

PRODUCT DATA SHEET

Ribwort plantain

Botanical name	Plantago lanceolata
Seeding rate	Depends on the purpose (new cultivation or overseeding, pure stand or in mixtures)
Distance between rows	Row planting similar to cereals is possible (if necessary, twin-row planting with half the seed amount each), well-suited to narrow row planting using a slice seeder (especially for overseeding)
Sowing period	New cultivation from early April to early May, overseeding in spring (mid March to late April) or late summer when competition from the old sward decreases (early August to early September)
Sowing depth	Flat, 1-2 cm



Botany

- Family: Plantain
- Genus: Plantain
- Origin: Europe
- One of the most calcium-rich herbaceous plants for grasslands
- Among popular forage herb species, ribwort plantain is the species with the highest feed value of 6
 - Ideal ratio 2:1 for calcium and phosphorous (meets the high Ca requirement in animals)
 - Promotes health in ruminants and reduces the accumulation of gas and air in the digestive tract
 - Acts as prophylactic agent for respiratory disorders

Possible applications

- In Europe and Germany, ribwort plantain has so far been used mainly as a major component in biodiverse mixtures and herb mixtures for permanent grasslands, as well as in species-rich flower and greening mixtures
- Popular tried and tested mixtures containing ribwort plantain as a major component:
 - ProGreen® 14+15 herb mixture for pastures and meadows dry and wet
 - ProGreen® 8 Sheep and small animals pasture with herbs and clover
 - ProGreen® WA 40 Deer meadow
 - ProGreen® WA 70 Habitat I
 - ProGreen® WB 220 Wolff mixture for vineyard greening
 - ProGreen® Honey plants for fallows, perennial
- Australia and New Zealand have had excellent results with pure stand cultivation of ribwort plantain in intensive and regularly cut arable feed crop production

Morphology

- Diploid
- Perennial, robust, persistent herbaceous plant with basal rosette and lanceolate, sessile leaves (→ tolerates grazing well)
- Roots grow up to 0.6 m deep
- Creamy-white flowers from May to September; can be pollinated by wind and insects, but may also propagate by means of stolon (known as rhizome)

Climate requirements

- Low water requirement and above-average drought resistance (possible to cultivate even with <550 mm annual rainfall)

Soil requirements

- No particular soil requirements
- Thrives in almost any location

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Soil preparation

▸ Soil preparation depends on the cultivation objective:

Objective	New cultivation	Overseeding
Measures	<p>Basic soil preparation (primary preparation) with a plough for neat cultivation.</p> <p>Secondary processing using a mill or rotary harrow for a fine, well-distributed seedbed.</p>	<p>Harrowing and levelling The old sward is aerated, loosened, disentangled and smoothed by harrowing and levelling. Using the appropriate combination devices, it is possible to combine all the advantages of harrowing and levelling and carry out overseeding simultaneously.</p> <p>Chances of successful stand establishment in the case of overseeding are lower compared to new cultivation.</p>

Sowing

▸ Seeding rate depends on the purpose of cultivation:

Objective	New cultivation		Overseeding	
Sowing	Pure stand	In mixtures	Pure stand	In mixtures
Sowing rate	20 kg/ha	5 kg/ha + approx. 25 kg/ha locally adapted grass mixtures for permanent grasslands or arable feed crop production	5 kg/ha	2-4 kg/ha + approx. 20 kg/ha locally adapted grass mixtures for permanent grasslands or arable feed crop production



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Crop protection

Fighting weeds

- Consider the use of herbicides in new cultivations, particularly on fields with high weed density
- Topping as an effective measure against growing weeds at heights of 10-15 cm
- Prevent weeds from expanding and dispersing their seeds via mowing
- Due to their toxic effects, unwanted weeds like the marsh horsetail, stinking willie, meadow buttercup and sorrel and thistle species should be removed using mechanical means or chemicals that target individual plants

Fertilisation

- Basic fertilisation based on soil testing
- Appropriate N fertilisation strategy in compliance with the currently applicable fertiliser regulations
- N requirement: 190 kg N/ha for 3-cut cultivation and 310 kg N/ha when used for 5-cut systems (comply with the currently applicable fertiliser regulations!)
 - Minimum reductions of 10-50 kg N/ha for soils with > 4% humus content
 - Reduction of 20 kg N/ha when legumes comprise 5-10% of the yield
- Nutrient loss for 3-5 cuts per year in kg/ha:

	Total N	P ₂ O ₅	K ₂ O	CaO	MgO
Total	190-310	89-117	268-364	104-138	33-46

Cutting, harvesting and treatment

- Cutting stages: regularly, ideally at an opportune time during the bolting stage
- Maximum benefits are achieved by cutting fresh and young plants in the vegetative stage
- Delayed cutting (during the flowering stage) leads to problems, particularly due to increase in crude fibre content and lignification effects
- Fresh mass yield:
 - 20,000 kg/ha in the first year
 - 40,000 kg/ha in the second year
- Cut height: 7-8 cm



Any questions? Please feel free to contact us!

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