



LEGUME

G U I D E



CONTENTS

- 03** Establishment Guarantee
- 04** Medics
- 06** Sub Clover
- 07** Clover
- 10** Winter Legumes

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S&W Seed Company is dedicated to providing the world's farmers with the very best seed varieties and hybrids to maximize their yields and profits, just as we have for over 40 years.



On the cover: SARDI Rose Clover



Photo: Barrel Medic



Establishment Guarantee[®]

At S&W Seed Company Australia, we are so confident in our seed genetics and the quality of our proprietary products, we will replace seed at half the original purchase price if it fails to establish satisfactorily.

Unfortunately, establishment failures can occur, so S&W Seed Company Establishment Guarantee[®] program* is available for the vital 30-day period after planting, and provides growers with substantial savings should they need to replant their paddocks.

S&W is the only forage company in Australia to offer Establishment Guarantee[®]. Plant with peace of mind and the support of S&W Seed Company Australia.

* Terms and Conditions apply.

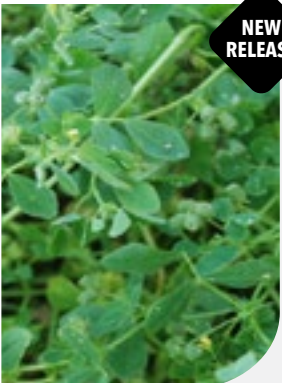
Penfield Barrel Medic

Penfield Spineless Barrel Medic is an early maturing, spineless barrel medic, with an SU herbicide residue tolerance trait. Barrel medics are some of the most persistent medic cultivars, offering excellent grazing recovery, tolerance to dry conditions and low fertility soils, as well as a natural level of aphid resistance. Medics are self-regenerating annual plants, meaning they will germinate from seed each year. Their hard-seeded characteristic means that one year of seed set offers numerous years of regeneration, as well as protecting from false breaks before the Autumn.

The addition of the SU herbicide residue trait offers increased persistence and is a valuable option for those with mixed farming systems, with the use of sulfonylurea herbicides common in broadacre rotations. Previously, medics have been highly susceptible to damage from a range of herbicide residues, particularly SU's.

This variety was developed in collaboration with Meat & Livestock Australia and SARDI, with the aim to develop productive pasture legumes for increased pasture quality and persistence in challenging environments.

The early maturity of Penfield (80 days) offers maximum biomass production in shorter season environments, with high levels of seed set offering strong persistence. This variety was also selected for lower hard seed levels, offering better regeneration in subsequent years. Well suited to a range of soil types and environments, from loams, right through to heavier clays.





NEW RELEASE

Penfield Barrel Medic *Medicago truncatula*

EARLY MATURING SPINELESS BARREL MEDIC WITH SU HERBICIDE RESIDUE TOLERANCE

Seeding Rate	kg/ha	Seed Treatment	Features & Benefits
Dryland	10-15	Goldstrike LongLife®	Spineless barrel medic
High Rainfall/Irrigation	15-20		SU herbicide residue tolerance
			First medic variety with elite combination of spineless trait and SU herbicide residue tolerance in a barrel medic

Product developed in collaboration with MLA, S&W & SARDI

Table 1. Medic varieties feed value growing as a crop, Nullawil 2022.

Crop	End Use	Variety	Sowing rate (kg/ha)	17 October Biomass (t/ha)	Crude Protein (%)	ME (MJ/kg)	ADF (%)	NDF (%)
Medic	Grazing	Paraggio	10	2.7	21.1	10.8	29.9	36.3
		Parabinga	10	4.9	18.8	9.3	38.8	47.3
		Seraph	10	4.7	22.7	10.4	32.4	38.4
		Emperor	10	6.0	20.5	10.2	31.9	38.1
		Penfield	10	5.6	19.4	9.7	34.4	41.0

The establishing medic also responded to fertiliser at sowing, producing 0.5t/ha more biomass and similar quality than the unfertilised plot, by 17 October (Table 2).

Table 2. Penfield medic response to applied fertiliser at sowing, Nullawil 2022.

Crop	Fertiliser	17 October Biomass (t/ha)	Crude Protein (%)	ME (MJ/kg)	ADF (%)	NDF (%)
Penfield medic	+	5.6	19.4	9.7	34.4	41.0
	-	5.1	22.0	10.6	31.7	37.9

*Alison Frischke, BCG (Standing Crops, 2022)



Emperor Barrel Medic

Medicago truncatula

NEW RELEASE

LATE MATURING BARREL MEDIC WITH POWDERY MILDEW RESISTANCE

Seeding Rate	kg/ha	Seed Treatment
Dryland	10-15	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits
 Powdery Mildew resistant
 Excellent dry matter production and grazing recovery
 Good grazing tolerance

Product developed in collaboration with MLA, S&W & SARDI



Cavalier Spineless Burr Medic

Medicago polymorpha var brevispina

HIGHLY ADAPTABLE ANNUAL MEDIC WITH VERSATILE USES

Seeding Rate	kg/ha	Seed Treatment
Dryland	10-15	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits
 Very early maturing
 Barrel shaped seed pod
 Aphid resistance
 Excellent base legume for low rainfall pasture grazing



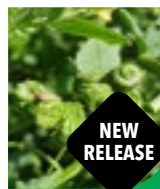
Bindaroo Button Medic

Medicago orbicularis

A PROSTRATE GROWING MEDIC WITH HIGH HARD SEEDS AND PERSISTENCE

Seeding Rate	kg/ha	Seed Treatment
Dryland	10-15	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits
 Button shaped seed pod
 Ultra high hard seed level
 Semi-prostrate growth habit



Seraph Strand Medic

Medicago littoralis

NEW RELEASE

POWDERY MILDEW RESISTANT, SU RESIDUE TOLERANT STRAND MEDIC

Seeding Rate	kg/ha	Seed Treatment
Dryland	10-15	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits
 Excellent early vigour and winter production
 Resistant to SU Herbicide and Powdery Mildew
 Good adaptation to alkaline sandy loam in low rainfall
 Palatable at all growth stages



Caliph Barrel Medic

Medicago truncatula

VERY EARLY MATURING APHID RESISTANT BARREL MEDIC

Seeding Rate	kg/ha	Seed Treatment
Dryland	10-15	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits
 Very early maturing
 Barrel shaped seed pod
 Aphid resistance
 Excellent base legume for low rainfall pasture grazing



Silver Snail Medic

Medicago scutellata

SNAIL MEDIC VARIETY WITH EXCELLENT VIGOUR AND PERSISTENCE

Seeding Rate	kg/ha	Seed Treatment
Dryland	15-18	Goldstrike LongLife®
High Rainfall/Irrigation	18-25	

Features & Benefits
 Early maturing
 'Snail' shaped seed pod
 Erect growth habit with very early bulk
 Excellent hay option
 Some tolerance to lower pH soils

SUB CLOVER

About Sub Clover

Sub Clover is a grazing-tolerant, self-regenerating, annual pasture legume that thrives best from Autumn through to Spring. Its vigorous establishment provides excellent winter feed, and it is highly persistent in medium to high rainfall areas and other regions with infrequent cropping. Sub clover can produce large volumes of dry matter, offering exceptional value for money, and maintains its high feed quality throughout the growing season. When well nodulated, it fixes nitrogen that can be utilised by grasses and other broadleaf plants. The perfect companion to ryegrass cultivar.



Dalsa® Sub Clover

Trifolium subterranean

EARLY MATURITY CONVENTIONAL SUB WITH GREAT EARLY VIGOUR

Seeding Rate	kg/ha	Seed Treatment
Dryland	8-14	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits

- Early maturing with high levels of hard seed
- Strong burr burial strength
- Excellent base legume for regenerating pasture
- Reliable seed set in early seasons, high hard seed for drought proofing



Ovaflow® Sub Clover

Trifolium subterranean

LATE MATURITY CONVENTIONAL SUB FOR HIGH YIELDS IN REGENERATING PASTURES

Seeding Rate	kg/ha	Seed Treatment
Dryland	8-14	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits

- Late maturing conventional sub clover
- Good burr burial strength
- Tolerant to hard levels of grazing
- High yield potential in late season environments



Hatrik® Sub Clover

Trifolium subterranean sub species yanninicum

MID MATURITY WHITE SEEDED SUB CLOVER WITH WATERLOGGING TOLERANCE

Seeding Rate	kg/ha	Seed Treatment
Dryland	8-14	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits

- White seeded 'yanninicum' type
- Excellent tolerance to waterlogging
- Persistent in high rainfall and irrigated environments with particularly wet winters
- Versatile regenerating variety



Clare2® Sub Clover

Trifolium subterranean sub species brachycalycinum

MID MATURITY, LARGE LEAF 'BRACHY' TYPE SUB CLOVER

Seeding Rate	kg/ha	Seed Treatment
Dryland	8-14	Goldstrike LongLife®
High Rainfall/Irrigation	15-20	

Features & Benefits

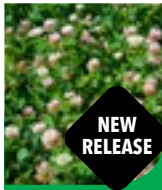
- Large leaf 'brachycalycinum' type
- Mid maturity variety
- Excellent early vigour
- Adaptable to a range of soil types

[Click here](#) for more information from MLA on identifying sub clover cultivars

Clover – Species Identification and Agronomic Traits

Variety & Species	Annual / Perennial	Maturity	Hard Seed	Waterlogging	Other Traits
Turbo Persian	Annual	Very late/ multi-cut	Low	Tolerant	Good heat and frost tolerance, low bloat, large leaf.
Sardi Persian	Annual	Mid	High	Tolerant	Low growth points. Regenerates from hard seed.
Zulumax Arrowleaf	Annual	Late	High	Poor	Deep taproot, low bloat, poor winter growth. Regenerates from hard seed.
White Cloud Crimson	Annual	Mid	Soft	Poor	Taproot, good early vigour, and winter growth. White colour reduces bitter compounds.
Alexandria Berseem	Annual	Mid-late	Low	Tolerant	Good early vigour, susceptible to frost, some salt tolerance.
Sardi Rose	Annual	Early-mid	Medium	Poor	Pioneering species (acidic, dry, low fertility).
Bartolo Bladder	Annual	Early	High	Poor	Susceptible to frost. Regenerates from hard seed.
Enduromax Balansa	Annual	Early	High	Tolerant	Good winter production. Regenerates from hard seed.
Border Balansa	Annual	Mid	High	Tolerant	Frost tolerant. Regenerates from hard seed.
Baler Balansa	Annual	Late	High	Tolerant	Sow in warm soil temperatures for best establishment. Regenerates from hard seed.
Renegade Red	Perennial	Mid	-	Moderately tolerant	Upright/hay type
Haifa White	Perennial	Early	-	Moderately tolerant	Common, large leaf, high stolon density
Casper White	Perennial	Early	-	Moderately tolerant	Large leaf, improved early vigour
Jumbo White	Perennial	Late	-	Moderately tolerant	Ladino type, vigour, heat tolerance
Palestine Strawberry	Perennial	Early	High	Tolerant	Deep-rooted, drought and salt tolerant. Regenerates from hard seed.
Dalsa® Sub	Self-regenerating	Early (97 d)	High	Poor	Subterranean, burr burial 9
Hatrik Sub	Self-regenerating	Mid (114 d)	Low	Tolerant	Yannicum, burr burial 5
Clare 2 Sub	Self-regenerating	Mid (130 d)	Low	Poor	Brachycalycinum, burr burial 1
Ovaflow Sub	Self-regenerating	Late (140 d)	Low	Poor	Subterranean, burr burial 6

CLOVER



Enduromax® Balansa Clover

Trifolium michelianum

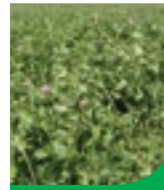
NEW
RELEASE

EARLY MATURING BALANSA WITH ELITE WINTER PRODUCTION

Seeding Rate	kg/ha	Seed Treatment
Dryland	4-6	Goldstrike®
High Rainfall/Irrigation	8-12	

Features & Benefits

Earliest balansa clover variety
Very high hard seed levels
Good early winter growth compared to other balansa clover varieties
Reliable hard seed base for long term regenerating pastures



Renegade Red Clover

Trifolium pratense

BIG YIELDING, SHORT-TERM RED CLOVER

Seeding Rate	kg/ha	Seed Treatment
Dryland	3-4	Goldstrike®
High Rainfall/Irrigation	5-8	

Features & Benefits

Tetraploid type
Erect growing 'hay type'
High yielding
Good disease tolerance
Excellent hay type for top end forage yield and annual mixes



Border Balansa Clover

Trifolium michelianum

MID-MATURITY BALANSA WITH EXCELLENT PERSISTENCE

Seeding Rate	kg/ha	Seed Treatment
Dryland	4-6	Goldstrike®
High Rainfall/Irrigation	8-12	

Features & Benefits

Heading date similar to Paradana
High hard seed levels
Waterlogging tolerant
Excellent regenerating annual for late season environments with wet winters
Highly digestible feed source



Turbo Persian Clover

Trifolium resupinatum sub species majus

LATE SEASON PERSIAN WITH EXCELLENT RECOVERY FROM GRAZING OR HARVEST

Seeding Rate	kg/ha	Seed Treatment
Dryland	6-10	Goldstrike®
High Rainfall/Irrigation	10-15	

Features & Benefits

Excellent seedling establishment and winter growth
Very late maturing variety
Good frost tolerance
Highly digestible source of forage



Baler Balansa Clover

Trifolium michelianum

NEW
RELEASE

VERY LATE MATURING BALANSA FOR MAXIMUM YIELD POTENTIAL

Seeding Rate	kg/ha	Seed Treatment
Dryland	4-6	Goldstrike®
High Rainfall/Irrigation	8-12	

Features & Benefits

Very late maturing
Waterlogging tolerant
Good cold tolerance
Excellent regrowth from grazing and cutting



SARDI® Persian Clover

Trifolium resupinatum

HARD SEEDED TYPE WITH MID MATURITY

Seeding Rate	kg/ha	Seed Treatment
Dryland	5-8	Goldstrike®
High Rainfall/Irrigation	10-15	

Features & Benefits

Highly digestible forage legume
Tolerant of waterlogging
Hard seeded Persian clover 'resupinatum' type
Excellent feed conversion for grazing animals

CLOVER



Riesling White Clover

Trifolium repens

EARLY MATURING VARIETY WITH HIGH STOLON DENSITY

Seeding Rate	kg/ha	Seed Treatment
Dryland	3-4	Goldstrike®
High Rainfall/Irrigation	5-8	

Features & Benefits

High stolon density
Strong root system
Highly persistent in higher rainfall environments
Highly digestible forage



Bartolo Bladder Clover

Trifolium spumosum

ADAPTABLE OVER WIDE SOIL TYPES, VERY HIGH LEVELS OF HARD SEED

Seeding Rate	kg/ha	Seed Treatment
Dryland	8-14	Goldstrike®
High Rainfall/Irrigation	15-20	

Features & Benefits

Adaptable to a wide range of soil types
Some tolerance to RLEM
Very high hard seed levels
Suitable for low rainfall pastures



SARDI Rose Clover

Trifolium hirtum

HIGH PERSISTENT ROSE CLOVER WITH IMPROVED HARD SEEDS

Seeding Rate	kg/ha	Seed Treatment
Dryland	5-8	Goldstrike®
High Rainfall/Irrigation	10-15	

Features & Benefits

Highest hard seed levels of any rose clover
Pioneering species
Tolerant to mildly acidic soils
Persists and regenerates in soils with low fertility



Casper White Clover

Trifolium repens

EARLY MATURING VARIETY WITH LARGE LEAF SIZE

Seeding Rate	kg/ha	Seed Treatment
Dryland	3-4	Goldstrike®
High Rainfall/Irrigation	5-8	

Features & Benefits

Early maturing variety
Large leaf trait
Excellent permanent pasture option
Quick recovery from grazing, suits rotational grazing systems with a grass base



Zulumax® Arrowleaf Clover

Trifolium vesiculosum

LONG SEASON VARIETY WITH HIGH YIELD POTENTIAL

Seeding Rate	kg/ha	Seed Treatment
Dryland	6-10	Goldstrike®
High Rainfall/Irrigation	10-15	

Features & Benefits

Late heading date
Adaptable to heavy and low pH soils
Low bloat potential
Very high potential yield



Jumbo White Clover

Trifolium repens

LATE MATURING 'LADINO' TYPE

Seeding Rate	kg/ha	Seed Treatment
Dryland	3-4	Goldstrike®
High Rainfall/Irrigation	5-8	

Features & Benefits

'Ladino' type with large leaves
Excellent recovery from grazing
High heat tolerance gives 'year-round' production
Highly digestible feed for elite animal performance

About Vetch

Vetch, belonging to the genus *Vicia* spp., is an annual legume commonly cultivated during winter for its multipurpose nature. It typically develops as a sprawling vine, using branched tendrils for climbing, and can form dense stands reaching up to approximately 80cm in height. Alternatively, it can be trained to trellis on cereals or canola crops, providing opportunities for grazing, ensiling, or preservation as hay.

The *Vicia* spp. genus encompasses around 140 species of flowering plants, collectively known as vetches. Considered a large-seeded pasture legume, vetch serves various purposes including forage, fodder, and as a nitrogen-fixing green manure. In Australia, all varieties of Common vetch are suitable for grain production, providing high-protein feed for ruminants and a limited portion for pig rations.

Notable species of vetches bred and cultivated in Australia include:

Common or grain vetch – *Vicia sativa*

Timok Vetch*, Studenica Vetch*

Purple vetch – *Vicia benghalensis*

Presto Vetch*

Woolly pod vetch – *Vicia villosa* subspecies *dasycarpa* and *eriocarpa*

Woolly Pod Vetch

*Indicates S&W Seed Company proprietary products



Studenica Vetch
Vicia sativa


NEW RELEASE

LATEST RELEASE COMMON VETCH WITH SEEDLING FROST TOLERANCE

Seeding Rate	kg/ha	Seed Treatment
Dryland	30-45	None / XLR8™ optional

Features & Benefits

- Fantastic early vigour
- Seedling frost tolerance
- White flowers from 'Blanchefleur' parentage
- Can be sown late due to seedling frost tolerance
- Late sowing allows for better weed control post season break
- High dry matter and grain yields in short season areas



Presto® Purple Vetch
Vicia benghalensis

VERY EARLY MATURING PURPLE VETCH

Seeding Rate	kg/ha	Seed Treatment
Dryland	30-45	None / XLR8™ optional

Features & Benefits

- Earliest maturing purple vetch option
- Quick emergence and forage production
- Approx 35 days earlier than Popany
- Good winter growth
- Excellent quality legume for dry matter production
- High nitrogen fixation potential for a short season



Timok Vetch
Vicia sativa

ALL-PURPOSE COMMON VETCH

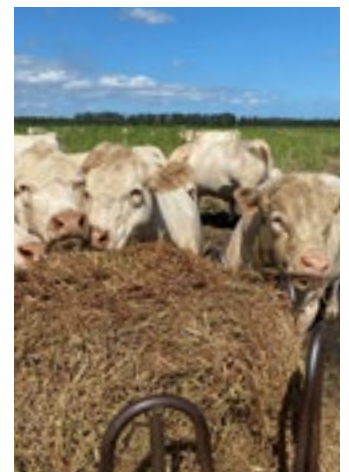
Seeding Rate	kg/ha	Seed Treatment
Dryland	30-45	None / XLR8™ optional

Features & Benefits

- Maturity between Rasina and Morava
- High yield and rust resistance
- Very good vigour at flowering
- Early dry matter production in short season environments
- Excels even in low rainfall situations
- High forage quality, ideal feed for livestock operations

“
To have a legume hay yield of 4500kg/ha plus the nitrogen benefit for the following summer crop is a huge win for the Redgroves' enterprise.

**Agronomist,
Richard Parker**



Timok Vetch: A Game-Changer for the Redgroves' Cattle and Hay Enterprise



Photo: David Redgrove in paddock of Timok Vetch

Hinton (NSW) cattle and hay producers, David & Sue Redgrove, faced several challenges in August 2022. Floodwaters, greater than 2m deep, inundated their broadacre and cattle property in the Hunter Valley, leaving the property isolated for 10 days.

After a successful Sorghum crop in summer 2022-23 (following the flood), David and Sue, along with Agronomist Richard Parker of Achieve Agronomy, decided to implement a legume rotation to address the soil de-nitrification caused by the flooding.

The 12ha paddock was worked to a fallow and finished with power-harrows resulting in an excellent seed bed. The paddock was sown on the 1st of May with Timok Vetch at 30 kg/ha along with 125kg/ha of Croplift 15 fertiliser. Metribuzon herbicide was applied post sowing pre-emergent followed by 25mm of irrigation to control troublesome weeds producing a nice clean stand of Timok Vetch.

The crop was treated with NPK in the form of Chelates at 5L/ha on 3rd of August followed with 25ml of Irrigation on the 15th of August. The crop responded nicely, ultimately setting the Timok Vetch up for a hay crop. The crop was cut for hay on the 22nd September and was made into Round Bale Hay, yielding 165 large round bales, averaging 14 large round bales per hectare (avg. 300kg/bale) of Vetch hay.

The quality of the hay was exceptional, attracting a premium price when sold. David commented that his customers were "extremely happy with the quality and palatability of the hay". David was impressed with Timok vetch stating, "it's hay yield was terrific, and the cows just love it".

Agronomist Richard Parker said the Timok vetch had done "exactly what we wanted; the shorter maturity worked perfectly for our double crop system".

Richard went on to explain "to have a legume hay yield of 4500kg/ha plus the nitrogen benefit for the following summer crop is a huge win for the Redgroves' enterprise".

Following the success of the 2023 season, Timok will become a permanent part of the Redgroves' production plans. David stated, "It's easy to grow, there's a ready-made market for the hay, and the added nitrogen is a win-win".

Note: Following the vetch hay crop, Agronomist Richard Parker reported that the 12ha was planted with forage sorghum in summer 2023-24. The additional nitrogen benefit from the Timok vetch crop resulted in an extra 5mt/ha hay yield at first cut (extra 10 bales/ha) in the paddocks of forage sorghum following vetch than adjacent paddocks planted on non-vetch fallow.

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