Cultivar check list

Introduction

The following is a checklist to assist in deciding whether the claims made in promotional material are valid, whether the data is accurate and reliable, and whether the claims are applicable to your situation.

The Checklist

- Is the data published from NZ trials?
- Were the trials from a range of sites and a range of farming conditions throughout NZ?
- Were the trials exposed to livestock grazing in order to simulate what occurs in a farming situation?
- Were the varieties used in the trials quality, proven cultivars which are commercially available today?
- Is there information available about performance of the cultivar given in terms of energy production (ME or MJME/ha), disease resistance, seasonal growth rates or is it simply presented as total drymatter production?
- Does the trial data presented cover a number of years?
- Does the trial data presented cover a whole year? If not, why only selected seasons?
- Did the trial adhere to the National Forage Variety Trial (NFVT) protocols? These are nationally recognised conventions for conducting trials designed to ensure valid and comparable results.
- Is the heading date of the cultivar known?
- What was the endophyte status of the cultivar and those used for comparison? If they were different why and what effect might this have had? If it was a grazing and/or persistence trial, this can be very important

There are three key measures which should be presented along with all trial data; these are Coefficient of Variation (CV), Trial Mean and Least Significant Difference (LSD).

- The CV is a term used to define the accuracy of a trial and can be seen as a measure of how well the trials were run. The CV% should be less than 20, otherwise there is a lot of unexplained variation in the trial.
- The Mean is the average of the values recorded for the trial. Often the data will be 100ised that is the mean of the trial set at 100. The performance of all cultivars is presented relative to this. A reading of 132 would mean that the reading was 32% greater than the mean.
- Least Significant Difference (LSD) is a value necessary to determine whether an actual difference between two values exists. If two numbers are different by less then the LSD, the two numbers are not significantly different. The difference that does exist could be explained by random chance.

Example

Table 1 is an example of a table including all the information which should be provided.

Table 1: Drymatter production of Revolution AR1 - Enhanced Ryegrass in its first year

Variety	Autumn 03	Winter 03	Spring 03	Summer 03	Total Yr1	LSD
Revolution AR1	106	120	108	110	111	a
Bronsyn AR1	109	109	102	102	104	b
Impact AR1	104	106	100	103	102	bc
Mean	1,304	2,280	5,806	4,824	14,814	kgDM/ha
LSD	143	344	384	497	1,054	
CV%	16	19	10	14	10	

Source: Pooled average Dry Matter yields from 5 Cropmark-run trials conducted on farms at Huntly, Hamilton, Taranaki, Tekapau and Darfield (2003-04), non AR1 cultivar data not shown

Summary

There are a number of pieces of information which should be presented in order to make an accurate decision about pasture cultivar trial data. The checklist here outlines the most important of these which should enable a consumer to make an informed decision. These questions should ensure that the information provided is valid, reliable, and applicable.

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