

The below listed weeds germinating from seed are controlled at the growth stages indicated by an application of Macho at 0.25 l/ha in tank mix with 1.5 l/ha pendimethalin MAPP 13405.

Weed	Application Pre-emergence of Weeds		Application Post-emergence of Weeds	
	Susceptibility		Susceptibility	Maximum Growth Stage Controlled or Size
Annual meadow-grass	S		S	Up to 2 true leaves
Common chickweed	S		S	Up to 2 true leaves
Common field speedwell	S		S	Up to 2 true leaves
Field pansy	MS		MS	Up to 2 true leaves
Ivy-leaved speedwell	S		S	Up to 2 true leaves
Common poppy	S		S	Up to 4 true leaves
Red dead-nettle	S		S	Up to 2 true leaves

This mixture is not recommended for the post-emergence control of weeds on the following soil types: sandy clays, clays and silty clays (ADAS 85 classification).

FOLLOWING CROPS

After normal harvest of any crop treated with Macho in tank mix with diflufenican or pendimethalin products, the following crops may be established as follows:

Following crops	15 cm deep plough OR cultivate with thorough soil mixing	15 cm deep plough with thorough soil mixing	No specific conditions ¹⁾
Tank mix with diflufenican			
Oil seed rape, field beans, edible brassicas	Yes		
Peas, sugar beet, carrots, onions		Yes	
Wheat, barley, potatoes			Yes
Tank mix with pendimethalin			
Wheat, barley, potatoes, peas			Yes
All other crops		Yes	

¹⁾ Even where ploughing or cultivation is carried out there is still a risk of damage to following crops of onions, leeks and related species or clover. General restriction for tank mixes with diflufenican based products: diflufenican levels might build up in the soil in case of applications in successive cereal crops. Except for cereals or potato, ploughing and deep soil mixing must be done before establishment of the next crop. See label advice of the tank mix partner.

FAILED CROPS

If a crop treated with Macho should fail for any reason, follow the instructions below according to the tank-mix partner product used. To replace failed crops treated with Macho in tank with authorized formulations containing only diflufenican, ploughing to at least 15 cm deep and sow only, wheat, barley or potatoes. Before sowing spring wheat or spring barley, allow at least 12 weeks from date of treatment. To replace failed crops treated by Macho in tank with authorized formulations containing only pendimethalin, plough to at least 15 cm

deep and sow only wheat, barley, peas or potatoes.

SPRAYER DECONTAMINATION

Follow guidance of tank mix partner. Trace amounts of Macho remaining in the sprayer after use can cause damage to other crops subsequently treated with the same equipment. Immediately after use, thoroughly clean the sprayer and all equipment with a proprietary detergent cleaner. It is essential that all nozzles, filters, tubing, strainers, pumps and the spray tank are thoroughly cleaned after use to avoid the risk of damage to crops subsequently treated with the same equipment. Spray equipment should not be drained or flushed onto land planted with or intended for planting with trees or crops other than oilseed rape, beans and peas.

COMPATIBILITY

Macho may be applied in tank-mixture with a variety of plant protection products providing that the application timing is correct for both Macho and the partner product(s) in the mixture.

The following listed products have been shown to be physically and chemically compatible with Macho when used in tank-mixture when applied at up to the recommended maximum dose rates and in the recommended water volumes.

Approved Formulations of:	MAPP Number(s)
beta-cyfluthrin	12865
cypermethrin	15696 or 17071
diflufenican	16922 or 12424 or 16027
diflufenican and flufenacet	16195 or 15206
diflufenican and flupyrsulfuron-methyl	12558
diflufenican and flurtamone	16448
diflufenican, flufenacet and flurtamone	14784
flufenacet and pendimethalin	13914
flumioxazine	13458
flupyrsulfuron-methyl	12979
glyphosate	14459
iodosulfuron-methyl-sodium and mesosulfuron-methyl	12478
lambda-cyhalothrin	12629
pendimethalin	13405 or 15761 or 16063 or 14664
pendimethalin and picolinafen	13456
picolinafen	13621
pinoxaden	12521
prosulcarb	16202
tau-fluvalinate	10612

The above list is being continually updated with the addition of new physically and chemically compatible tank-mixtures, including three-way and four-way mixtures. For further information consult Albaugh Europe Sàrl, or your distributor representative.

COMPANY ADVISORY INFORMATION

This section is not part of the Product Label under the Plant Protection Products Regulations. 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.

Macho is a trademark of Albaugh. Albaugh is a trading style of Albaugh Europe Sàrl and Albaugh UK Ltd.



MAPP 18122 **SHAKE WELL BEFORE USE - PROTECT FROM FROST**

A suspension concentrate containing 480 g/l flufenacet for the pre- and early post-emergence control of specified grass and broad-leaved weeds in winter wheat and winter barley when used in specified tank mixtures



WARNING

MACHO – contains 480 g/litre (40.1% w/w) flufenacet

HARMFUL IF SWALLOWED MAY CAUSE DAMAGE TO ORGANS THROUGH PROLONGED OR REPEATED EXPOSURE

VERY TOXIC TO AQUATIC LIFE WITH LONG LASTING EFFECTS

Do not breathe spray.
Wear suitable protective gloves.
Do not eat, drink or smoke when using this product.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
Collect spillage.
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 man and the environment, comply with the instructions for use.

The Control of Substances Hazardous to Health (COSHH) Regulations may apply to the use of this product at work
This product is approved under the Plant Protection Product Regulations

IMPORTANT INFORMATION
FOR USE ONLY AS AN AGRICULTURAL HERBICIDE
Crops: Winter wheat and winter barley.
Maximum Individual Dose per hectare, Maximum Total Dose per hectare, Maximum Number of Treatments, Latest Time of Application, Other Specific Restrictions: Full details are on attached leaflet.
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.

<p>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 when handling the concentrate or handling contaminated surfaces. DO NOT HANDLE TREATED CROPS for at least 2 days after treatment. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection. WHEN USING DO NOT EAT, DRINK OR SMOKE. IF YOU FEEL UNWELL seek medical advice (show the label if possible). WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves. WASH HANDS before meals and after work.</p>	<p>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 to surface water bodies in line with LERAP requirements. TAKE EXTREME CARE TO AVOID DRIFT ONTO NON-TARGET PLANTS OUTSIDE OF THE TARGET AREA. DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5 m 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. This product qualifies for inclusion within the Local Environmental Risk Assessment for Pesticides (LERAP) scheme. Before each</p>	<p>spraying operation from a horizontal boom sprayer, either a LERAP must be carried out in accordance with CRD'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 three years. 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. DO NOT RE-USE CONTAINER for any purpose. RINSE CONTAINER THOROUGHLY by using an integrated pressure rinsing device or manually rinsing three times. Add washings to sprayer at time of filling and dispose of safely. Keep dry and protect from frost in a suitable pesticide store. <i>Manufacturing date and batch number: see pack</i></p>
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For advice on medical emergencies, fires, spillages or chemical hazards, telephone: 01235 239 670 (24 hour)
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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/Situations	Maximum Individual Dose	Maximum Total Dose	Maximum Number of Treatments	Latest Time of Application
Winter wheat, winter barley	0.5 litres product /ha	0.5 litres product /ha per crop	-	Until 31st December in year of planting and the following growth stages Winter wheat: Before GS23 (third tiller stage) Winter barley: Before GS23 (third tiller stage)

Other Specific Restrictions: Do not apply via hand-held equipment.

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

Macho is a contact and residual herbicide for use in tank mix with diflufenican MAPP 12424/16027 or pendimethalin MAPP 13405 for the control of certain annual grass and broad-leaved weeds in winter wheat and winter barley.

Macho may be applied at 0.5 l/ha pre-emergence or early post-emergence of the crop in tank mix with either 0.12 l/ha diflufenican MAPP 12424/16027 or 3.0 l/ha pendimethalin MAPP 13405.

Apply Macho in tank mix as recommended in the autumn until 31st December and before GS23 (third tiller stage) in winter wheat and winter barley. Best results will be obtained from pre-emergence or early post-emergence applications to weeds that have not yet emerged or have emerged and are rapidly growing but still at early growth stages.

WARNINGS AND RESTRICTIONS

Carefully read and follow labels of the tank mix products.

EXTREME CARE MUST BE TAKEN TO AVOID SPRAY DRIFT to avoid damage to plants outside the target area.

DO NOT APPLY under windy conditions.

DO NOT APPLY PRE-EMERGENCE for crops drilled after 30th of November.

DO NOT ALLOW SPRAY SWATHS TO OVERLAP as crop damage may occur.

Do not apply to broadcast crops because of risk of crop damage.

Do not treat undersown cereals or those due to be undersown.

Do not cultivate or disturb the soil after application.

Do not soil incorporate.

Do not use on sands, very light soils or stony or gravelly soils (ADAS 85 classification), or on soils with more than 10% organic matter content as there is risk of crop damage.

Do not use on any soil with poor or compacted soil structure or that is subject to waterlogging.

Seedbed preparation should include the even incorporation of trash and straw to a depth of 15 cm for effective weed control.

A reduced level of weed control may result if a prolonged dry period follows application.

Weed control is likely to be unsatisfactory if application is made to dry cloddy seedbeds.

Weed control may be reduced on soils with more than 6% organic matter.

Under certain climatic conditions, some transient discolouration of the crop foliage may occur, which can be particularly severe if heavy rain falls soon after application. These transient symptoms are quickly outgrown and have no adverse effect on crop yield.

Do not apply to crops that are under stress from any cause including pest or disease attack, frost damage or nutrient deficiency.

Avoid making applications during prolonged or severe frosty conditions, as there is a risk of transitory crop damage from which the crop will normally recover.

Trace amounts of Macho remaining in the sprayer after use can cause damage to other crops subsequently treated with the same equipment. Immediately after use thoroughly clean the sprayer and all equipment as detailed in the section "SPRAYER DECONTAMINATION".

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

Effects on processed crops have not been established. Consult processor before using Macho on crops intended for processing.

RESISTANCE MANAGEMENT

There is a moderate risk for the development of weed resistance to Macho. Strains of some annual weeds (e.g. Black-grass, Wild oats and Italian Ryegrass) 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 and alternating the use of Macho, with other herbicides with a different mode of action and a similar spectrum of activity. 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:

WRAG guidelines for preventing and managing herbicide resistant weeds need to be followed.

DO NOT use Macho in tank mix with diflufenican or pendimethalin as a stand-alone treatment against black-grass. Use only in sequence with other herbicides approved for use against black-grass and with alternative modes of action.

DO NOT use Macho in tank mix with diflufenican or pendimethalin as the sole means of weed control in successive crops.

Throughout a cropping rotation, ALWAYS use grass and broad leaf weed herbicides with alternative modes of action.

Follow the label recommendations.

Adopt complementary weed control practices: optimized weed control in other crops of rotation, plough, optimized drill timing, optimized seedbed.

Minimise the risk of spreading weed infestations.

Implement good spraying practice to maintain effective weed control.

Use the correct spray nozzles to maximise coverage.

Apply only under appropriate weather conditions.

Monitor herbicide performance and report any unexpected results to Albaugh Europe Sàrl.

APPLICATION

Before use, make sure the spraying equipment is cleaned from any previous use and that it is calibrated to apply the recommended spray volume and pressure. After use, make sure the sprayer and all equipment are thoroughly cleaned as detailed in the section "SPRAYER DECONTAMINATION".

Apply in 200-400 litres of water per hectare as a MEDIUM spray (BCPC). Use higher water volumes where the crop or the weed foliage is dense. Do not allow the spray boom to bounce or yaw, and ensure an even coverage of the weed foliage and soil surface. Leave a minimum of 14 days after application before applying any other product.

MIXING

Half fill the sprayer tank with clean water and begin gentle agitation. Add the required quantity of product into the sprayer tank and allow to disperse fully. Rinse the empty containers thoroughly by using an integrated pressure rinsing device or manually rinsing three times. Add the washings to the sprayer and continue agitation whilst topping up the tank with water to the required level. Continue agitation until the mix is sprayed out. Spray immediately after mixing, do not allow the mixture to stand in the sprayer. When using tank-mixes follow any specified order of addition on the partner product label(s).

SOIL CONDITIONS

Apply to moist level seedbeds that are of a fine tilth and free from clods. Loose or puffy seedbeds should be consolidated by rolling or other cultivations prior to application. Good weed control depends on the removal of trash from a previous crop and adequate soil moisture.

The seed should be covered by at least 3-4 cm of soil to ensure adequate crop safety. Where a crop has been direct-drilled, the drill slits must be closed by harrowing across the direction of drilling prior to application. Where direct drilled crops are treated then ploughing and cultivating to a depth of 15 cm must take place before the planting of any subsequent crop. Shallow drilled crops should only be treated post-emergence. Do not apply to broadcast crops.

WEEDS CONTROLLED

Apply Macho at 0.5 l/ha in tank mix with EITHER 0.12 l/ha diflufenican MAPP 12424/16027, OR in tank mix with 3.0 l/ha pendimethalin MAPP 13405.

Best results will be obtained in moist soil conditions and if rain falls within 7 days after application. Residual control may be reduced if there is a prolonged period of dry conditions as soil moisture is required for product activation. Speed of control will be best under favourable growing conditions. Applications of Macho in recommended tank mixes will not control perennial grass or broad leaf weeds developing from rootstocks.

Follow the label recommendations of the partner product when using any tank-mix.

Macho in Tank Mix with 0.12 l/ha diflufenican MAPP 12424/16027

The below listed weeds germinating from seed are controlled at the growth stages indicated by an application of Macho at 0.5 l/ha in tank mix with 0.12 l/ha diflufenican MAPP 12424/16027.

Weed	Application Pre-emergence of Weeds		Application Post-emergence of Weeds	
	Susceptibility	Susceptibility	Maximum Growth Stage Controlled or Size	
Annual meadow-grass	S	S	3 leaf and 1 tiller stage	
Black-grass	MS	MS	3 leaf stage	
Cleavers	MR	MR	1 whorl	
Common chickweed	S	S	5 cm	
Common field speedwell	S	S	4 leaf stage	
Field pansy	S	S	4 leaf stage	
Ivy-leaved speedwell	MR	-	-	
Mayweeds	S	S	2 leaf stage	
Field forget-me-not	S	-	-	
Groundsel	S	-	-	
Red dead-nettle	S	-	-	
Loose silky bent	-	S	1 leaf stage	

Macho in Tank Mix with 3.0 l/ha pendimethalin MAPP 13405

The below listed weeds germinating from seed are controlled at the growth stages indicated by an application of Macho at 0.5 l/ha in tank mix with 3.0 l/ha pendimethalin MAPP 13405.

Weed	Application Pre-emergence of Weeds		Application Post-emergence of Weeds	
	Susceptibility	Susceptibility	Maximum Growth Stage Controlled or Size	
Annual meadow-grass	S	S	1 tiller stage	
Black-grass	S	S	2 leaf stage *	
Cleavers	MS	MS	cotyledon stage	
Common chickweed	S	S	5 cm	
Common field speedwell	S	-	-	
Field pansy	MS	S	2 leaf stage	
Ivy-leaved speedwell	S	-	-	
Mayweeds	MS	MS	cotyledon stage	
Field forget-me-not	MS	-	-	
Italian ryegrass	S	-	-	
Perennial ryegrass	S	-	-	
Knotgrass	MS	-	-	
Hemp nettle	S	-	-	
Fat hen	MS	-	-	
Common orache	MS	-	-	
Common poppy	S	-	-	
Corn marigold	S	-	-	
Shepherd's purse	S	-	-	
Loose silky bent	S	S	1 leaf stage	
Red dead-nettle	S	-	-	
Henbit dead-nettle	S	-	-	
Smooth sowthistle	MS	-	-	
Rough meadow-grass	S	-	-	
Sterile brome	MS	-	-	
Parsley-piert	S	-	-	
Scarlet pimpernel	S	-	-	

* Black-grass is moderately susceptible pre-emergence on the following soil types: sandy clays, clays and silty clays (ADAS 85 classification)