

Revenge 20

MAPP 14449



Contents: 60g^e Made in the EU

A sulfonylurea herbicide containing 20% w/w metsulfuron-methyl as a water soluble granule.

A herbicide for the post-emergence control of a range of annual broad-leaved weeds in winter wheat, spring wheat, durum wheat, winter barley, spring barley, winter oats, spring oats, triticale, linseed and land temporarily removed from production (set-aside).

REVENGE 20 - contains 20% w/w metsulfuron-methyl.



IRRITANT



DANGEROUS
FOR THE
ENVIRONMENT

RISK OF SERIOUS DAMAGE TO EYES • VERY TOXIC TO AQUATIC ORGANISMS, MAY CAUSE LONG-TERM ADVERSE EFFECTS IN THE AQUATIC ENVIRONMENT

KEEP OUT OF THE REACH OF CHILDREN • KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDING STUFFS • WHEN USING DO NOT EAT, DRINK OR SMOKE • DO NOT BREATHE SPRAY • IN CASE OF CONTACT WITH EYES, RINSE IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE • THIS MATERIAL AND ITS CONTAINER MUST BE DISPOSED OF IN A SAFE WAY. • WEAR SUITABLE GLOVES AND EYE/FACE PROTECTION. • USE APPROPRIATE CONTAINMENT TO AVOID ENVIRONMENTAL CONTAMINATION.

To avoid risks to man and the environment, comply with the instructions for use.

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops: winter wheat, durum wheat, spring wheat, winter barley, spring barley, winter oats, spring oats, triticale, linseed and land temporarily removed from production (set-aside).

Maximum Individual Dose, Maximum Number of Treatments, Latest Time of Application and Other Specific Restrictions: see under "DIRECTIONS FOR USE"

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.

The Control of Substances Hazardous to Health (COSHH) Regulations may apply to the use of this product at work.

SAFETY PRECAUTIONS

Operator protection

Engineering control of operator exposure must be used where reasonably practicable in addition to the following personal protective equipment:

WEAR SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate.

However, engineering controls may replace personal protective equipment if a COSHH assessment shows that they provide an equal or higher standard of protection.

WASH CONCENTRATE from skin or eyes immediately.

WASH HANDS AND EXPOSED SKIN before meals and after work.

Environmental Protection

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.

Take extreme care to avoid drift onto crops and non-target plants outside the target area.

To protect aquatic organisms respect an unsprayed buffer zone to surface water bodies in line with LERAP requirements.

DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 6 metres of the top of the bank of a static or flowing waterbody, unless a Local Environmental Risk assessment for Pesticides (LERAP) permits a narrower buffer zone or within 1m of the top of a ditch which is dry at the time of application.

Aim spray away from water.

Do not allow direct spray from hand-held sprayers to fall within 2 metres of surface waters or ditches. Aim spray away from water.

This product must only be applied from 1 February in the year of harvest until the specified latest time of application.

This product qualifies for inclusion within the Local Environmental Risk assessment

for Pesticides (LERAP) scheme. Before each spraying operation from a horizontal boom sprayer, and broadcast air-assisted sprayer, either a LERAP must be carried out in accordance with PSD's published guidance or the statutory buffer zone must be maintained. The results of the LERAP must be recorded and kept available for inspection for 3 years to any person entitled to exercise enforcement powers under or in connection with the Food and Environment Protection Act 1985 (as amended). (An electronic record will satisfy the requirement for a written record, providing it is similarly available for inspection and can be copied).

Storage and Disposal

KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place.

EMPTY CONTAINER COMPLETELY, and dispose of safely.

DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

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PEEL BACK FOR DIRECTIONS FOR USE LEAFLET

DIRECTIONS FOR USE

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

IMPORTANT INFORMATION

FOR USE ONLY AS AN AGRICULTURAL HERBICIDE.

Crops	Maximum Individual Dose g of product per hectare	Maximum Number of Treatments	Latest Time of Application
Winter wheat, spring wheat, durum wheat, winter barley, spring barley, winter oats, spring oats, triticale	30	1 per crop	Before the flag leaf extending stage (GS 39)
Linseed	30	1 per crop	Before flower buds visible, or up to 30 cm tall, whichever is the sooner.
Green cover on land temporarily removed from production	30	1 per year	Before 1 August in the year of application.

Other specific restrictions:

This product must only be applied to green cover on land temporarily removed from production where a full green cover is established.

Green cover on land temporarily removed from production must not be grazed by livestock or harvested for human or animal consumption or used for animal bedding.

This product must only be applied to green cover on land temporarily removed from production where the cover crop is predominantly (i.e. sufficient to maintain reasonable cover) grassland, wheat, barley, oats or triticale.

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.

General Information

Revenge 20 is a post-emergence systemic herbicide for the control of certain broad leaved weeds in winter wheat, spring wheat, (including durum wheat), winter barley, spring barley, winter oats, spring oats, triticale, linseed and land temporarily removed from production (set-aside).

After application, Revenge 20 is translocated through the weed plant. Weed growth is stopped or slowed shortly after application and this minimises the effects of weed competition on the crop. Final death of susceptible weeds and

the decay of weed foliage may not be seen until several weeks after treatment. Revenge 20 is typically rainfast 1 hour after application under good drying conditions.

Warnings and Restrictions

Do not treat crops that are or have been under stress from any cause, including poor soil or cultural conditions, adverse climatic conditions, waterlogging or drought, pest or disease attack, nutrient deficiency, or any other cause.

Apply Revenge 20 when the weeds are growing actively. Best results will be achieved from applications made when the weeds are small. The crop should be growing strongly and provide competition with the weeds.

Do not spray if frost is likely to occur soon after spraying, during periods of frosty weather, or during periods of low night temperatures.

Do not roll or harrow or make any other cultivation within 1 week before or after application.

Weed foliage should be dry at the time of application; do not apply when rain is imminent.

Do not apply more than once to any crop.

Do not allow spray bouts to overlap.

Do not use on cereal crops undersown or due to be undersown with grass, clover (or other legumes) or any broad-leaved crop.

Contract agents should be consulted before using on crops grown for seed.

Before use, make sure the sprayer is calibrated to apply the recommended spray

volume and pressure. Immediately after use thoroughly clean the sprayer and all equipment – see “Sprayer Decontamination”. Traces of product left in the sprayer may cause damage to other crops that are subsequently treated with the same equipment.

RESISTANCE MANAGEMENT

There is a significant risk for the development of weed resistance to Revenge 20. Strains of some annual weeds have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures. Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor OR crop adviser. Implement a weed resistance strategy based on Good Agricultural Practice and including the following:

Follow the label recommendations.
Adopt complementary weed control practices.
Minimise the risk of spreading weed infestations.
Implement good spraying practice to maintain effective weed control.
Use the correct spray nozzles to maximise coverage. Consider using sequences or tank-mixing with suitable products having a different mode of action.
Apply only under appropriate weather conditions.
Monitor herbicide performance and report any unexpected results to Agform Ltd.

Warning on Spray Drift and Contamination

Revenge 20 is active at very low application rates. Take extreme caution not to allow spray to drift and contaminate any broad-leaved plants, (or soil to be planted with broad – leaved plants) lying outside the target sprayed crop area.

Avoid damage by drift onto ponds, waterways or ditches. Draining or flushing of spraying equipment must not take place on land planted or intended for planting with trees or any crop other than cereals.

Soil Types and Conditions

Revenge 20 may be used on all soil types. Weed control will be reduced under dry soil conditions.

Application Rate

Revenge 20 is highly active and only very low application rates are required. Make one application of 30 g/ha to all recommended crops. Observe the maximum individual dose, maximum number of treatments and latest time of application as specified under “Crops Treated”.

Crops Treated

Cereals

All varieties of winter and spring wheat (including durum wheat), and winter and spring oats may be treated with Revenge 20 from the 2 leaf stage until GS 39

(before the flag leaf sheath extending stage). All varieties of winter and spring barley may be treated from the 3 leaf stage until GS 39 (before the flag leaf sheath extending stage).

Apply after the 31st January and within the recommended crop growth stages. For optimum weed control, apply when the weeds are small and actively growing, preferably during a period of mild weather, see “Weed Control”.

Maximum Dose:	30 g/ha.
Maximum number of treatments:	One per crop.

Apply in 100 – 400 litres of water per hectare. Select a volume of water from within this recommended range that will give a good even cover of the weed foliage, use the higher volume when crops or weed populations are dense. Good spray cover is essential to achieve the weed control indicated (see Weed Control).

Compatibility

Revenge 20 may be applied in tank mixture to winter wheat, winter and spring barley with approved formulations of any one of the following formulations:

Chlormequat, fluroxypyr, bromoxynil/ioxynil, mecoprop-p, amidosulfuron, clodinafop-propargyl with adjuvant, fenoxaprop-p-ethyl with adjuvant.

Before using any tank-mix, always follow the manufacturer's restrictions and recommendations for the partner product.

When making a tank-mix, add each product separately to the water in the spray

tank or mixing bowl and agitate thoroughly before adding the partner product. Always add the Revenge 20 to the spray tank first.

Do not apply the mixture with fluroxypyr to spring cereals.

DO NOT APPLY REVENGE 20 IN MIXTURE WITH ANY OF THE FOLLOWING:-

chlorpyrifos
any product containing diclofop-methyl
any product containing flutriafol
any product containing propiconazole
tralkoxydim with adjuvant

At least 12 weeks must elapse between application of Revenge 20 and any of the products listed above.

When Revenge 20 is applied in a tank-mix with an approved formulation containing amidosulfuron, sow only any cereal crop as the following crop. Do not apply Revenge 20 in any tank-mixture on spring wheat, oats and triticale.

SEQUENTIAL TREATMENTS AFTER OTHER SULFONYLUREA HERBICIDES

Winter Wheat crops that have been treated in the Autumn with one of the sulfonylurea products listed below, may be treated with Revenge 20 in the following Spring.

Approved products containing iodosulfuron-methyl-sodium and mesosulfuron-methyl e.g.

MAPP 12478

MAPP 12049

Do not apply Revenge 20 to any cereal crop in sequence or in tank mixture with a product containing any other sulfonylurea or 'ALS-inhibiting' herbicide.

Do not apply Revenge 20 to any crop following the use of any other sulfonylurea herbicides.

The above products must be applied in accordance with the manufacturer's recommendations. After harvesting a crop treated with a sequence of one of the above products and Revenge 20 in the Spring, plant only Winter Wheat as the following crop.

Linseed

All varieties of linseed (including crops for seed) may be treated with Revenge 20. Apply after the 31st January when the crop is actively growing and from the first pair of true leaves unfolded stage, up until the crop is 30 cm high or before flower buds are visible, whichever occurs first.

Do not apply to crops of linola or flax.

Do not apply in tank-mix with any other product or in sequence with any other sulfonylurea containing product.

Ensure an interval of at least 7 days (10 days if the crop is growing poorly or under stress) before and after application of Revenge 20 and the application of any other crop protection product.

Some stunting of the crop may occur especially under conditions of frost, heavy

rainfall, significant day/night temperature variations, or any combination of these factors. Crop yield may be reduced in severe cases.

Maximum Dose: 30 g/ha.
Maximum number of treatments: One per crop.

Apply in 100 – 200 litres of water per hectare. Select a volume of water from within this recommended range that will give a good even cover of the weed foliage; use the higher volume when crops or weed populations are dense. Good spray cover is essential to achieve the weed control indicated (see Weed Control).

For optimum weed control, apply when the weeds are actively growing and small, preferably during a period of mild weather, see "Weed Control". Weed control may be reduced if soil conditions are very dry.

Following harvesting, only cereals may be sown within 16 months of the date of treatment.

Green cover on land temporarily removed from production

Revenge 20 may be applied to green cover on land temporarily removed from production (set-aside) for the control of broad-leaved weeds, provided that a full green cover is established and where the green cover crop is predominantly (i.e. sufficient to maintain reasonable cover) grassland, wheat, barley, oats or triticale. For optimum control of Docks, apply 3 weeks before or after cutting. Since other broad-leaved species will also be controlled, the use of Revenge 20 may not be

applicable in areas being managed for conservation or wildflower development.

Before use on green cover on land temporarily removed from production, make sure that any application complies with any rules and stipulations under grant programmes or other management considerations.

Treated green cover on land temporarily removed from production must not be grazed by livestock or harvested for human or animal consumption or used for animal bedding.

Maximum Dose:	30 g/ha.
Maximum number of treatments:	One per crop.

Apply in 200 litres of water per hectare. Good spray cover is essential to achieve good levels of weed control. For optimum weed control, apply when the weeds are small, from between the 15th April up until the 31st July, preferably during a period of mild weather (see Weed Control).

Do not make more than one application of any product containing a sulfonylurea in any calendar year.

Where the green cover crop is mainly made up of established grass species, some stunting and discolouration of the cover crop may occur.

Do not use on seedling grasses. Seedling cereals are tolerant after the 3-leaf stage.

After application to set-aside, only cereals may be sown within 16 months of the date of treatment.

Weed Control

The following weeds are controlled at up to 15 cm high or across under good growing conditions:

Charlock	Pale Persicaria
Common Chickweed	Parsley-piert
Common Hemp-nettle	Redshank
Corn Spurrey	Scarlet Pimpernel
Docks	Shepherd's-purse
Mayweeds	Volunteer sugar beet

The following weeds are controlled at up to the 6 expanded true leaf stage, under good growing conditions.

Corn Buttercup	Fool's Parsley
Common Field Speedwell	Persian Speedwell
Corn Marigold	Small Nettle
Common Poppy	Volunteer oilseed rape
Dove's foot Crane's-bill	

The following weeds are controlled at up to the 2 expanded true leaf stage, under good growing conditions.

Creeping Buttercup	Field Pansy
Fat-hen	Knotgrass
Field Forget-me-not	

The following weeds are moderately susceptible at up to the 2 expanded true leaf stage, under good growing conditions.

Common Orache
Fumitory

Method of Application

Apply as a MEDIUM spray (BCPC) by means of a conventional downward-placement hydraulic nozzle tractor-mounted or trailed sprayer (with or without air-assistance). Ensure that the sprayer is correctly calibrated to apply the recommended water volume and spray quality, and the boom height and nozzles are adjusted to give even coverage of the target weeds. Avoid overlapping of spray bouts.

Mixing instructions

Before use ensure the sprayer is clean and decontaminated from any previous use. Place a quarter of the required amount of clean water in the spray tank and commence agitation. Add the required amount of Revenge 20, followed by the remaining water requirement and use immediately. Continue agitation during spraying; do not allow the spray mixture to stand.

When Revenge 20 is tank-mixed with a partner product, always add the partner product(s) to the spray tank after the Revenge 20.

Ensure that all completely used containers are empty, and dispose of according to the MAFF/HSE Code of Practice for the Safe Use of Pesticides on Farms and Holdings. After use, clean and decontaminate the sprayer and all equipment.

Following Crops

If a crop treated with Revenge 20 fails for any reason, only sow winter wheat within 3 months of the date of treatment.

Following harvesting of a cereal crop treated with Revenge 20, only oilseed rape, cereals, field beans or grass may be sown in the same calendar year as the year of treatment. Any crop can be sown the next year.

Following harvesting of a linseed crop treated with Revenge 20, or after application to set-aside, only cereals may be sown within 16 months of the date of treatment.

Sow only wheat, barley, rye or triticale following a cereal crop treated with Revenge 20 and any product containing imazamethabenz-methyl.

Sow only wheat, barley, rye or triticale following a cereal crop treated with a tank mixture of Revenge 20 and an approved formulation containing amidosulfuron.

Sprayer Decontamination

Immediately after use, the sprayer and all other equipment must be thoroughly cleaned and decontaminated to stop any traces of Revenge 20 remaining in the sprayer and causing damage to crops treated subsequently with the sprayer.

Thoroughly clean and decontaminate the sprayer internally and externally by brushing and rinsing with cleaning water, including the lid, booms, nozzles, nozzle filters, in-line filters and all other equipment.

Nozzles, nozzle and all other filters and strainers should be removed from the sprayer and cleaned separately. Fill the sprayer to at least 10% of the tank volume

and pump through, making sure there is sufficient pressure to adequately flush the system. Any remaining rinsate must be drained out of the tank and the rinsing, flushing and draining procedure repeated.

If Revenge 20 is applied in a tank-mix with an approved formulation containing amidosulfuron, the following sprayer decontamination procedure must be followed:

Drain the sprayer and clean the outside to remove any contamination. Rinse the inside of the tank with water and flush through the booms, hoses and nozzles using clean water to fill at least 10% of the tank volume, then drain the tank until completely empty.

Half fill the spray tank with clean water and add a proprietary tank cleaner mixture of ammonia formulated for sprayer decontamination in accordance with the manufacturer's recommendations. As an alternative, use 0.3 litres of domestic ammonia solution (typically 9% strength) per 100 litres of tank capacity (or equivalent to give a final strength in the sprayer of 0.03%). Agitate and then flush the boom, hoses and nozzles with the solution and drain. Fill the tank with clean water and agitate for a minimum of 15 minutes. Flush the hoses and boom and drain until empty. (If the tank does not empty completely, repeat the procedure using fresh proprietary tank cleaning mixture or household ammonia as above).

Remove the sprayer nozzles and all filters, clean and soak in a solution of proprietary tank cleaner or household ammonia of 0.03% as used in the sprayer.

Carry out a final rinse of the sprayer with clean water using a minimum of 10% of the tank volume and then flush through the boom and hoses, drain and leave to dry.

Follow the Code of Practice for the Safe Use of Pesticides on Farms and Holdings for the disposal of sprayer and tank washings. Do not spray onto land intended for cropping with sensitive crops.

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Control of Pesticides Regulations 1986. It provides additional advice on product use at the discretion of the applicant.

TERMS AND CONDITIONS OF SUPPLY, SALE AND USE

Many factors can affect or influence the activity of this product, including, but not limited to: weather and soil conditions, crop variety, treatment timing, water volume, application rates, spraying techniques, crop rotation, regional factors, and the occurrence and development of strains resistant to the active ingredient. Under certain circumstances, changes in activity or crop damage can occur. The manufacturer or supplier is unable to accept any liability in these circumstances. All goods supplied by us are of a high grade and we believe them to be suitable for the purpose for which we expressly supply them: but as we cannot exercise any control over their mixing, use or application which may affect the performance of the goods all conditions and warranties statutory or otherwise as to the quality or fitness for any purpose of our goods are excluded and no responsibility will be accepted by us for any damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff, our agents or the re-sellers of the product whether or not they supervise or assist in the use of such goods.