

Fodder chicory

Botanical name Cichorium intybus

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 April to May, overseeding in spring (mid March to

end of April) or late summer when competition from the old sward

decreases (early August to early September)

Sowing depth Flat, 1-2 cm



Botany

- ► Family: Composite
- Genus: Chicory
- Origin: Europe, Western Asia, Northwest Africa
- Contains health-promoting substances
 - Prebiotics, such as inulin and inbitin, provide the gut flora with ideal nutrition
 - Fodder chicory promotes health in ruminants, reduces the accumulation of gas and air in the digestive tract and is effective against intestinal parasites

Possible applications

- In Europe and Germany, fodder chicory 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 fodder chicory 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® PF 80 Herb mixtures for horse pastures
 - 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 fodder chicory in intensive and regularly cut arable feed crop production

Morphology

- ▶ Diploid
- · Considered a pioneer plant
- Perennial, herbaceous plant with hemicryptophyte buds, from which the plant keeps emerging year after year, just above the soil surface (has high resistance to trampling and can, therefore, withstand grazing)
- Lower sheath of the foliage leaf is hirsute, the hairs provide special protection against evaporation during periods of hot weather
- ► Taproot that grows very deep into the soil
- Mostly sky-blue (seldom white) coloured ligulate flowers that bloom between June and October

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
- · Can be cultivated easily in almost any location
- No waterlogging
- ▶ pH of 6.5-7





Soil preparation

• Soil preparation depends on the cultivation objective:

Objective	New cultivation	Overseeding		
Measures	Basic soil preparation (primary preparation) with a plough for neat cultivation. Secondary processing using a mill or rotary harrow for a fine, well-distributed seedbed.	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 simulta-		
		neously. Chances of successful stand establishment in the case of overseeding are lower compared to new cultivation.		

Sowing

• Seeding rate depends on the purpose of cultivation:

Objective	New cu	ltivation	Overseeding		
Sowing	Pure stand In mixtures		Pure stand In mixtures		
Sowing rate	15 kg/ha	5 kg/ha + approx. 25 kg/ha locally adapt- ed grass mixtures for permanent grass- lands or arable feed crop production	5 kg/ha	2-4 kg/ha + approx. 20 kg/ha locally adapted grass mix- tures for permanent grasslands or arable feed crop produc- tion	





Crop protection

Weed control

- · Consider the use of herbicides in new cultivations, particularly on fields with high weed density
- ► Use topping as an effective measure against growing weeds at heights of 10-15 cm
- Prevent dissemination and dispersal of weeds in aftermath
- 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
- ► Yield: approx. 30,000 kg/ha fresh mass
- ▶ Cut height: 7-8 cm

