

# Compass

## CHICORY *Chicorium intybus*



<b>Seeding Rate</b>	<b>kg/ha</b>
Dryland	3
High Rainfall/Irrigation	5

<b>Seed Treatment</b>	None/XLR8™ optional
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**Description**  
Short term chicory

**Market Segment/Target**  
High performance animal production

**Features**  
Short term type  
Excellent establishment vigour  
High digestibility and preferred intake

**Benefits**  
Excellent pasture mix option  
Increased intake and animal performance  
Lowers bloat potential in pasture mixes

<b>Range</b>	
Low Bloat™	N
Super N Fixer™	N
XtraLeaf®	N

### SEED AGRONOMY TABLE

Maturity	N
Hard Seed Level (description)	N
Waterlogging Tolerance	N

### ESTABLISHMENT GUARANTEE™

At S&W Seed Company Australia we're so confident about our seed genetics and seed quality, we will replace seed at half the original purchase price if it fails to establish satisfactorily in the first thirty days\*

### STRENGTHS

Palatable and nutritious  
Rapid establishment and high first year productivity  
High animal growth rates  
Fast regrowth in warmer months  
Adapted to acid soils  
Deep root system capable of extracting water and nutrients from depth  
Not known to cause bloat  
Persistent under moderate grazing  
Regenerates readily if allowed to seed  
Retains leaf better than lucerne in dry conditions  
More drought tolerant than plantain

### LIMITATIONS

Susceptible to trampling and overgrazing  
Requires high levels of nitrogen for maximum production  
Does not make good hay  
Poor growth rates at low temperatures  
Herbicide options are limited

### PASTURE TYPE AND USE

Chicory is used as a short and medium term forage, and is an alternative to lucerne in areas where soils may be too acidic for lucerne. Valuable for finishing livestock and promoting weight gain. Can be used in dryland or irrigated pastures. Will tolerate some shading, and has been used as a cover crop in vineyards.

### WHERE IT GROWS

**Rainfall:** Chicory is adapted to a wide variety of climates, from summer dominant to winter dominant rainfall areas, receiving 400 millimetres to 800 millimetres annual rainfall. It requires some summer rain or irrigation over summer to perform best.

**Soils:** It prefers well drained, deep, fertile soils, but will grow on heavier soils providing they are not prone to waterlogging for extended periods. While it grows best on slightly acid to neutral soils, it is moderately tolerant of acid soils down to a pH (CaCl<sub>2</sub>) 4.2.

**Temperature:** Moderate to high frost tolerance.

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## PLANT DESCRIPTION

**Plant:** Broad-leaved perennial with thick, deep taproot, belonging to the daisy family. Prior to flowering, it produces one or more basal rosettes of large, soft, lush leaves with short stalks. On flowering, it develops into a sprawling bush over 1 metre high. Plants typically survive for 2 to 3 years, and up to 5 years in higher rainfall areas with careful management.

**Stems:** In late spring, stiff spreading flowering stems emerge from the leafy crown, growing to a height of 1.5 metres. They are hairy, hollow, branching and sparsely leafed, exuding a milky sap if cut.

**Leaves:** Rosette leaves are 5 to 15 centimetres long, oblong or lance-shaped, and covered with rough hairs on both the upper and lower surfaces. Leaf margins vary with cultivar. Stem leaves are much smaller.

**Flowers:** Blue daisy flowers 25 to 35 millimetres across.

**Seeds:** The seeds are about 3 millimetres long, dark brown, wedge-shaped, and 5 angled.

## ESTABLISHMENT

**Grasses:** Annual and perennial grasses.

**Legumes:** Lucerne, annual legumes such as subterranean clover or balansa clover  
Other: Plantain (in coastal regions).

**Sowing/Planting rates in mixtures:** 2 to 5 kilograms per hectare chicory with 0.5 kilograms white clover or 0.5 to 1 kilogram per hectare red clover as specialist forage in higher rainfall areas 1 to 2 kilograms per hectare chicory when combined with lucerne, perennial grasses, or sub clover. When sown with lucerne can reduce the risk of bloat. Should be sown at a depth of no more than 1 centimetre. (shallower is best).

**Sowing/Planting rates as single species:** 4 to 5 kilograms per hectare if sown alone. Not normally sown alone, usually combined with a legume.

**Sowing time:** Can be sown in autumn or early spring (in longer growing season districts).

**Inoculation:** Not required. Seed is XLR8™ treated for insect control.

**Fertiliser:** Requires phosphorus, sulphur and nitrogen. Can also be sensitive to Boron deficiency in limed soils.

## MANAGEMENT

**Maintenance fertiliser:** Annual dressings of superphosphate. Apply nitrogen if no companion legumes sown.

**Grazing/Cutting:** Rotational grazing management is the preferred option for persistence. A rotation of 1 week on, 3 weeks off is preferential. Plant height should be maintained between 5 centimetres and 40 centimetres. Grazing pressure in summer can be manipulated to promote leaf growth and delay stem elongation and flowering, or to encourage flowering, seed-set and regeneration. Heavy grazing in late autumn and winter can reduce persistence if there is insufficient leaf growth to replenish root carbohydrate reserves. Grazing, slashing or cutting just prior to prolonged rainfall should be avoided as this can result in stem disease and increased plant mortality. Plants are susceptible to damage from trampling and overgrazing, particularly when dormant. Chicory makes good quality silage but does not make good hay as leaves are brittle and break up on drying.

**Ability to Spread:** Can regenerate from seed under some circumstances but does not spread widely.

**Weed Potential:** It is unlikely to become a weed since plants tend to be short lived, it is restricted to moderately fertile soils and is highly palatable and readily grazed.

**Major Pests:** Attacked by earth mites and white fringed weevils, although damage is usually not serious. Slugs can cause significant damage and crop failure particularly in direct drilled germinating crops.

**Major Diseases:** Charcoal rot and sclerotinia rot. It is advisable not to sow chicory after sclerotinia susceptible crops, such as pulses, lucerne, canola etc.

**Herbicide Susceptibility:** Susceptible to many broadleaf herbicides. Always check label before herbicide use. Best sown into weed free pastures.

## ANIMAL PRODUCTION

**Feeding value:** Has a good balance between crude protein, energy and minerals resulting in rapid passage through gut and very high feeding value, sometimes the diet may lack sufficient fibre causing scouring. Dry matter digestibility ranges from 66 to 80 per cent, metabolisable energy from 9 to 11 megajoules and crude protein from 14 to 24 per cent.

**Palatability:** Highly palatable.

**Production Potential:** Very valuable for finishing livestock and promoting weight gain. Capable of producing high growth rates in lambs (290 grams per day) and calves (900 grams per day). Also useful for flushing ewes to promote ovulation.

**Livestock Disorders/Toxicity:** Some varieties have high levels of lactucin, which causes milk taint when chicory is fed to dairy cows, particularly where it forms more than 50 per cent of the diet and is grazed too soon before milking. Leaves have been reported as poisonous to pigs and roots poisonous to cattle but these incidents appear to be rare. There are no reports of poisoning under Australian conditions. Does not cause bloat in cattle due to its high condensed tannin content.



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