Live Weight Gain Trial 2014

2014 | Penfield Research Station | Trial Sown 23/05/2014

Throughout the duration of the trial, all varieties were exposed to the same environmental conditions and assessed equally by being grazed simultaneously by three grazing groups of steers; one group on each variety at any time. With each cattle group grazing each different variety for a four week rotation, this allowed us to exclude the differences in the grazing performance of the different cattle groups from being a variable factor.

An irrigated six hectare paddock was divided into 12 half-hectare sections . On the May 23, four of these sections were each sown with L71 Lucerne, Aurora, and SARDI 7 Series 2.

Sowing rate was 15 kilograms per hectare.

24 Hereford steers were split into three grazing groups of eight steers, with an average starting weight of 299 kilograms.

The three groups simultaneously grazed each of the varieties throughout the duration of the trial.

The trial ran for 12 weeks, in which each variety at least would be grazed for a four week duration by each of the four grazing groups.

No other sources of feed or supplements were given to the animals.

Discussion

Throughout the duration of the trial, all varieties were exposed to the same environmental conditions and assessed equally by being grazed simultaneously by the three grazing groups of steers; one group on each variety at any time. With each cattle group grazing each different variety for a four week rotation, this allowed us to exclude the differences in the grazing performance of the different cattle groups from being a variable factor.

The trial focused on the true variable being the variety of lucerne that was being grazed. During the trial measurements on dry matter production of the varieties were also taken, as well as samples taken for feed quality analysis. All varieties established well, and the cattle performance in the first four week rotation was good all round. Prior to the trial commencing there was a very dry early spring period, without much natural rainfall. The trial was irrigated, but there was still a lack of soil moisture deep in the soil profile and this caused some periods of moisture stress between watering.

This resulted in particularly the second rotation showing a drop off in dry matter production from all varieties, but also daily weight gain in the Aurora and SARDI 7 Series 2. However, dry matter production and weight gain began to increase again in the third rotation across all varieties.

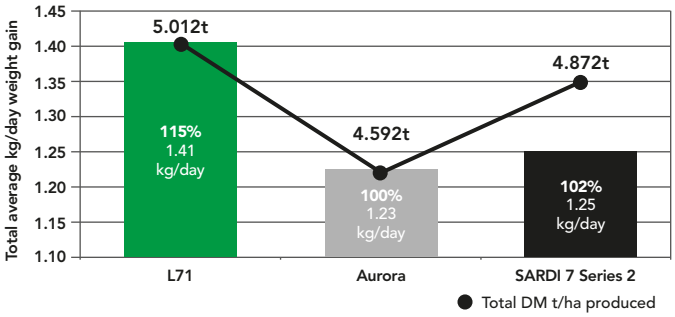
The results indicate that the L71 Lucerne was able to maintain quality and resulted in higher levels of intake during these times. The feed analysis shows a lower percentage of ADL and NDF values, this could likely account for the higher levels of kilograms per day weight gain achieved by the L71 Lucerne throughout the trial. The results are consistent with the key features of L71 Lucerne; which is a highly persistent and high quality variety, able to perform in both irrigated and dryland conditions that are less than ideal.

First, second and third rotation

First rotation	Second rotation	Third rotation
06/10/2014 - 02/11/2014	02/11/2014 - 30/11/2014	01/12/2014 - 28/12/2014

Total average g/day weight gain

	Kg/Day weight gain average	DM t/Ha produced total
L71	1.41	5.012
Aurora	1.23	4.592
SARDI 7 Series 2	1.25	4.872



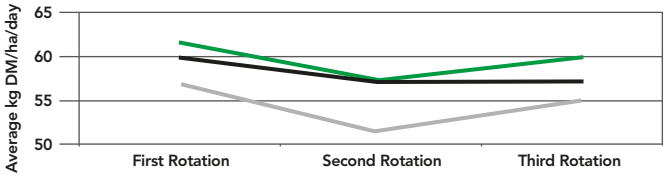
Feed Tests

	L71	Aurora	SARDI 7 Series 2
% Dry Matter	17.20	16.40	14.70
ME (MJ/kg)	11.50	11.70	11.70
% Crude Protein	30.20	31.40	32.00
% ADF	24.9	26.5	25.7
% NDF	30.5	31.8	30.7
RFV	212	199.7	208.7

Average results from feed test taken prior to grazing throughout the trial (three tests).

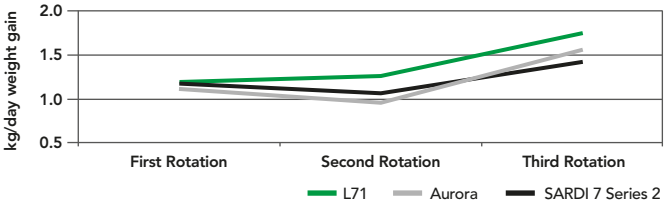
Lucerne average kg dm/ha/day

Average Kg DM/Ha/day	First rotation	Second rotation	Third rotation
L71	62	57	60
Aurora	57	52	55
SARDI 7 Series 2	60	57	57



Average kg/day weight gain

Average Kg/Day weight gain	First rotation	Second rotation	Third rotation
L71	1.27	1.26	1.71
Aurora	1.20	0.97	1.53
SARDI 7 Series 2	1.26	1.07	1.41



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