

Penfield Station Liveweight Gain Trial 2013

**Perun
weight gain
increase
over
Crusader
by 29%**

RYEGRASS

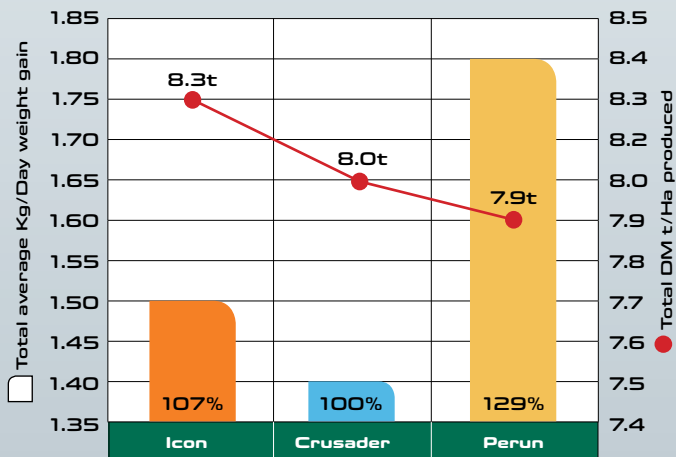
GRASS GRAZING TRIAL

- An irrigated 6Ha paddock was divided into 12 half Ha sections. On the 6th of May, 4 of these sections were each sown with **Icon Italian Ryegrass**, **Crusader Italian Ryegrass** and **Perun Festulolium**.
- Sowing rate was 30Kg/Ha
- 24 Angus steers were split into 3 grazing groups of 8 steers, with an average starting weight of 225Kg
- The 3 groups simultaneously grazed each of the varieties throughout the duration of the trial
- The trial ran for 16 weeks, in which each block of each variety at least would be grazed in a rotation for a week every 4 weeks.
- No other source of feed or supplements were given to the animals

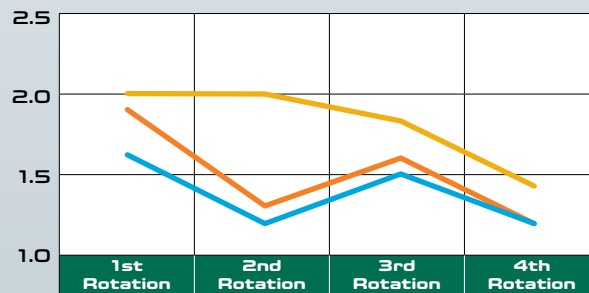
	Kg/Day weight gain average:	DM t/Ha produced total:
Icon	1.5	8.3
Crusader	1.4	8.0
Perun	1.8	7.9

Ave Kg weight gain/day	1st rotation	2nd rotation	3rd rotation	4th rotation
Icon	1.9	1.3	1.6	1.2
Crusader	1.6	1.2	1.5	1.2
Perun	2.0	2.0	1.7	1.4

TOTAL AVERAGE KG/DAY WEIGHT GAIN



AVERAGE KG WEIGHT GAIN/DAY



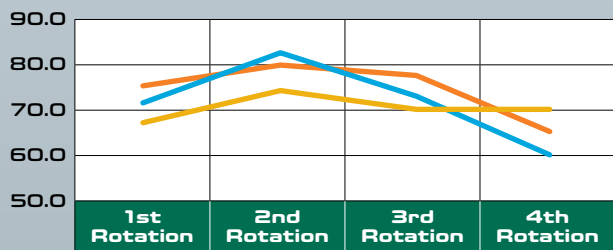
Ave Kg DM/Ha/day	1st rotation	2nd rotation	3rd rotation	4th rotation
Icon	75.0	80.0	77.0	65.0
Crusader	71.0	82.0	73.0	60.0
Perun	67.0	74.0	70.0	70.0

FEED TESTS

Average results from feed test info taken prior to grazing throughout the trial (4 tests):

	Icon	Crusader	Perun
% NDF	52.3	53.9	49.9
ME (MJ/Kg)	10.16	10.01	10.89
% Crude Protein	20.3	20.1	25.8
ADF	29.5	30.7	26.5
RFV	117	112	127

SEASONAL AVERAGE KG DM/HA/DAY



Discussion:

The trial protocol was developed to remove any variables and limiting factors other than the grass variety being grazed, so that it was ideally the only influencing factor into the differences of the animal's performance. Environmental conditions and animal performance differences were mitigated due to the fact that each variety being assessed was grazed simultaneously in identical conditions and for an equal time by all the animals involved in the trial. During the trial, measurements were not only taken for the weight gain information on the steers, but forage production and rate of consumption were analysed as well. This gave us data on the intake of the animals on the specific varieties, and the efficiency of the different forage in weight gains. Some interesting observations can be made particularly on **Perun**. The inclusion of a Festulolium in a trial involving Italian Ryegrasses was due to the fact that late season production into spring and early summer in Italian Ryegrass is suffering in areas with increasingly common hot and dry finishes.

With added root depth and heat tolerance characteristics during the fourth rotation, we saw the **Perun** exceed the Italian varieties in dry matter production as it was more suited to the hot conditions we experienced in September and October. A small burst of heat and moisture stress in the period of the second rotation is well observed in a decline in weight gain performance in the **Icon** and **Crusader**, whereas the **Perun** maintained its high gain figures. One observable negative of the **Perun** was its lower production in the early part of the trial, which is due to the fact that it was sown in early May, which is at the later end of the sowing window for the Festulolium and it was delayed in establishment compared to the Italian Ryegrasses; ideally **Perun** should be sown as early as possible in the autumn grass sowing window. Still, without a limiting factor of available feed due to the trial being run in an excess feed situation, it was clear when looking at the feed test information on the three varieties that even with slightly less total production, a better relative feed value and nutritional balance and inputs, we saw an increase of weight gain on the **Perun** over the other varieties.

1st rotation:
2/8/13 to 29/8/13

2nd rotation:
30/8/13 to 26/9/13

3rd rotation:
27/9/13 to 24/10/13

4th rotation:
25/10/13 to 21/11/13

