet Nr 36 van 1947

READ THE LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

GROUP

2

HERBICIDE

A water soluble herbicide for the control of weeds in the crops as listed.

'n Wateroplosbare onkruidodder vir die Beheer van onkruid in die gewasse soos aangedui.

WARNING



In case of poisoning, call the following numbers:

Poisons Information Helpline: +27 861 555 777

EMERGENCY NUMBER: +27 82 446 8946

Hazard statements

Very toxic to aquatic life.
Causes serious eye irritation.

Precautionary statements

IF IN EYES: Rinse cautiously with water for several minutes.
If eye irritation persists: Get medical help.
Avoid release to the environment.

Active Ingredient / Aktiewe Bestanddeel

Imazethapyr contains 240 g a.i. per l.....Imasetapir
(imidazolinone) (imidasolinoon)

Net volume l Netto volume

Batch No./Date manufactured/Expiry date: Refer to details printed on container.

UN No. / VN Nr. 3082

REGISTRATION HOLDER / REGISTRASIEHOUER:

Novagen Innovations (Pty) Ltd / (Edms) Bpk t/a Agri Novagenix
Reg. No. 2020/891524/07
6 Antwerp Street, Apex, Benoni, 1540, South Africa / Suid-Afrika



WARNINGS

- GHS Hazard statements

Very toxic to aquatic life. Causes serious eye irritation.

Allow the following number of days between the last treatment and harvest or use as food or feed:

All crops 85 days

IMPORTANT: The recommended withholding period between the last application and harvest meets local residue requirements but may not meet export requirements. However, it is important to note that import tolerances of other countries might potentially be exceeded. If the treated crop will be exported, first consult the relevant importer or exporting body regarding the use of this product, MRL's and recommended withholding periods.

- Do not contaminate dams, rivers, lakes, or any other water sources.
- Store under lock and key in the original container in a cool, dry, well-ventilated place out of direct sunlight.
- Store away from food, feed, fertilizer, and seed.
- Keep out of reach of children, uninformed persons, and animals.
- **Re-entry:** Do not enter a treated field within 1 day following treatment unless wearing protective clothing.
- **Aerial application:** Notify all inhabitants in the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow spray drift to contaminate adjacent areas such as crops, rivers, dams and wetlands.
- **SETRA** has been tested on some of the most important commercial cultivars without any phytotoxic effects. More susceptible cultivars may be released in the future which will need to be tested. For this, apply **SETRA** to a limited test area before any commercial applications are made.
- **In case of poisoning immediately call a physician and make this label available to him/her.**

DISCLAIMER

Although this remedy has been 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 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, the environment, or harm to man, or animal, or for lack of performance of the remedy concerned, due 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

- GHS Precautionary statements

If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read carefully and follow all instructions. Wash hands thoroughly after handling. Do not touch eyes. Avoid release to the environment.

Wear protective gloves/protective clothing/eye protection/face protection.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
 If eye irritation persists: Get medical help.
 Collect spillage.
 Dispose of contents/container in accordance with national regulations.

- **OPERATOR PROTECTION**

- Handle with care.
- Do not inhale spray mist or fumes.
- Wash with soap and water after use and accidental skin contact as well as contact with contaminated clothing.
- Should eye contact occur, flush the eyes with plenty of clean water for 15 minutes holding eyelids open. Remove contact lenses after five minutes of irrigation. Seek medical attention if irritation persists.
- Avoid skin and eye contact by wearing protective clothing when handling the product.
- Do not eat, drink, or smoke while mixing or applying the product or before washing hands and face.

- **ENVIRONMENTAL PROTECTION**

- Do not contaminate dams, rivers, lakes, or any other water sources.
- Avoid drift of spray onto other crops, grazing, rivers, dams, and areas not under treatment.
- Clean the applicator with clean water directly after use. Dispose of the rinsate where it will not contaminate crops, grazing, rivers, dams, and boreholes.

- **STORAGE AND DISPOSAL**

- Store under lock and key in the original container in a cool, dry, well-ventilated place out of direct sunlight.
- Store away from food, feed, fertilizer, and seed.
- **KEEP OUT OF SIGHT AND REACH OF CHILDREN**, uninformed persons, untrained personnel, unauthorised personnel and animals.
- Do not allow access to this product by children, uninformed persons, untrained personnel, unauthorised personnel, or animals under any circumstances.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Containers and packages must be completely emptied before disposal.
- **TRIPLE RINSE THE EMPTY CONTAINER AS FOLLOWS:** Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter, rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate into the spray or mixing tank. Destroy the triple rinsed container by perforation and flattening and do not use for any other purpose. Store appropriately until it can be disposed of via an approved collector or recycler authorised to recycle or destroy waste in terms of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) and the relevant waste management regulations. Empty containers and product should not be burnt. Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages.

RELEVANT SUBSTANCES

Hazardous ingredient	Concentration (w/v)
Imazethapyr-ammonium	> 25%

FIRST AID TREATMENT

If medical advice is needed, have product container or label at hand. Provide medical personnel with the product container, label or safety data sheet (SDS) when seeking medical attention.

General Information: Remove patient from exposed area. Never give fluids or induce vomiting if the patient is unconscious or is having convulsions.

Inhalation: Remove victim to fresh air. Keep patient calm. Monitor for respiratory distress. If breathing is irregular or stopped, apply artificial respiration and oxygen. If mouth to mouth resuscitation is given use rescuer protection (pocket mask etc.). Keep the patient warm and at rest. **Seek medical attention.**

Skin contact: Immediately remove contaminated clothing and flush body and clothes with large amounts of water. Wash thoroughly with soap and water (including hair, skin, and fingernails) Wash contaminated clothing before re-use. Seek medical assistance if irritation persists. Persons providing first aid must wear gloves to avoid self-contamination.

Eye contact: Flush eyes immediately with plenty of clean, room temperature water for at least 15 minutes holding eyelids open. Remove contact lenses if present, after the first 5 minutes, then continue rinsing eyes. Seek medical attention if pain or redness persists.

Ingestion: Wash out the patient's mouth if the patient is alert and able. Do **NOT** induce vomiting. If the patient is alert and respiration is not depressed, administer large quantities of water. Seek medical attention if required.

No specific antidote known. Treat symptomatically and supportively. In cases of ingestion of large amounts, gastric lavage may be indicated. For further information on the treatment of poisoning refer to the product Safety Data Sheet provided.

RESISTANCE MANAGEMENT WARNING STATEMENT

For resistance management, **SETRA** is a group code 2 herbicide. Any weed population may contain individuals naturally resistant to **SETRA** and other group code 2 herbicides. These resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds may not be controlled by **SETRA** or any other group code 2 herbicide.

To delay herbicide resistance:

- Avoid the exclusive repeated use of herbicides from the same herbicide group code. Alternate, or tank mix, with registered products from different herbicide group codes. Large numbers of healthy surviving weeds can be an indication that resistance is developing. Efforts should be taken to prevent seed set of these survivors.
- Integrate other control methods (such as chemical, cultural, biological) into weed control programmes.
- Refer to the Herbicide Resistance Action Committee for information regarding any applicable resistance management of group 2 herbicides at <https://hracglobal.com/> for more information.
- Avoid distribution of the resistant species to adjacent fields by implements during the cultivation period.

As the occurrence of resistance cannot be forecast, users are advised to keep all treated crops under close observation. If the treatment is not effective following the use of **SETRA** as recommended, a resistant strain may be present. If a resistant strain is positively identified, consideration should be given

to the prompt use of a herbicide with a different mode of action against which no record of resistance exists.

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

The presence of resistant weeds is difficult to detect prior to use and therefore neither the Registration Holder nor the Distributor can accept responsibility for any losses as a result of **SETRA** not controlling resistant weeds. Do not apply **SETRA** alone in situations where weed resistance has been confirmed. Sub-standard application of **SETRA** or other group code 2 herbicides will lead to inferior weed control and may assist in development of herbicide resistance.

MODE OF ACTION

Imazethapyr is a systemic herbicide with contact and residual activity. It acts via the inhibition of the enzyme acetolactate synthase (ALS), a key enzyme catalysing branched chain amino acid biosynthesis in target plants. Imazethapyr is taken up through the foliage and/or roots of the target weed species and then is rapidly translocated to the growing points.

DIRECTIONS FOR USE - Use only as directed.

NOTICE TO USER: This agricultural remedy is to be used only in accordance with the instructions on the label. It is an offence under Act No. 36 of 1947 to use this agricultural remedy for any purpose or in any manner contrary to the directions on the label.

WAITING PERIOD FOR FOLLOW-UP CROPS:

The following waiting periods must be observed with respect to follow-up crops:

Crops	Re-cropping interval: Months
Drybeans, Soybeans, Groundnuts	0
Wheat	6
Any legume other than dry beans, soybeans, and groundnuts	10
Maize (excluding popcorn and sweetcorn)	20*
All other crops (including popcorn and sweetcorn)	24

*Depending on the following factors:

- Soil type
- Rainfall / irrigation
- Application rate
- Maize variety (See “**SELECTION OF MAIZE HYBRIDS**” below).
- Contact the supplier for further information.

The land must always be ploughed before planting a follow-on crop. A test planting is required in all cases.

The waiting period indicated above should be strictly adhered to in order to avoid the possibility of damage to follow-on crops.

The above-mentioned waiting periods are valid only if:

- The correct dosage of **SETRA** alone, or in combination with complementary herbicide/s (according to the soil) was applied.

- A minimum of 350 mm of rainfall and/or irrigation occurs and, occurs specifically following the application of **SETRA** and prior to planting of the follow-on crop.

These waiting periods will increase by an extra 12 months to a minimum of 20 months if the higher rate of 190 – 210 ml / ha has been used to control *Tribulus terrestris*.

When **SETRA** is used in a tank mixture with another herbicide, the waiting period of that product with respect to follow-up crops, if longer than what is listed above, must be adhered to.

SELECTION OF MAIZE HYBRIDS:

a) 10 Month Waiting Period:

In which the higher rate of 190 – 210 ml / ha **SETRA** was applied in the previous season for *Tribulus terrestris* control:

PHB 30H22
PHB 3394
PHB 35A19
CRN 3549

This group of Maize hybrids is semi-tolerant to Imidazolinone herbicides, and can be planted in areas where the average seasonal rainfall, or more than the average seasonal rainfall, is experienced in the previous season. Do not plant, however, if less than the average rainfall was experienced in the previous season, especially < 350 ,mm of rainfall.

b) 10 Month Waiting Period:

In which the standard registered rate of **SETRA** was applied in the previous season.

CRN 3414	PHB 30D05
CRN 3505	PHB 30T43
CRN 3604	PHB 3203
CRN 3631	PHB 32K39
CRN 3760	PHB 32K61
CRN 3891	SC 707
CRN 4502	SNK 2147
Goldfinger	SNK 2401
Highflyer	SNK 2640
LS 8503	SNK 2776
PAN 6146	SNK 2860
PAN 6233	Woodriver
PAN 6364	

This second group of semi-tolerant maize hybrids may be planted only where seasonal average rainfall or higher than seasonal average rainfall was experienced in the previous season. If less than the average rainfall was experienced in the previous season, use only the maize hybrids listed in point (a) above.

c) 20 Month Waiting Period:

A minimum waiting period of 20 months is recommended in the production areas of the western Free

State, the western North-West Province and the northern Northern-Cape Province for all maize hybrids not listed above. A test planting should still be carried out, however, if there is any doubt, choose a yellow maize hybrid over a white hybrid.

COMPATIBILITY

The compatibility of **SETRA** with other products depends on the formulations of the respective products as well as the quality of the spray water to be used. As formulations change from time to time it is recommended that a physical compatibility test be done prior to the tank mixture being made.

SETRA is not compatible with post-emergence grass control herbicides due to the different modes of action.

ALL WARNINGS, PRECAUTIONS, USE RESTRICTIONS and DIRECTIONS FOR USE on the product labels must be fully adhered to. Consult the relevant labels for full details.

SETRA should not be mixed with products other than those specifically listed in this label.

USE RESTRICTIONS

- Only apply **SETRA** to Helderberg, Kamberg, Kranskop, PAN 148, Sabie, and Teebus dry bean cultivars.
- Do not use **SETRA** on acidic soils with a pH below 5 (KCl).
- Do not apply more than 300 ml / ha **SETRA** on a particular field per season.
- Do not apply **SETRA** to any crop or situation not mentioned in this instruction leaflet.
- Only apply **SETRA** using an accurate and safe application technique.
- If **SETRA** is used in a tank mix with other recommended remedies, consideration should be given to the restrictions of those respective products.
- Do not apply this product in combination or tank mixture with any other product or agricultural remedy which is not specifically listed on this label. Novagen Innovations (Pty) Ltd t/a Agri Novagenix accepts no responsibility for any negative effects experienced if the instructions on this label are not adhered to, unless an Agri Novagenix representative was consulted beforehand.
- By buying this product, the buyer undertakes that the user is fully aware of and suitably trained on the hazards associated with the preparation and use of this product. By selecting this product voluntarily, the user assumes responsibility for his or her own personal protection whilst storing, mixing, and applying the product in the approved manner according to the instructions for use. The user also confirms to have consulted the SDS of this product and he/she is aware of the potential health hazards which could arise out of use and misuse of this product. Users are encouraged to keep records of all procedures followed and which personal protection equipment was used at all times. All personal protection equipment used must be kept clean and in good working order according to the manufacturer's specifications. Novagen Innovations (Pty) Ltd accepts no responsibility for any adverse effects experienced if the instructions on this label are not adhered to or resulting from improper use of this product or the use of unsuitable personal protection equipment. The user has selected to use this product at his/her own free will and risk.

MIXING INSTRUCTIONS

Half-fill the spray tank with suitable water. Make a premix by carefully measuring out the required amount of **SETRA** and mixing it with a minimum of 10 l of water. Add the premix to the tank while agitating continuously. Rinse the container used for pre-mixing and add the rinsate to the spray tank. Fill the spray tank to the required volume with suitable water while maintaining agitation. If **SETRA** is mixed with another product, the label instructions should be followed and the product should be pre-mixed in a similar fashion prior to being added to the spray tank. Do not use brackish water. Should

tank mixtures with other products be made, follow the respective manufacturer's label recommendations. **Ensure thorough agitation of the mixture in the tank during mixing and application. Tank mixtures must be sprayed out immediately and not allowed to stand in the spray tank overnight.** Spraying equipment must be thoroughly flushed out at the end of the spraying operation. If the spray water pH is > 8, it is recommended that a suitably registered buffering agent is used. Ensure that spray premixes and/or final spray mixtures are kept out of reach of children, uninformed persons, untrained personnel, unauthorised personnel and animals.

APPLICATION METHODS

GENERAL

- Ideally, 10 mm of rain should fall within seven (7) days of application, the weeds may not come into contact with the **SETRA** or absorb it. In these cases, carry out a shallow cultivation / surface blend (3 – 5 cm) to control the weeds and also to incorporate the **SETRA** into the top layer of the soil.
- If heavy rain falls on sandy soils within a few days of application, poor weed control may result due to the movement of the **SETRA** out of the relevant area altogether.
- Following a pre-emergence application of **SETRA**, weeds still germinate but soon succumb and stop growing.
- A shallow surface blend or inter-row cultivation (<5 cm deep) may be carried out for increased weed control, especially of *Tagetes minuta*. Ensure that it is carried out at least once before the crop canopies, and that it is not too deep as this could reduce the level of weed control and a further cultivations would then be required.
- Ensure that the soil nutritional status is at its optimum, especially the phosphate levels which should be a minimum of 20 – 25 ppm.

GROUND APPLICATION

SETRA may be applied with any suitable medium to high volume applicator, provided that it is fitted with an efficient agitation system, is able to apply the spray mixture evenly over the target area and is calibrated correctly. Ensure thorough coverage of the target area by applying no less than 200 l of spray mixture per ha.

AERIAL APPLICATION

Notify all inhabitants of the immediate area to be sprayed and issue the necessary warnings. Do not spray over or allow drift to contaminate adjacent areas or water. Please refer to the SANS Code of Practice for the aerial application of agricultural chemicals.

Aerial application of **SETRA** may only be performed 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 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 above.
- Droplet coverage: The following number of droplets per cm² must be recovered at the target area: 20 to 30.

- **Droplet size:** The following droplet spectra are recommended: VMD of 350 to 400 microns. 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 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 15 kilometres per hour.
- 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:
 - reduced efficacy due to suspension and evaporation of small droplets in the air (inadequate coverage),
 - 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

CROP/SITUATION	Clay %	DOSAGE	REMARKS
Dry beans <i>Phaseolus vulgaris</i> and <i>P. coccineus</i> Single pre-emergence application	0 - 15	125 ml / ha	Apply SETRA pre-emergence (to crop and weeds) onto a well-prepared seedbed that is fine, even and firm and without excessive plant rests.
	16 – 25	170 ml / ha	Ground application: Apply by means of a suitable medium or high volume applicator in at least 200 l of water / ha at planting or within 3 days of planting.
	26 – 30	210 ml / ha	Aerial application: Apply as for Ground application above in at least 35 l water / ha.
Groundnuts Single pre-emergence application	0 – 15	125 ml	SETRA may be applied as a single pre-emergence treatment. A follow-up treatment is not recommended. In areas where <i>Tribulus terrestris</i> is a problem, a pre-emergence application of 190 – 210 ml must be used. Please note that this

	16 – 25	170 ml	higher dosage in lighter soils may result in carry-over to the following season. Apply onto a well-prepared seedbed that is fine, even and firm and without excessive plant rests. Ground application: Apply by means of a suitable medium or high volume applicator in at least 200 l of water / ha at planting or within 3 days of planting.
	26 - 30	210 ml	Aerial application: Apply as for Ground application above in at least 35 l water / ha.
Soybeans Single pre-emergence application	0 – 15	125 ml	Apply SETRA pre-emergence (to crop and weeds) onto a well-prepared seedbed that is fine, even and firm and without excessive plant rests.
	16 – 25	170 ml	Ground application: Apply by means of a suitable medium or high volume applicator in at least 200 l of water / ha at planting or within 3 days of planting.
	26 – 30	210 ml	Aerial application: Apply as for Ground application above in at least 35 l water / ha.

WEEDS CONTROLLED:

WEEDS NORMALLY CONTROLLED BY SETRA WHEN APPLIED PRE-EMERGENCE:

Scientific name	Common name
<i>Acanthospermum hispidum</i>	Upright starbur
<i>Amaranthus hybridus</i> *	Common pigweed
<i>Chenopodium album</i>	White goosefoot
Variable control of the following weeds may be expected when applied alone:	
<i>Datura ferox</i>	Large thorn apple
<i>Portulaca oleracea</i>	Purslane
<i>Tagetes minuta</i> **	Khaki weed
<i>Tribulus terrestris</i>	Dubbeltjie
<i>Xanthium strumarium</i>	Spiny cocklebur

*Where ALS resistant ***Amaranthus spp.*** occur, poor control can be expected

In areas where *Tribulus terrestris* is problematic, a pre-emergence application of 190 – 210 ml **SETRA may be used, irrespective of the soil type, to give > 80% control. The waiting periods for the follow-up crops may, however, be influenced by this higher application rate.