

# Dalsa

## SUB CLOVER

*Trifolium subterranean*



<b>Seeding Rate</b>	<b>kg/ha</b>
Dryland	8 - 14
High Rainfall/Irrigation	15 - 20

<b>Seed Treatment</b>	Goldstrike LongLife®
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### Description

Early maturity conventional sub with great early vigour

### Market Segment/Target

Regenerating annual pastures

### Features

Early maturing with high levels of hard seed  
Strong burr burial strength  
Good early season forage production

### Benefits

Excellent base legume for regenerating pasture  
Reliable seed set in early seasons,  
high hard seed for drought proofing  
Very low rainfall requirements for persistence

### Range

Low Bloat™	N
Super N Fixer™	N
XtraLeaf®	N

### SEED AGRONOMY TABLE

Maturity	N
Hard Seed Level (description)	N
Waterlogging Tolerance	Poor
Flowering	97 days
Burr Burial Strength	9
Hard Seed Level (rating)	9

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

### 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

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

### LIMITATIONS

Poor persistence on deep sands  
Insufficient hard seededness for reliable persistence in tight cropping rotations (1 year crop:1 year pasture)  
Susceptible to germination following 'false breaks'  
Shallow-rooted, so unable to capture deeper soil moisture and susceptible to premature death in dry springs  
Some older cultivars have high oestrogen levels contributing to ewe infertility

### PASTURE TYPE AND USE

Suited to permanent and semipermanent pastures and to crop rotations (with at least 2 years between crops). The subspecies subterranean is best suited to well drained acid soils, with the other subspecies, yanninicum and brachycalycinum, being suited to waterlogged acid and cracking neutral-alkaline soils, respectively.

### WHERE IT GROWS

**Rainfall:** Adapted to winter-dominant rainfall area of southern Australia with annual rainfall 275 to 1200 millimetres. Early flowering varieties suited to lower rainfall zone, later flowering varieties suited to higher rainfall zone. Can also be grown under irrigation.

**Soils:** Prefers well-drained sandy loams to clay loams of moderate acidity (pH CaCl 4.5-6.5).

**Temperature:** Widely adapted to the agricultural areas of Western Australia, South Australia, Victoria, Tasmania, New South Wales and parts of south-east Queensland with sufficient winter rainfall. Good frost tolerance.

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## PLANT DESCRIPTION

**Plant:** A prostrate self-regenerating annual pasture legume tolerant of heavy grazing that grows from autumn through to spring and buries its burrs.

## ESTABLISHMENT

**Sowing/Planting rates in mixtures:** 3 to 8 kilograms per hectare, depending on the number of mixture components. Ensure seed is Goldstrike® treated.

**Sowing/Planting rates as single species:** 8 to 20 kilograms per hectare. Ensure seed is Goldstrike® treated.

**Sowing time:** Sow April to June, into moist soil following good weed control. Shallow sowing (greater than 40 millimetres) is essential.

**Inoculation:** Goldstrike® treated. The use of Goldstrike® XLR8™ seed treatment is recommended to reduce damage from insects at seedling stages. The use of Subterranean clover fixes about 25 kilograms of N per tonne of herbage dry matter. As a result it can increase soil nitrogen by about 125 to 200 kilograms of N per hectare per year.

**Fertiliser:** Phosphorus (with potassium on deficient soils) at sowing – levels dependent on soil tests. Trace elements (Cu, Mo, Zn) may be required on very infertile soils.

## MANAGEMENT

**Grazing/Cutting:** Thrives under set stocking and can be grazed moderately hard while flowering. Likely to be shaded out by 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® 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 per cent and crude protein over 20 per cent until mid-flowering. Quality reduces once plants hay off. Dry herbage feeding value over summer is less than maintenance value (often greater than 50 per cent 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 are capable of more than 10 tonne per hectare annual production in long season environments or under irrigation. Herbage production of 4 to 6 tonne per hectare is achievable in low to medium rainfall environments.

**Livestock Disorders/Toxicity:** Some older varieties of subterranean clover contain high levels of phytoestrogens which can affect the sheep reproductive system. The most active isoflavone is formononetin, which can cause a decline in ewe fertility. Two other isoflavones, genistein and biochanin A, are also present in all subterranean clover varieties, but these have less impact. If ewes are mated when they are grazing

green, potent subterranean clover their reproductive performance can be temporarily impaired. Continued exposure over several years to high levels of formononetin can lead to permanent infertility. Ram fertility is not affected. Formononetin is present in subterranean clover only while the pasture is green.



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