

**Table 1. Comparative dry matter yields of pasture species at Tamworth from a trial sown on 9th May 2003.**

Cultivar or Line	Days to flowering	Yields in kg dry matter/ha (2003)		
		28th August	16th Sep- tember	17th October
Disc/strand medic (Toreador <sup>Ⓟ</sup> )	85	2340	4800	3375
Barrel medic (Caliph)	89	1240	4365	3630
Balansa clover (Frontier <sup>Ⓟ</sup> )	89	1667	4330	3525
Spineless burr medic (Scimitar <sup>Ⓟ</sup> )	91	1700	5167	3890
Barrel medic (Jester)	104	1520	4950	4150
Gland clover (Prima)	110	2100	5225	5050
Sub clover (Rosedale)	124	1140	3350	5025
Sulla cross	131	1715	4840	6840
Sub clover (Clare)	136	1290	3640	5290
Sulla (Aokau)	140	1515	4515	6275

**Table 2. Second year production from Sulla at Moree sown in 2000 (kg DM/ha).**

Date	28th June 2001	16th Aug 2001	18th Sept 2001	10th Oct 2001
Sulla	5500	8700	26000	19600

<sup>Ⓟ</sup> Varieties displaying this symbol beside them are protected under the Plant Breeders Rights Act 1994.

**Reference**

Carolyn de Koning, David Lloyd, Steve Hughes, Don McLachlan, Graham Crocker, Suzanne Boschma and Andrew Craig. *Hedysarum*, a new temperate forage legume with great potential - field evaluation. *Proceedings of the 11th Agronomy Conference, Geelong, 2003.*

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# Sulla

**(Hedysarum Coronarium)**  
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# Sulla

## (Hedysarum Coronarium)

### **A new highly productive legume option**

#### **Common Names**

Sulla, Italian sainfoin, French honeysuckle.

#### **Description**

It is a short term, cool season, deep rooted herbaceous perennial legume that grows from 0.5-1.2 meters tall, with succulent, pinnate leaves which have oval to round leaflets arranged in pairs. Stems are thick and succulent becoming woody after flowering. Strongly tap rooted, over 2m with numerous secondary roots.

#### **Distribution**

Sulla is widely used for fodder and hay in Europe, North America and New Zealand. While sulla is relatively new in Australia it has been grown in New Zealand for over 30 years.

#### **Characteristics**

Sulla grows well in warm temperate, Mediterranean and subtropical climates with mild winters. It is best adapted to alkaline calcareous soils including red-brown earths in SA and black earths and brigalow clay soils in northern NSW and southern Queensland. It will grow on mildly acid soils but its adaptation is limited by saline, sodic and waterlogged soils. It is susceptible to one race of Rhizoctonia root rot and to Sclerotium root in Queensland. It can be grown on sites having annual rainfall from 500 to 1500mm.

#### **Season of growth**

Autumn to spring, drying off with summer heat. Sowing date and autumn rainfall influences growth throughout the year. Vigorous autumn growth occurs in the second harvest year.

#### **Frost Tolerance**

Cannot tolerate temperatures much below freezing point.

#### **Drought Tolerance**

Medium Tolerance.

#### **Tolerance of Flooding**

Not tolerant.

#### **Dry Matter Yields**

Sulla is capable of very high dry matter production, more than 20 t/ha of dry matter in southern Queensland. More than 5 t/ha of dry matter has been measured in the winter in all 3 States. Sulla has high nutritive quality with leaf protein levels exceeding 25% and dry matter digestibility up to 70%.

#### **Suitability for Hay and Silage**

Growth characteristics, especially of erect, thin stemmed types, make sulla suitable for preservation. Good quality hay can be made if cut at the flowering stage rather than the traditional seed pod stage while good quality wilted silage can be made because of sulla's high water soluble carbohydrate content.

#### **Feeding Value**

High value, especially leafy forage in winter/early spring before increased steaminess. The forage contains moderate levels of condensed tannins which prevent bloat and are reputed to possess anthelmintic properties. Researches have found that the condensed tannins responsible for its non-bloating ability also produce a by pass protein effect which produces additional live weight gains of about 10% and reduces worm burdens. Sulla is also reported to reduce fly strike through reduced scouring.

#### **Grazing Management**

The inclusion of Sulla into the cropping rotation will allow nitrogen to be built up, will provide a break crop for insects and disease and can be used for hay, silage or as a green manure crop. Some of the advantages of sulla over Lucerne are that it provides better ground cover, makes excellent quality hay as it is a legume and it doesn't drop its leaf as Lucerne does.

#### **Disadvantages**

While the positives about sulla are good there are a few disadvantages to consider. This involves a range of management issues, which include:

1. Specialist sowing and establishing practices
2. Variable productivity – it can produce 25 tones DM/ha/year, but yields as low as seven tones DM/ha/year have been reported.
3. Tannin concentrations vary, and very hard high concentrations can be detrimental to animal performance

It has poor competitive capabilities, especially at the juvenile stage and post harvesting.

#### **Availability**

However, New Zealand has been growing it for over 30 years and hopefully two Australian cultivars of Sulla (Hedysarum coronarium) will be commercially available in 2006, one prostrate, the other semi-erect.

#### *Reference:*

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