PANAREX®

HERBICIDE

An emulsifiable concentrate formulation containing 40 g/L quizalofop-P-tefuryl (4.38 % w/w) for use as a selective, systemic foliar applied graminicide for use on specified broad-leaved crops for post-emergence control of a range of annual and perennial grass weeds, including volunteer cereals.

RISK & SAFETY INFORMATION

An emulsifiable concentrate formulation containing 40 g/L (4.38 % w/w) quizalofop-P-tefuryl and alcohols, C12-16, ethoxylated

DANGER :

Causes serious eye damage
Suspected of causing cancer
Suspected of damaging fertility. Suspected of damaging the unborn child.
May be fatal if swallowed and enters airways
Toxic to aquatic life with long lasting effects

Obtain special instructions before use
Wear protective gloves/eye protection/face protection
IF SWALLOWED: immediately call a poison centre or doctor/physician
Do NOT induce vomiting
IF IN EYES: rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing. Immediately call a POISON CENTER or doctor/physician
Avoid release to the environment.
Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for triple rinsed empty containers which can be disposed of as non-hazardous waste

To avoid risks to human health and the environment, comply with the instructions for use

PCS No. 05867

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In case of toxic or transport emergency ring CARECHEM24 : + 44 (0) 1235 239 670 (24 hour).

For Professional Use Only

Batch No. and Manufacturing Date: See packaging

Protect from frost

5L

IMPORTANT INFORMATION

FOR PROFESSIONAL USE ONLY
FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

For use on :	Oilseed rape Sugar and fodder beet Potatoes Combining pea Field bean Linseed
Maximum individual dose:	2.25 l product/ha
Maximum number of treatments:	One per crop
Maximum total dose:	2.25 l product/ha
Latest time of application:	60 days before harvest

Other specific restrictions:

(1) To avoid the build up of resistance do not apply products containing an ACCase inhibitor herbicide more than twice to any crop. In addition, do not use this product in mixture or sequence with any other product containing quizalofop-P-tefuryl or quizalofop-P-ethyl.
(2) Fodder beet must not be grazed by livestock or harvested for animal consumption until at least 60 days following application.
(3) A period of at least 120 days must be observed prior to planting of succeeding crops following treatment with Panarex

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

SAFETY PRECAUTIONS

Operator protection
WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate
WEAR SUITABLE PROTECTIVE GLOVES when handling contaminated surfaces
TAKE OFF IMMEDIATELY all contaminated clothing
DO NOT BREATHE SPRAY
WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.
AVOID ALL CONTACT WITH SKIN/EYES
AFTER CONTACT WITH SKIN, WASH IMMEDIATELY with plenty of water
WHEN USING DO NOT EAT, DRINK OR SMOKE
WASH HANDS AND EXPOSED SKIN before meals and after work

Environmental protection
Do not contaminate surface waters or ditches with chemical or used container
Extreme care must be taken to avoid spray drift onto non-crop plants outside the target area.
Do not contaminate water with the product or its container. (Do not clean application equipment near surface water/ Avoid contamination via drains from farmyards and roads).

Storage and disposal
KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS
KEEP OUT OF REACH OF CHILDREN
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place
WASH OUT CONTAINER THOROUGHLY, empty washings into the spray tank and dispose of safely

DIRECTIONS FOR USE

IMPORTANT : This information is approved as part of the Product Label. All instructions within this section must be read carefully to obtain safe and successful use of this product.

Panarex has a built-in optimised wetting system and does not require the addition of tank-mixed surfactants, wetter systems or oils.
Panarex is rapidly absorbed through the leaves and moves throughout the grass weeds to reach the growing points, above and below ground. First effects of Panarex can include stopping further weed growth and visible colour changes to the leaf tips at around seven days after application. Complete kill takes three to four weeks under normal good growing conditions.
On perennial weeds such as couch grass *(Elymus repens)*, Panarex should be used under good growing conditions to optimise movement into all new growing points. Fragmenting the roots during cultivation of the seedbed can give better control of perennial weeds with extensive root systems.
Panarex is rainfast within one hour of application. Panarex is foliar acting and is not affected by soil type.
Panarex can be used on crops grown for processing.

Annual Weeds[1]	Weed Growth Stage	Rate of Use (L/ha)
Volunteer wheat and barley	2 true leaves to first node	0.5 – 1.0
Cereal cover crops drilled to provide protection from 'wind blow'	2 true leaves to first node	0.5 – 0.75
Volunteer oats	2 true leaves to first node	0.75 – 1.25
Wild oats	2 true leaves to first node	0.75 – 1.25
Perennial rye grass (from seed)	2 true leaves to end of tillering	1.0 – 1.5
Italian ryegrass	2 true leaves to end of tillering	1.0 – 1.5
Perennial Weeds		
Common couch grass		1.75 – 2.25

[1] For optimum results treat at growth stage: up to and including the start of tillering.
Grass weeds germinating after application are not controlled. Panarex does not control broad-leaved weeds.

Panarex can contribute to the control of black-grass as part of a herbicide resistance management strategy, involving mixtures and sequences with herbicides of alternative modes of action. Where resistant biotypes are present control from Panarex will be unacceptable.

For cereal cover crops, spray Panarex when the cover crop has served its purpose, the risk of wind blow is passed and before the cover crop starts to seriously compete with the crop. Use high rates to effect rapid control and avoid crop competition.

For Common Couch Grass *(Elymus repens)* best results are achieved when the weed is actively growing and new rhizome growth commences.

Resistance
This product contains quizalofop-P-tefuryl which is an ACCase inhibitor, also classified as a Group [A] herbicide based on the mode of action classification system of the Herbicide Resistance Action Committee (HRAC).

Strains of some annual grasses (e.g. black-grass, wild-oats, and Italian rye-grass) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted.

Use only as part of a resistance management strategy that includes crop management, cultural methods of control. Panarex must not be used in mixture with any other product containing other "fop" (aryloxyphenoxypropionate) group of herbicides or in sequence with any other ACCase inhibitor herbicides within the same season and should be used in conjunction with other herbicides utilising multiple modes of action with overl ng weed spectrums in rotation, sequences, or mixtures. Where possible, use non-selective herbicides to control early flushes of weeds (prior to crop emergence). Avoid continued use of the same herbicide or herbicides having the same site of action in the same field unless it is integrated with other weed control practices.

To reduce the risk of resistance developing, applications should be made to young actively growing weeds. Panarex should not be applied at doses lower than those recommended on the product label.

Monitor weed control effectiveness and investigate any odd patches of poor grass weed control.

Rate of use
0.5 to 2.25 l/ha. The application rate is dependent on the grass weed species, the size of weed, the weed density, the growth stage of the crop and competitive nature of the crop. (See Weeds table).

Use the highest rate specified if the weeds are beyond the optimum growth stage for control or if the weed density is high. For best results apply when the weeds are actively growing and the leaves are at least 5 cm long.

Spray Preparation
Use only clean water for mixing. Half fill the spray-tank with water and start agitation. Add the required quantity of Panarex directly to the spray-tank or through a specialised filling device. Do not add any additional surfactants or oils to Panarex. Continue filling and maintain agitation during the entire spraying procedure, including travelling to the site and during stoppages. Rinse the container clean either with a pressure-rinsing device or by manually triple rinsing. Container washings should be added to the spray tank before filling is completed.

Water Volume
Panarex should be applied using a standard nozzle through conventional hydraulic equipment (including air-sleeved booms) at water volumes of 200 to 400 litres per hectare. The lowest water volume should only be used in open crops on small weeds. On later applications when the crop is dense or when weeds are larger, the spray volume should be increased to higher volumes to ensure adequate coverage of the weeds.

The recommended spray pressure is 2 – 4 bars. Apply Panarex as a FINE or MEDIUM spray.

Ensure the sprayer is correctly calibrated before use and the nozzles are in good condition. Blocked or worn nozzles can lead to uneven application and missed areas.

Recommendations
Only apply Panarex to actively growing weeds, especially in the spring with perennial weeds, when translocation to growing points on the rhizomes and stolons is important.

Do not treat crops and weeds growing under stress. Stress can be caused by many factors including frost, drought, water logging, trace element deficiency, disease and pest attack.

Crop Application Timings
For all crops, applications should be made before the crop canopy closes preventing adequate spray coverage of the weed. Applications should also be made before the weeds become significantly competitive and must allow a pre-harvest interval of 60 days.

Autumn sown crops

Oilseed rape	From fully expanded cotyledons until canopy prevents adequate penetration.
Linseed	From 2 – 3 unfolded leaves up to flower buds visible.
Field bean	From 2 – 3 unfolded leaves up to flower buds visible (Spring application only).

Spring sown crops

Oilseed rape	From fully expanded cotyledons to before flower buds visible.
Sugar & fodder beet	From two unfolded leaves until canopy prevents adequate penetration.
Potato	From two leaves until canopy prevents adequate penetration.
Combining pea	From 2 – 3 unfolded leaves up to flowering.
Linseed	From 2 – 3 unfolded leaves up to before flower buds visible.
Field bean	From 2 – 3 unfolded leaves up to flower bud visible.

Applications to cereal cover crops should be made as soon as the risk of wind blow has passed and before the cover crop causes serious competition to the main crop. If there is also a significant grass weed problem, the rate appropriate to the weed species should be applied if this is higher than the rate needed for the cover crop.

Following Crops
If a crop treated with Panarex should fail for any reason or after normal harvest, any broad-leaved or cereal crop may be planted. At least 120 days must elapse after application of Panarex before planting any following crop.

Other
Thoroughly clean all traces of Panarex from application equipment immediately after use. Rinse sprayer and all parts with clean water three (3) times. Flush the tank, pump, hoses and boom with several changes of clean water after removing nozzle tips and screens (clean those parts separately). Failure to thoroughly clean the equipment may result in injury to subsequently sprayed cereal and grass crops. Dispose of the washings in an appropriate manner.

Weeds will be controlled more rapidly when they are actively growing in warmer conditions with sufficient soil moisture. In poor growing conditions (drought, cold weather, and waterlogged soil), the translocation of Panarex may be significantly reduced. In these situations use the higher rates of Panarex.

To protect neighbouring crops and other plants, avoid spray drift outside of the target area. Avoid spray drift onto neighbouring crops, especially cereal crops. Do not spray in windy weather, especially if using fine sprays, when the risk of spray drift will be increased.

PANAREX® is a registered trade mark.