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Current lucerne varieties 2009

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In order to ensure high production and longevity in a lucerne stand it is important to establish an adequate plant population and ensure that it survives for as long as production is required.

Choosing appropriate varieties is a key step towards achieving a productive, persistent stand. Consider which factors are likely to reduce lucerne growth in your situation and when plant growth is required. Varieties must suit your environment, management system and markets.

Winter growth of lucerne

Although lucerne is a perennial plant, its winter growth habit (or dormancy) varies between varieties. Dormancy classes range from 3 to 10: dormant (3, 4); semi-dormant (5); winter-active (6, 7); and highly winter-active (8, 9, 10).

Winter-active varieties continue to grow right through the winter period while dormant and semi-dormant varieties grow very little during this time. The lower the dormancy number of the variety, the earlier it will cease growth in autumn and the later it will start in spring.

As a rule, dormant and semi-dormant varieties persist longer than highly winter-active ones under stressful conditions (e.g. severe cold or heavy grazing). Winter active varieties tend to have large, vigorous seedlings which can be an advantage in early winter sowings. Note that the growth pattern of a variety can change if moisture is limiting.

Pests and diseases of lucerne in NSW

Several pests and diseases limit lucerne production. Their impact depends on the variety, the age and health of the plant and the seasonal conditions. Not all pests are relevant in every region, every year.

Other factors, such as acid soils, salinity, waterlogging, heavy grazing and other diseases and insects, can also reduce production and persistence of lucerne.

The following pests and diseases are recognised as being the main ones reducing lucerne production in Australia and for which some resistance is available. Aphid resistance is essential in all regions of Australia, while the need for resistance to other pests and diseases will vary, depending on the location and available management options.

- **SAA (spotted alfalfa aphid)** is an insect that can kill both seedlings and mature plants. All varieties, except Hunter River, have some resistance.
- **BGA (blue-green aphid)** can kill lucerne seedlings and dramatically reduce plant growth of established lucerne plants. BGA resistance is desirable.
- **PRR (phytophthora root rot)** is a fungal disease which destroys the root system of lucerne. PRR resistance is essential on heavy soils or under flood irrigation.
- **Anthracnose** is a disease caused by the fungus *Colletotrichum trifolii* which causes crown rot in lucerne. Resistance is important for hay-cutting stands in warm humid areas or under spray irrigation.
- **SN (stem nematode)** reduces production and kills plants along the major river systems of NSW, where at least moderate resistance may be required.
- **BW (bacterial wilt)** is a minor disease in NSW, but may be important on the coast and inland rivers in southern NSW and in Victoria. At least moderate resistance to BW is required in those areas.

Breeding lucerne varieties

A lucerne variety is a genetic population of many different plants, so resistance to, or tolerance of pests and diseases varies from plant to plant within any variety. However, each variety is unique and is widely tested in a range of locations before it is released for sale.

Most new varieties have **Plant Breeders Rights** (PBR) which protect the breeders of varieties and provide funds for plant breeding and innovation. Under PBR each variety is signified as distinct, uniform and stable for several traits. It does not indicate yield or agronomical performance of any variety.

Commercial varieties

The list on the next page provides information about the characteristics of current commercial varieties available in NSW. The ratings are collated from information provided by breeders and seed companies. Use this and local information to ensure that you select appropriate varieties.

This list is intended as a guide only. It does not represent results of comparative tests between these varieties, and does not represent recommendations by Industry and Investment NSW.

Note: a high level of 'resistance' does not mean the variety is immune to the pest or disease; a proportion of plants may still be susceptible.

Note that resistant varieties may still require control measures to avoid yield loss, especially in seedling stands.

Key to table (next page)

Pest & disease resistance: HR – highly resistant; R – resistant; MR – moderately resistant; LR – low resistance; S – susceptible.

Winter growth[#]: Varieties are listed alphabetically within groups of increasing late autumn–winter growth (i.e. 3 – very slow, 6 – moderate, 10 – very active). Dormancy groupings are not absolutely distinct; the range of dormancy is continuous.

∅ Protected by Plant Breeders Rights;

® Registered trademark;

TM Trademark;

~ No data available

* Public variety, not covered by Plant Breeders Rights.

+ These ratings do not reflect all races of anthracnose (*Colletotrichum trifolii*). The distribution and importance of all identified races in NSW is not known.

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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (September 2009). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of Industry & Investment NSW or the user's independent adviser.

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Variety	Winter growth [#]	SAA	BGA	PRR	Anthracnose ⁺	SN	BW
Winter-dormant							
54Q53 [Ⓟ]	4	R	MR	HR	HR	HR	HR
WL 342HQ-MF	4	R	R	HR	HR	R	HR
Semi winter-dormant							
Hunter River*	5	S	S	S	S	S	S
Kaituna [Ⓟ]	5	R	HR	MR	R	HR	R
L56 [Ⓟ]	5	HR	HR	HR	HR	HR	HR
SARDI Five [Ⓟ]	5	HR	HR	HR	HR	R	~
SF Force 5	5	MR	~	HR	HR	HR	MR
Venus [Ⓟ]	5	HR	R	MR	LR	~	~
Winter-active							
Aurora*	6	HR	HR	R	MR	R	LR
Hunterfield*	6	HR	LR	S	S	S	S
Icon [Ⓟ] (SuperAurora)	6	HR	HR	HR	S	~	~
Stamina [®] GT6	6	HR	R	R	HR	HR	~
WL 614	6	HR	HR	HR	MR	R	R
Flairdale [Ⓟ]	7	R	HR	R	LR	R	~
Genesis [Ⓟ]	7	HR	R	R	R	~	~
Q75 [Ⓟ]	7	HR	R	HR	HR	R	MR
Quadrella [Ⓟ]	7	R	R	MR	R	LR	S
SARDI Seven [Ⓟ]	7	HR	HR	HR	HR	R	~
SF Force 7	7	R	~	HR	MR	HR	R
SF 714QL	7	HR	HR	HR	MR	R	R
Trifecta*	7	R	HR	MR	R	LR	R
UQL-1 [Ⓟ]	7	HR	HR	HR	HR	~	~
Highly winter-active							
Aquarius [Ⓟ]	8	R	HR	HR	LR	R	MR
Australis (SuperSiriver) [Ⓟ]	8	R	HR	R	MR	~	~
Hallmark [Ⓟ]	8	HR	R	HR	HR	HR	~
Multi Foli [®] -8	8	HR	HR	HR	R	R	R
Blue Ace (SuperSequel) [Ⓟ]	9	HR	HR	R	LR	~	~
CUF101*	9	R	HR	MR	S	S	S
L90 [Ⓟ]	9	R	HR	HR	HR	R	LR
L91 [Ⓟ]	9	HR	HR	HR	HR	R	R
ALA Pegasus [Ⓟ]	9	HR	LR	R	MR	~	~
Salado [Ⓟ]	9	R	HR	LR	LR	MR	~
Saturn [™]	9	HR	HR	HR	MR	MR	~
Sequel*	9	R	R	MR	R	S	S
Sequel HR [Ⓟ]	9	R	R	R	HR	R	~
Silverado [Ⓟ]	9	HR	HR	HR	HR	MR	~
Siriver*	9	HR	MR	S	S	S	S
Siriver MkII [Ⓟ]	9	HR	R	LR	S	~	~
Sirosal	9	HR	HR	R	S	S	~
SuperSonic [Ⓟ]	9	R	HR	HR	MR	~	~
WL 925HQ	9	HR	HR	HR	MR	R	MR
Cropper 9.5 [®]	9.5	HR	HR	HR	MR	R	MR
ML99 Multileaf [®] [Ⓟ]	10	HR	HR	HR	HR	MR	~
SARDI Ten [Ⓟ]	10	HR	HR	R	R	R	~
SF Force 10	10	HR	HR	HR	MR	R	LR