

# TALISH CLOVER, CV. PERMATAS

*(Trifolium tumens Steve. Ex M.B.)*

Eric Hall and Andrea Hurst  
Tasmanian Institute of Agricultural Research, Mt Pleasant Laboratories, Launceston, Tasmania

## ORIGIN

**Recurrent phenotypic selection:** 4 cycles of recurrent phenotypic selection for seedling vigour, seed production, stolon production and leaf marker within accession (*to be completed after PBR part one accepted*), collected in the former Soviet Union and received by the USDA in 1939.

Seed was received by TIAR in 2002.

**Propagation:** seed.

**Breeders:** Eric Hall and Andrea Hurst, Tasmanian Institute of Agricultural Research, Mt Pleasant Laboratories, Launceston, Tasmania.

## DESCRIPTION

**Ploidy:** tetraploid.

## MAJOR ATTRIBUTES

Permatas is a stoloniferous persistent perennial clover with a dense prostrate growth habit and a very deep taproot. It has a very high level of drought and cold tolerance. Once established Permatas can tolerate persistent close grazing by sheep as the plants growing point is below the soil surface.

## SEASONAL PRODUCTION

Permatas produces most forage in the warmer months of spring/summer, but does have year round activity, producing high protein, high-energy forage with a high level of digestibility and nutritive value.

## DROUGHT TOLERANCE

Permatas has a very deep taproot and has an ability to become dormant through extended dry periods, as a result Permatas has a very high level of drought tolerance. At several trial sites in Tasmania Talish clover has shown excellent persistence through years where annual rainfall has been as low as 300mm.

## COLD TOLERANCE

Very high. Tolerates frosts to  $-9^{\circ}$  C with little or no frost damage.

## WATERLOGGING TOLERANCE

Will tolerate short periods of waterlogging.

## SALT TOLERANCE

Low.

### **SOIL AND CLIMATE REQUIREMENTS**

Best adapted for sowing in low rainfall temperate areas receiving 300mm to 750mm average annual rainfall. Adapted to a range of soil types pH 5.0 to 8.5 and climatic conditions.

### **MATURITY**

Begins flowers in early October. Seed matures December.

### **SEED SIZE**

Thousand seed weight 1.003gms (white clover 0.636gms).

### **HARD SEED**

Very high. 93% hard seed.

### **SEED TREATMENT**

Seed must be scarified and inoculated with appropriate rhizobia prior to sowing.

### **RHIZOBIUM**

Group O (cc2483g) or Group C (WSM 1325).

### **SOWING METHODS**

Drilled, direct drilled or broadcast.

### **SOWING DEPTH**

Best sown at 5mm.

### **SOWING RATE**

3-6 kg/ha, depending on seedbed quality.

### **SOWING TIME**

Preferably late summer to autumn for sufficient seedling development coming into winter, but can be sown in spring.

### **LAND PREPARATION**

Well-cultivated firm seedbed required for best results. For direct drilling or broadcasting there should be as little vegetation as possible and adequate soil moisture prior to sowing.

### **COMPATIBILITY WITH OTHER SPECIES**

Suitable for sowing with other forage grasses and legumes with low to moderate seedling vigour. May be out competed by more vigorous species.

### **SUGGESTED MIX**

Spanish cocksfoot, winter active tall fescue, phalaris, Talish clover and Caucasian clover.

### **SEEDLING VIGOUR**

Permatas can be slow to establish if sown in the cooler months and should not be sown with more vigorous plants eg, perennial ryegrass or bromes.

### **GRAZING MANAGEMENT**

Forage production in the first year will be low and management should be concentrated on maximising the chances of successful establishment. Permatas should be considered an investment that will provide returns for years to come. Once established can tolerate persistent close grazing by sheep.

### **DRY MATTER YIELD**

little data to date, although 2tDM/ha achieve under drought conditions at Cressy, Tasmania, 2006 (309mm of rain).

### **FEED VALUE**

High.

### **TYPICAL FEED TEST FIGURES**

Crude protein (%DM)	22.3
Digestibility (%digestible DM)	78.9
Metabolizable energy (MJ/kg DM)	11.6

### **ANTI QUALITY FACTORS**

None known.

### **DISEASES**

Some plants may suffer from mildew in years or areas where summers are wet.

### **PESTS**

Resistant to pasture grub attack. Highly susceptible to red legged earth mite attack as seedlings, but established swards appear more resistant.

### **ANIMAL PERFORMANCE**

No data available at this stage.

### **PRODUCTION DATA**

No data available at this stage.