CLAYTON NEUTRON

A selective herbicide with foliar and root activity for use in sugar beet, beetroot, fodder beet and mangels. A suspension concentrate formulation containing 700 g/l (58.3% w/w) metamitron.

MAPP19563

Clayton Neutron contains 700g/L metamitron in a suspension concentrate formulation

WARNING
Harmful if swallowed.
Very toxic to aquatic life with long lasting effects.
Contains reaction mass of 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4isothiazolin-3-one. May produce an allergic reaction.

Keep out of reach of children.
Do not eat, drink or smoke when using this product.
Dispose of contents/container to a licensed hazardous waste disposal contractor or collection site except for empty, clean containers which can be disposed of as nonhazardous waste.

To avoid risks to human health 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.

IMPORTANT INFORMATION : FOR PROFESSIONAL USE ONLY AS AN AGRICULTURAL HERBICIDE

Crops	Max. Individual dose (L product/ha)	Max. total dose (L product/ha)	Latest time of application
Sugar beet, red beet, fodder beet and mangels	2.0	5.0	Before crop meets between the rows

OTHER SPECIFIC RESTRICTIONS:
The minimum interval between applications is 6 days.
Fodder beet and mangels must not be grazed by livestock or harvested for animal consumption until at least 32 days following the last application.

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.

Approval Holder
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Marketing company in UK
Clayton Plant Protection (UK) Ltd.
Address and telephone as above.

Contents: 5 L e

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Batch No:

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. However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
TAKE OFF IMMEDIATELY all contaminated clothing.
WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the insides of gloves.
WASH HANDS AND EXPOSED SKIN before eating and drinking and after work. WHEN USING, DO NOT EAT, DRINK OR SMOKE.

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

STORAGE AND DISPOSAL
KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.
WASH OUT CONTAINER THOROUGHLY, empty washings into spray tank and dispose of safely. DO NOT RE-USE CONTAINER FOR ANY PURPOSE.

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.
Clayton Neutron is a versatile crop safe selective herbicide with contact and residual properties acting by both leaf and root uptake for the control of annual weeds in sugar beet, red beet, fodder beet and mangels. Clayton Neutron is absorbed by the roots of any emerging weeds.

RESTRICTIONS AND WARNINGS
Pre-emergence application is not recommended on organic soils.

Factors affecting crop tolerance
Clayton Neutron exhibits great safety to beet combined with consistent weed control when used as recommended. The beet plant is, however, very sensitive to herbicide treatments if the following stress factors occur: previously applied pesticides and herbicides (other than Clayton Neutron pre-emergence on mineral soils), soft growth after prolonged rain, sudden changes in temperature, high light intensity, high radiant temperatures, prolonged low temperature periods, insect and fungal attack, damage by wind blows, nutrient deficiencies such as manganese. If these or any other stress-inducing conditions occur, some cotyledon tip scorch may occasionally result. Under these conditions crop tolerance to Clayton Neutron + Cropspray 11E may be reduced, particularly when used in conjunction with other herbicides either as tank-mixes or sequentially.

Uneven application
Spraying can be uneven due to the movement of spraying equipment, ground undulations, proximity of hedgerows etc. This can lead to local high dosages of chemical and damage to the crop for which no responsibility can be accepted by the suppliers.

RESISTANCE
This product contains metamitron, a Group C1 herbicide, based on the mode of action classification system of the Herbicide Resistance Action Committee. Repeated use of herbicides with the same mode of action can increase the risk of strains of weeds developing resistance to these compounds, leading to poor control. In order to minimise the risk, a strategy for preventing and managing such resistance should be adopted.
Growers are advised to apply products containing herbicides with different modes of action in sequence or tankmix where two or more components are active against the target weeds.
Use the recommended rate of Clayton Neutron and the correct application timing for the hardest to control weed species present in the field.
The above should be used in conjunction with effective cropping rotation and cultivation techniques e.g. stale seedbed, cultivation and use of non-selective herbicide prior to drilling.

Further guidance on weed resistance management is available from the Herbicide Resistance Action Committee (HRAC) and Weed Resistance Action Group (WRAG). Follow WRAG Guidelines.

WEEDS CONTROLLED

Pre-emergence followed by post-emergence applications

Weeds controlled from a pre-emergence application of Clayton Neutron followed by a programme of well-timed sprays of post-emergence applications at early cotyledon stage of the weeds of Clayton Neutron+Cropspray 11E.

Susceptible	Moderately susceptible	Resistant
Red Dead-nettle Groundsel Fat-hen Scarlet pimpernel	Common Chickweed	Black-bindweed Cleavers Field Pansy Knotgrass

Post-emergence programme

Weeds controlled at early cotyledon stage from a series of well-timed sprays of Clayton Neutron+ Cropspray11E.

Susceptible	Moderately susceptible	Moderately resistant	Resistant
Annual meadow-grass, Chickweed, common, Dead-nettle, red, Fat-hen, Groundsel, Hemp-nettle, common, Nettle, small. Orache Poppy, common Pineappleweed Shepherd's Purse Speedwells	Field Forget-me-not, Knotgrass, Mayweeds, Field Pansy, Field Penny-cress, Pale Persicaria, Redshank, Scarlet pimpernel	Fumitory, common Parsley, fool's	Black-bindweed Cleavers Perennial weeds

It is important to adhere to the full programme of sprays to ensure complete kill, particularly under dry soil conditions.

CROP SPECIFIC INFORMATION

Clayton Neutron is recommended for use in all varieties of sugar beet grown on mineral and organic soils and red beet, fodder beet and mangels grown on mineral soils.

TIME OF APPLICATION

Clayton Neutron may be applied either as a pre-emergence application followed by post-emergence applications or as a post-emergence programme.

Pre-emergence of beet followed by post-emergence applications:

Apply the first application of Clayton Neutron at the pre-emergence stage of the crop. Prolonged dry weather after application may reduce effectiveness.

Best results will be obtained on a fine, well consolidated seedbed, free from clods and established weeds. Cloddy or fluffy seedbeds or very dry conditions will reduce activity.

A second application should be applied post-emergence of the crop at the first weed flush, when the weeds are at the expanded cotyledon stage. A further application should be applied when the next flush of weeds germinates. This is usually 10-21 days after the first post-emergence application.

Post-emergence programme:

The first application should be made at the cotyledon stage of the earliest germinating weeds. The size of the beet does not matter provided the crop is not under stress. The treatment should be repeated as each flush of weeds reaches the cotyledon stage until weed germination ceases.

If weeds have survived the previous spray 7-10 days after treatment, another application should be made even if no new weeds have germinated during the period.

RATE OF USE

Pre-emergence of beet followed by post-emergence applications:

On all mineral soils apply Clayton Neutron at 1.65 L/ha in 80-200 litres of water per hectare as an overall preemergence application. This should precede two post-emergence sprays of Clayton Neutron at 1.65 L/ha + Cropspray 11E at 1.65L/ha applied in 80-100 L/ha water.
Alternatively, an application of Clayton Neutron may be used pre-emergence at 2.0 L/ha followed by 2 postemergence applications of Clayton Neutron at 1.5 L/ha + Cropspray 11E at 1.65L/ha.

Post-emergence programme:
An overall programme of three sprays using: Clayton Neutron at 1.65 L/ha + Cropspray 11E at 1.65L/ha in 80100 litres of water per hectare. NB. The residual activity of Clayton Neutron is dependent on the cumulative rate of Clayton Neutron applied; therefore, if the full programme of sprays is not used, residual activity and efficacy will be reduced.

FOLLOWING CROPS
Beet crops may be sown at any time following the use of Clayton Neutron.
Providing 16 weeks elapse from the last application of Clayton Neutron, winter cereals may be sown in the same season. Any spring crop may be sown in the season following use of Clayton Neutron or Clayton Neutron + Cropspray 11E.
Mouldboard ploughing to a depth of 15cm followed by thorough cultivation is recommended before planting any crop.

MIXING AND SPRAYING
Thoroughly shake the pack before use. Add the required quantity of Clayton Neutron to the half-filled spray tank with the agitation system in operation and then fill to the required level. Continue agitation at all times during spraying and stoppages until the tank is completely empty. Spray immediately after mixing.
When tank-mixes are to be used, each product should be added separately to the tank; the Clayton Neutron should be dispersed first unless otherwise specified under the Compatibility section.

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 container safely.

Pre-emergence of the crop use a FINE-MEDIUM spray and post-emergence use a FINE spray as defined by the BCPC system. Avoid spray drift.
Do not use finer than 80 mesh filters in spray lines or nozzles. Clean
spray equipment thoroughly after use.

Crops should not be re-entered until spray residues are dry.

COMPATIBILITY
Clayton Neutron can be used as a 2-way tank-mix with some other sugar beet herbicides. Ask your supplier or agronomist for further information.
Always read the label of the partner product carefully before use.

Company Advisory Information :-
Conditions of Supply: all goods supplied by us are of high quality and we believe them to be correct but, as we cannot exercise control over their storage, handling, mixing or use, or weather conditions before, during and 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, and no responsibility will be accepted by us or resellers 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.

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