



LUCERNE

SA STANDARD

OVERVIEW

The old reliable South African variety. Winter dormant, minimum rainfall of 350mm required. Responds well to moisture but can also withstand drought conditions. Produces high yields in spring, summer and autumn. Can tolerate high temperatures. Dormancy group 5 - 6.



- Subtropical Legume
- Semi-winter dormant, dormancy 6
- Can withstand severe heat and cold conditions
- Moderately tolerant to soil salinity
- Responds quickly to spring and summer rainfall/irrigation

DROUGHT TOLERNACE	HIGH
PROTEIN CONTENT	HIGH
DISEASE RESISTANCE	HIGH
PRODUCTIVITY	8 – 15 t/ha/annum
SOWING PERIOD	Aug – Sept Feb– May
SEEDING RATE	8 – 12.5 kg/ha dryland
SEEDING RATE	20 – 25 kg/ha irrigated

Table 3: Yield (tons DM.ha⁻¹) per year to date of dormant lucerne cultivars planted at Cedara.





Cultivar	Dormancy rating	Year 1 (Spr 14 to Aut 15)			Year 2 (Wint 15 to Aut 16)			Year 3 (Wint 16 to Aut 17)			Total Yield (Year 1 to 3)		
		tons.ha ⁻¹	Rnk		tons.ha ⁻¹	Rnk		tons.ha ⁻¹	Rnk		tons.ha ⁻¹	Rnk	
Aurora A	6	10.94	11	bcd	16.29	12	ab	13.80	9	a	41.02	11	ab
Aurora KK	5	9.05	18	d	16.21	13	ab	12.94	15	a	38.20	18	b
CAP789 Sigma	8	11.85	9	abc	18.40	1	a	14.70	4	a	44.95	3	a
Gea	7	13.11	2	ab	17.96	4	ab	13.82	8	a	44.89	4	a
Genesis II	7	10.17	16	cd	16.38	10	ab	12.75	16	a	39.30	15	ab
HL6	6	13.04	3	ab	18.22	2	a	13.85	7	a	45.12	1	a
Magna 601	6	12.38	6	abc	16.13	14	ab	13.34	10	a	41.85	10	ab
Marina	7	12.42	5	abc	17.43	6	ab	15.16	1	a	45.01	2	a
PANLUC 26	6	13.50	1	a	15.92	16	ab	13.21	12	a	42.63	9	ab
SA Select AGR	7	10.38	15	cd	15.40	18	b	12.62	17	a	38.40	16	b
SA Select KK	7	10.04	17	cd	15.76	17	ab	12.51	18	a	38.31	17	b
SA Standard	5	12.11	8	abc	17.71	5	ab	14.80	2	a	44.62	5	a
Sardi 7	7	10.46	14	cd	18.00	3	ab	14.78	3	a	43.24	8	ab
Super Aurora	7	11.02	10	bcd	16.43	9	ab	13.33	11	a	40.77	12	ab
Venus	6	10.87	12	bcd	16.03	15	ab	13.08	13	a	39.97	13	ab
WL357HQ	5	13.04	4	ab	16.89	8	ab	13.96	6	a	43.89	6	ab
WL414	7	12.26	7	abc	17.11	7	ab	14.31	5	a	43.67	7	ab
WL525HQ	8	10.60	13	cd	16.29	11	ab	13.05	14	a	39.94	14	ab
CV%		10.9			8.2			9.9			7.2		
LSD (0.05)		2.079			2.289			2.237			5.036		
Mean		11.51			16.81			13.67			41.99		

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Lucerne Dormancy Groups

The activity-dormancy of lucerne varieties has little effect on the total production during the life of a stand. It is important though in determining the amount of autumn to early spring production. Lucerne varieties are referred to as being: Winter dormant, semi winter dormant and highly winter active.

More recently a scale of 1 to 10 has been used, 10 being highly winter active, while 3 is winter dormant.

Scale	Lucerne varieties	Growth habit
1-3	Winter dormant varieties have a dormant period, usually started by shortening daylight hours. Growth during this period virtually stops. They have less winter vigour and so are less suited to sowing in the cooler months of winter. These varieties provide less feed at the critical autumn – early winter period, so are not favoured as dryland varieties.	
4-5	Semi-dormant varieties have better autumn and spring growth than winter dormant varieties. They have broader crowns which sit lower in the ground compared to more active varieties. These varieties have only a short dormancy period in midwinter. Where strict rotational grazing is not possible, these varieties may persist better than those with more activity.	
6-7	Winter active varieties slow down in growth during the cold winter months, but they never become dormant. They will recover faster after cutting or grazing than dormant varieties.	
8-9	Highly winter active varieties also have slower growth in winter but are highly active in late autumn and early spring. Varieties commonly have narrow crowns which sit above ground level, making them more vulnerable to grazing damage. Most Australian bred varieties, however, have retained good grazing tolerance.	
10	Very highly winter active lucerne varieties are currently very productive but have poor persistence. They are well suited to short rotations (2-4 years) and require careful grazing management to maximise persistence. This category has only recently been added to the winter activity scale.	