



## Dalkeith Sub Clover

### *Trifolium subterranean*

Dalkeith is an early maturing, semi-erect Sub Clover, with excellent early vigour, suitable for low rainfall environments. It is a prolific seeder producing a large black seed with a high percentage of hardness. Dalkeith is very tolerant of hard grazing and will persist as a straight pasture or in a mixed sward under extended grazing pressure. It is susceptible to a range of diseases, including clover scorch, but generally these are not an issue in the low rainfall regions where Dalkeith is most popular.

- Early maturing hardseeded variety
- Very persistent variety even under heavy grazing and/or low rainfall
- Very competitive

### Seed agronomy table

Maturity	Early
Days To Flower	97
Burr Burial Strength	9
Min Rainfall	350
Hard Seed Level	9

Waterlogging Tolerance	Poor
Seeding Rate	Kg/Ha
Dryland	8-14
High Rainfall / Irrigation	15-20

Hard Seed Level 1 = Least Hard 10 = Most Hard Burr Burial Strength 1 = Very Weak 10 = Very Strong

## Enterprises this seed is being used for

Sheep  
Beef Cattle  
Horse  
Hay & Silage

## Strengths

- Tolerant of heavy grazing under set stocking.
- Vigorous seedlings provide good winter feed.
- Very persistent in high rainfall areas and other areas with infrequent cropping.

## Limitations

- Requires cracking or stony soils to bury its burrs.
- Insufficient hard seededness for reliable persistence in tight cropping rotations (1 year crop:1 year pasture).
- Susceptible to germination following ifalse breaksí.
- Shallow-rooted, so unable to capture deeper soil moisture and susceptible to premature death in dry springs.

## Plant Description

A prostrate self-regenerating annual pasture legume tolerant of heavy grazing that grows from autumn through to spring.

## Pasture type and use

Suited to permanent and semi permanent pastures and to crop rotations (with at least 2 years between crops). It is best suited to neutral-alkaline cracking or stony soils, while the other subspecies (yannicum and subterraneum) are better suited to acid soils.

## Where it grows

**Rainfall:** Adapted to winter-dominant rainfall area of southern Australia with annual rainfall

425 -800 mm. Mid season varieties suited to medium rainfall zone, later flowering varieties suited to higher rainfall zone. Can also be grown under irrigation.

**Soils:** Prefers well-drained, neutral-alkaline (pH CaCl 6.0-8.5), cracking and self-mulching or stony loams and clays.

**Temperature:** Adapted to the agricultural areas of South Australia, Victoria, New South Wales and parts of south-east Queensland on appropriate soil types with sufficient winter rainfall. Good frost tolerance.

## Establishment

**Companion species:** A range of perennial and annual grasses, lucerne, subterranean clover ssp. subterraneum, biserrula, rose clover, purple clover, balansa clover, persian clover, barrel medics and burr medics, depending on soil type.

**Sowing/planting rates as single species:** 5-15 kg/ha. \* ensure seed is Goldstrike treated.

**Sowing/planting rates in mixtures:** 3-8 kg/ha, depending on the number of mixture components. \* ensure seed is Goldstrike treated.

**Sowing time:** Sow April-June, into moist soil following good weed control. Shallow sowing (Inoculation: Goldstrike Treated. The use of Goldstrike XLR8 seed treatment is recommended to reduce damage from insects at seedling stages. Will biologically fix about 25 kg nitrogen per tonne of dry herbage produced.

**Fertiliser:** Phosphorus (with potassium or sulphur on deficient soils) at sowing levels dependent on soil tests.

## Management

**Maintenance fertiliser:** Annual applications of superphosphate (with potassium on deficient soils) are required to achieve maximum productivity. Levels are dependent on soil tests.

**Grazing/cutting:** Thrives under set stocking and can be grazed moderately hard while flowering. Likely to be shaded out from more erect plants under lax grazing. Can be cut for hay.

**Ability to spread:** Slow spread from site of sowing. Can spread by burrs attaching to wool.

**Weed potential:** Its slow rate of spread, its preference for moderate-high fertility soils and specific rhizobia requirement gives it low potential as an environmental weed. It is readily controlled by a range of broadleaf herbicides within crop.

**Major pests:** Red legged earth mite is a major pest, particularly at plant establishment, where it can kill emerging seedlings, but also causes damage in spring. Timerite<sup>®</sup> has proved an effective means of control. Lucerne flea and blue green aphids can also cause damage in spring. Refer to chemical labels for suitability and recommended rates for insecticides.

**Major diseases:** Some cultivars are susceptible to the foliar disease clover scorch (*Kabatiella caulivora*), found in high rainfall, humid areas. Other foliar diseases in higher rainfall areas include leaf rust (*Uromyces trifolii-repentis*), powdery mildew (*Erysiphe polygonii*) and cercospora leafspot (*Cercospora zebrina*). Several root rots can attack subterranean clover, causing most damage to emerging seedlings and young plants. They include *Phytophthora clandestina*, *Fusarium avanaceum*, *Pythium irregulare* and *Rhizoctonia solanii*.

**Herbicide susceptibility:** Refer to chemical labels for suitability and recommended rates for herbicides registered for use on subterranean clover.

## Animal production

**Feeding value:** Excellent as green feed with in vitro digestibility in the order of 70% and crude protein over 20% until mid-flowering. Quality reduces once plants hay off. Dry herbage feeding value over summer is less than maintenance value (often < 50% in vitro digestibility) although animals may be able to obtain sufficient energy and protein by digging up seed burrs.

**Palatability:** Readily consumed by livestock, either as green or dry feed.

**Production potential:** Vigorous seedlings provide good early season production. Later flowering varieties capable of more than 10 t/ha annual production in long season environments.

**Livestock disorders/toxicity:** No commercially available varieties of ssp. *brachycalycinum* subterranean clover are oestrogenic and ewe infertility will not be affected. There have been isolated reports of cattle bloat on very clover-dominant subterranean clover pastures.

## International Contact

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