Product Data Sheet
NoroTec™ Manganese

FIELD OF APPLICATION

Foliar micronutrient against manganese deficiency in agricultural crops.

Content per litre
150 g manganese, 89 g sulphur.
The content is chelated.

Precaution
Dangerous: Risk of serious health injuries at long time exposure by breathing or eating.
Toxic to water living organisms, can cause harmful effects in the water environment.
Keep out of reach from children. Avoid inhaling the spray-mist. Use suitable protective gloves and face protection. This material and its container shall be taken care of as hazardous waste.
Avoid contaminating the environment. Read special instructions/safety data sheet.
To avoid risks for humans and the environment, follow the recommendations.

Storage
Stored in frost free, cool and dry premises. *Storage temperature -0 ℃ to +30 ℃*. Shelf life 2 years.

FOLIAR APPLICATION DIRECTIONS FOR USE

Manganese deficiency gives “grey-spot disease” in cereals. The leaves get grey to brown spots on the lower part and often the leaves breaks in the middle, decay and dye. The grain setting will be weak and green shoots develop. Dicotyledonous crops get yellow veins, often with dark spots between the veins.

NoroTec™ Manganese shall be used at an early stage to achieve the best effect.
Experiences have shown, that sandy soils, high pH, organic matter and after cold, wet weather are conditions favouring manganese deficiency. The most susceptible crops are oat, wheat, rape-seed, sugar beets and potatoes. Peas and barley are less susceptible, while rye has a relative little need of manganese.

The low rate in the table below is used for prophylactic treatment and the high rate at symptoms of deficiency. The treatment may need to be repeated. The first treatment can be done at the same time as the weed control spray.

Recommended dosage rates and time of application

Crop	Time of treatment	Dosage rate NoroTec™ Manganese l/ha	Amount of water l/ha
Cereals	3-4 leaves - tillering At risk of deficiency At deficiency	 0,5 1,0	100-200
Lucerne	At sufficient leaf area At flower bud formation	0,5-1,0	100-200
Sugar beets	6-10 leaves 10 days later	1,0 0,5	100-200
Potatoes	2-3 weeks after emergence Before flowering	1,0 0,5-1,0	100-200
Rape seed/ Canola	4-6 leaves	1,0-1,5	100-200
Rape seed/ Canola	Stem elongation- before flowering	1,0 + 2 l Magnesium + 1 l Flytande Bor	100-200
Peas, beans	4-6 leaves	1,0	100-200
Strawberries	Early budding stage	1,0	200-500
Vegetables	At sufficient leaf area 10 days interval	1,0 1,0	200-500
Ley, grass	Early spring 10-14 days interval	1,0 1,0	100-200

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Compatibility
NoroTec™ Manganese is chelated and is therefore compatible with plant protections. Follow always the instruction on the label for the plant protection product. At hesitation check the compatibility in a small pre mix. Contact your local supplier for more information.

Preparation and treatment
The sprayer is filled to 2/3 of water and the ingredients are added in the order below. The agitation shall be working all the time.

- Plant Protections according to instructions.
- NoroTec™ Manganese.
- Add remaining amount of water.

Caution
Avoid treatment at extreme climatic conditions as high temperature, frost, rain or when frost and rain are predicted. At sunny weather, the treatment shall be done early in the morning or evening. Don't spray plants covered by water droplets or before a rain. The spray solution shall keep a temperature of min. 10°C. The best effect is obtained if there is no rain within at least 2 hours after treatment.

Cleaning
Sprayer: Clean the spray equipment before and after the treatment. At mixing with plant protections follow the instructions for cleaning of plant protections.
Empty containers: Wash three times. Wash water to be added to the spray solution. Cleaned empty package to be deposited according to local rules.

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