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 CLOTHING (COVERALLS), SUITABLE PROTECTIVE GLOVES AND FACE PROTECTION (FACESHIELD) when handling the concentrate. DO NOT BREATHE SPRAY.

WHEN USING DO NOT EAT, DRINK OR SMOKE. WASH CONCENTRATE from skin and eyes immediately.

WASH HANDS AND EXPOSED SKIN before eating and drinking, 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).

To protect aquatic organisms respect an unsprayed buffer zone of 5 m to surface water bodies.

Extreme care must be taken to avoid spray drift onto non-crop plants outside of the target area.

Storage and disposal:

KEEP IN ORIGINAL CONTAINER, tightly closed in a safe place. RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings t sprayer at time of filling and dispose of safely. DO NOT RE-USE CONTAINER for any purpose.

READ DIRECTIONS FOR USE ON ATTACHED LEAFLET

PROTECT FROM FROST SHAKE WELL BEFORE USE



A post-emergence herbicide for use on a variety of winter cereals (wheat, durum wheat, spelt, barley, rye, triticale, oats and these crops under sown with grass) and spring cereals (wheat, durum wheat, barley, rye and these crops under sown with grass) for the control of a wide range of broad-leaved weeds.

FOR PROFESSIONAL USE ONLY

Authorisation Holder: Corteva Agriscience UK Limited CPC2 Capital Park, Fulbourn, Cambridge, CB21 5XE, United Kingdom Telephone: + 44 1462 457272 Technical enquiries: +44 800 6898899 or email: ukhotline@corteva.com 24 Hour Emergency Telephone Number: 076 680 5288 National Poison Centre (Dublin): 01 8092166

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IMPORTANT INFORMATION.

Maximum Individual Dose: Maximum Total Dose: Latest Time of Application : Other Specific Restrictions: }

PROTECTION PRODUCTS.



IMPORTANT INFORMATION

FOR USE ONLY AS A PROFESSIONAL HERBICIDE

Crops	Maximum Individual Dose	Max No of applications	Maximum Total Dose
Barley, Durum Wheat, Rye, Spelt, Triticale and Wheat	1.0 L/ha * see Other Specific Restrictions	1 per crop	1.0 L/ha
Barley, durum wheat, rye, spelt, triticale, wheat, (Undersown with grass)	1.0 L/ha * see Other Specific Restrictions	1 per crop	1.0 L/ha
Oat (winter), Oat (Winter, undersown with grass)	0.5 L/ha	1 per crop	0.5 L/ha
Other Presifie Restrictioner			

Other Specific Restrictions:

 One application of ZYPAR per season. •*Do not apply more than 0.75 litre product per hectare to any crop before the 15th of February.

 The total amount of halauxifen-methyl applied to a winter cereal crop must not exceed 14.04 g/ha (13.5 g a.e/ha of halauxifen-methyl) For autumn sown crops the maximum total must not exceed 7.8 g/ha (7.5 g a.e/ha of halauxiten-methyl) between first leaf unfolded (BBCH11) and 31st December. For any applications involving halauxifen-methyl made between January 1st and flag leaf swollen (BBCH 45) the maximum total dose of halauxifen-methyl applied must not exceed 6.24 g/ha (6 g a.e/ha). A minimum interval of 3 months between applications of products which contain halauxifen-methyl must be respected

 For autumn planted crops a maximum total dose of 3.75 g of florasulam must be observed for applications made between crop emergence in the year of planting and February 15" in the year of harvest. The total amount of florasulam applied to a cereal crop must not exceed 7.5 g.

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.

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.

GENERAL INFORMATION

ZYPAR is mainly absorbed through the foliage of the target weeds. The ideal timing is when the weeds are small and actively growing. DO NOT treat crops under stress. Stress can be caused by many factors including frost, drought, water logging, trace element deficiency, disease and pest attack etc. ZYPAR can sometimes induce slight and transient (2-3 weeks) crop yellowing. This has no impact at all to the yield. When applying ZYPAR to spelt, transient growth inhibition and chlorosis may be observed; however, it should have no adverse effect on yield. DO NOT apply to crops containing or undersown with clover or any legume containing mixtures. DO NOT roll or harrow 7 days before or after application.

WEED RESISTANCE

ZYPAR is a product containing Arylex™ (halauxifen-methyl) active substance and florasulam. It also contains a safener (cloquintocetmexyl). ArylexTM is a member of the arylpicolinate family of synthetic auxins (Group "4" according to HRAC classification) and the risk of resistance developing to this active is low. Florasulam belongs to the triazolopyrimidine (Group 2, HRAC classification) and as an ALS inhibitor there is a risk of resistance building to this active ingredient, therefore precautions should be taken to minimize the risk. The following resistance risk strategies are advised: 1. Do not rely on a single mode of action.

2. Avoid the repeated use of florasulam

- a. where resistance to other ALS inhibitors has developed
- mixtures with herbicides with another mode of action.
- difficult to control weed species.

Latest Time of

Application

June 30th

Late boot stage (GS 45)

ZYPAR may be used on all soil types.

CROPS

ZYPAR can be used on a variety of winter cereals (wheat, durum wheat, spelt, barley, rye, triticale and oats) and spring cereals (wheat, durum wheat, barley and rye) for the control of broad leaf weed species. Zypar can be used on a variety of winter cereals (wheat, durum wheat, spelt, barley, rye, triticale and oats) and spring cereals (wheat, durum wheat, barley and rye) under sown with grass for the control of broad leaf weed species. ZYPAR can be used in cereals grown for seed and malting barley.

TIMING

Winter sown cereals

ZYPAR can be applied from September 1st to the following crops; wheat, durum wheat, spelt, barley, rye, triticale (and these crops under sown with grass) from GS 11 (first leaf unfolded) up to GS 45 (flag leaf sheath swollen). The latest calendar date for application is 30th June.

Zypar can be applied September 1st when winter oats and winter oats (under sown with grass) is at GS 13 (three leaves unfolded) up to GS 32 (second node detectable). The latest calendar date for application is 31st May. Spring sown cereals

ZYPAR can be applied from February 15th when the crop is at GS 13 (three leaves unfolded) up to GS 45 (flag leaf sheath swollen) for all cereal types (except oats), including cereals under sown with grass. The latest calendar date for application is 30th June. The ideal timing for application is when the weeds are small and actively growing. However, some highly susceptible species can be controlled at advanced growth stages for rescue treatments (e.g. cleavers and red dead-nettle).

Undersown cereal crops

ZYPAR may be applied to wheat, barley, winter oats, rye, durum wheat, spelt and winter triticale crops undersown with grass. Application should be made when the grasses have started tillering (GS 21) and when weeds are actively growing.

RATES OF USE. WEED SUSCEPTIBILITY AND MAXIMUM SIZE CONTROLLED

For autumn sown crops the maximum total dose must not exceed 0.75 L/ha when applied from September 1st to February 14th and 1.0 L/ha when applied from February 15th to June 30th, except for winter oats, for which the maximum dose rate is 0.5l/ha.

b. and to species which are considered high risk species for the ALS herbicides such as Common Poppy and employ alternation or

3. Follow label recommendations concerning rates and timing of application. Use ZYPAR in a way to maximise control of high risk/

4. Consider the use of cultural control and crop rotation to help control prevent development of resistance biotypes.

Weed species	Recommended rate L/ha	Timing crop	Maximum growth stage controlled	Susceptibility	Weed species
Volunteer oilseed rape	0.75	From first leaf unfolded to end of tillering	7 true leaf stage 2-10 cm diameter	S	Fat-hen
Cleavers	0.75	From first leaf unfolded to end of tillering	2 true leaf stage 2-6 cm diameter	S	Cleavers Common fumito
Red dead-nettle	0.5	From first leaf unfolded to end of tillering	2 true leaf stage 2-3 cm diameter	3	Dead-nettles
Scented mayweed, Scentless mayweed	0.75	From first leaf unfolded to end of tillering	4 side shoots visible 1-25 cm diameter	S	Scented maywee Scentless mayw
Common poppy	0.75	From first leaf unfolded to end of tillering	6 side shoots visible 5 cm diameter	S	Black bindweed
Common chickweed	0.75	From first leaf unfolded to end of tillering	3 side shoots visible 1-10 cm diameter	S	Common chickw
lvy-leaved speedwell	0.75	From first leaf unfolded to end of tillering	2 true leaf stage 1-2 cm diameter	S	Rescue treatment and no later than t
Application rates and tir	ning for spring ap	plications (February 15th to June 30th) to winter cere:		<u> </u>	Weed species
Weed species	Recommended rate L/ha	Timing crop	Maximum growth stage controlled	Susceptibility	Cleavers
Volunteer oilseed rape	0.75	From 3 leaves unfolded to second node detectable.	First flowers visible 3-30 cm height	S	For best results :
Shepherd's purse	0.5	From 3 leaves unfolded to second node detectable.	First flowers visible 4-35 cm height	S	enhances control of JOINT APPLICAT A joint application i IMPORTANT NOTE Only one other pro application of anoth
Creeping thistle	1.0	From 3 leaves unfolded to second node detectable.	40 cm height	R	
Common fumitory	0.5	From 3 leaves unfolded to second node detectable.	Full flowering 2-22 cm height	S	
Common hemp-nettle	1.0	From 3 leaves unfolded to second node detectable.	3-10 cm height	MS	
Cleavers	0.75	From 3 leaves unfolded to second node detectable.	First flowers open 11-40 cm height	S	ZYPAR may be ap
Small-flowered cranesbill	0.5	From 3 leaves unfolded to second node detectable.	12-25 cm diameter	S	Ally Express Ally Max SX
Red dead-nettle	0.5	From 3 leaves unfolded to second node detectable.	Full flowering 5-18 cm height	s	Ally SX
Scented mayweed, Scentless mayweed	1.0	From 3 leaves unfolded to second node detectable.	2-12 cm height	S	Biplay SX Broadway Star ¹
Common poppy	1.0	From 3 leaves unfolded to second node detectable.	10 cm diameter	S	Calibre SX
oommon poppy	1.0				Finish SX Galaxy ¹

Weed species	Recommended rate L/ha	Timing crop	Maximum growth stage controlled	Susceptibility
Fat-hen	1.0	From 3 leaves unfolded to second node detectable.	3-15cm height	S
Cleavers	0.75	From 3 leaves unfolded to second node detectable.	4-20 cm height	S
Common fumitory	0.5	From 3 leaves unfolded to second node detectable.	6 true leaf stage 4-7 cm height	S
Dead-nettles	0.5	From 3 leaves unfolded to second node detectable.	8 true leaf stage 2-10 cm height	S
Scented mayweed, Scentless mayweed	1.0	From 3 leaves unfolded to second node detectable.	4-20 cm height	s
Black bindweed	1.0	From 3 leaves unfolded to second node detectable.	Flower buds visible 3-24 cm height	s
Common chickweed	0.75	From 3 leaves unfolded to second node detectable.	1-15cm diameter	S

t for cleavers to be applied to the crop from third node detectable to flag leaf sheath swollen (winter and spring cereals) the 30th of June.

Weed species	Recommended rate L pr/ha	Timing crop	Maximum growth stage controlled	Susceptibility
Cleavers	1.0	From third node detectable to flag leaf sheath swollen	Beginning of flowering Up to 90 cm	S

of the difficult to control weeds.

TION

n is the use of a product in tank mixture or sequence with another product.

TE: Joint applications should only be made within the label recommendations of every product in the application. oroduct with an ALS inhibitor mode of action may be applied to a cereal crop treated with ZYPAR. However a further other product containing florasulam may also be made **providing the maximum total dose of florasulam is not exceeded**¹.

plied in joint application to the same cereal crop with one of the following ALS products¹:

Ally Express	Gartrel ¹
Ally Max SX	Harmony M SX
Ally SX	Harmony SX
Biplay SX	Lorate
Broadway Star ¹	Presite SX
Calibre SX	Quantum
Finish SX	Spitfire ¹
Galaxy ¹	Thor

apply ZYPAR to young weeds which will respond quicker when treated at early stages. Vigorous crop competition

¹ The maximum total dose of florasulam applied to the crop must not exceed 7.5 g. For autumn planted crops a maximum total dose of 3.75 g of florasulam, must be observed for applications made between crop emergence in the year of planting and February 15th in the year of harvest.

Apart from these specific joint applications ZYPAR must NOT be applied with any other product containing an ALSinhibitor. for example amidosulfuron.

WEATHER CONDITIONS

ZYPAR can be used in cold or warm (from 2 to 25 °C), humid or dry conditions. I ought conditions there can be a slight reduction in efficacy.

RAINFASTNESS

ZYPAR is rainfast one hour after application.

WATER VOLUME

Using standard or low drift nozzles the recommended spray volume is 100 to 400 litres of water per hectare. The lowest water volume should only be used in open crops on small weeds. On later applications where the crop is dense, the spray volume should be increased to 200-400 litres water per hectare. The minimum recommended pressure is 2 to 3 bars. For undersown cereal crops, it is recommended to use a minimum spray volume of 150 litres of water per hectare.

CROP FAILURE

In the event of a crop failure after a crop has been treated with ZYPAR, consider all herbicides used on the treated field before deciding which new crop to sow.

Autumn applications In case of a crop failure after an autumn application of ZYPAR at 0.75 L/ha, it is possible to sow the following spring crops, with no

cultivation restrictions:

1 month after application (no cultivation restrictions): Spring wheat, Spring barley, Maize, Ryegrass
3 months after application (after ploughing): Spring Oilseed rape, Field beans, Peas, Sunflower

Spring applications

In case of a crop failure after a spring application of ZYPAR at 1.0 L/ha, it is possible to sow:

- 1 month after application (no cultivation restrictions): Spring wheat and Spring barley
- 2 months after application (after ploughing); Maize

FOLLOWING CROPS

After an application of ZYPAR there are no restrictions for sowing any succeeding crop after the cereal harvest. However, for sensitive species such as soybean, clover, lentils or sunflower ploughing is recommended prior to drilling.

ADJACENT CROPS

ZYPAR is of low volatility and is therefore not subject to vapour drift.

Avoid spray drift onto non-target crops.

Particular care should be taken to avoid spray drift onto susceptible crops e.g. vines, orchards, sunflower, oil seed rape, legumes, vegetable crops, ornamentals, flax, sugar beet, potatoes etc.

Do not spray in windy weather or only if the wind speed is less than or equal to 3 on the Beaufort scale (i.e. a maximum of 19 km/hour) and a temperature not exceeding 25 ° C in the shade.

Apply only with a boom sprayer and use suitable nozzles for herbicides. Use a spray pressure as low as possible and a low height with respect to the treated vegetation, while ensuring the good spray distribution. The use of low drift nozzles is recommended.

Alternatively contact your supplier

MIXING AND SPRAYING Application equipment

ZYPAR should be applied through a tractor mounted or trailed horizontal sprayer. Mixina

Half fill the sprav tank with water and add the required amount of ZYPAR. Fill up the sprav tank, agitating continuously to ensure thorough mixing, and maintain agitation until spraying is complete. Use only clean water for mixing. Spray quality

Apply ZYPAR as a MEDIUM spray as defined by the BCPC system.

TANK MIXTURES

Where tank mixes are used, and unless directed otherwise, the preferred order of addition of products to the spray tank is as follows: water dispersible granules, wettable powders, suspension concentrates (flowables), emulsifiable concentrates, solution concentrates. Each product should be added to the half-full spraver and be fully dispersed before the addition of the next product.

TANK CLEANING

To avoid subsequent injury to crops other than cereals (wheat, durum wheat, spelt, barley, rye, triticale), all spraying equipment must be thoroughly cleaned both inside and out using All Clear Extra spray cleaner at 0.5 % as follows: 1. Immediately after spraying thoroughly and completely rinse all internal surfaces. 2. Rinse inside of tank with clean water and flush through booms and in-line strainers using at least one tenth of the sprav tank volume. Drain tank completely.

Flush the boom and hoses and drain tank completely.

4. Nozzles and filters should be removed and cleaned separately with a tank cleaner at the recommended rate.

5. Rinse the tank with clean water and flush through the boom and hoses using at least one tenth of the spray tank volume. Drain tank completely.

6. For disposal of washings, follow Code of Practice for Using Plant Protection Products. Do not spray onto sensitive crop or land intended for cropping with sensitive crop.

Note: If it is not possible to drain the tank completely, step 3 must be repeated before going onto step 4.

COMPATIBILITIES

For details on compatibilities contact your distributor or Corteva technical hotline on +44 (0) 800 689 8899 or ukhotline@corteva.com

TRADEMARK ACKNOWLEDGEMENTS

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CORTEVA AGRISCIENCE CONDITIONS OF SUPPLY

3. Fill tank with clean water (minimum 10% of tank capacity) and add tank cleaner at the recommended rate and agitate for 15 minutes.

All goods supplied by us are of high grade and we believe them to be suitable but, as we cannot exercise control over their storage, handling, mixing or use, or the weather conditions before, during or after 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. No responsibility will be accepted by us or re-sellers for any failure in performance, damage or injury whatsoever arising from their storage, handling, application or use. These conditions cannot be varied by our staff or agents whether or not they supervise or assist in the use of such goods.

> To access the Safety Data Sheet for this product scan the QR code or use the weblink below: https://www.corteva.ie/content/dam/dpagco/corteva/eu/ie/en/files/sds/ZYPAR-IRL-SDS.pdf