Trial Report Summary

Frequently Asked Questions List

For internal use only

Your ultimate GUIDE to answering FAQs

042018

trouw nutrition
a Nutreco company

Contents/ FAQ List

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What is a TRS and when/how should I use it?

A Trial Report Summary (TRS) is a marketing document that highlights a particular piece of research conducted at partner universities, research institutions, customer field studies, or Trouw Nutrition. These reports should be used to highlight the value of a particular programme or product and are not intended as a standalone piece. TRS's are meant to fit within a larger Marketing material 'package' that also contains programme brochures, product and services leaflets. The TRS helps support the product value proposition and the overall added value of the programmes.

Why are there now more statistics in our TRSs?

As our marketing efforts for feed additives move from Segments 2 and 3 (commercial farms, co-ops, compound feed manufacturers and distributors) to focus on segment 1 (primarily integrators), we need to increase the professionalism, credibility and accuracy of our reporting. Product management is therefore targeting the use of our TRSs towards individuals within a customer that make technical decisions and are likely to be higher educated (MSc and PhD). Therefore, we need to provide them with the information they need to assess if this study is of value to them.

What are the standard error bars and what do they mean?

Standard error is a statistical term that quantifies variation with in a population, treatment group or trial. Unlike standard deviation, standard error takes into account sample sizes hence it gives a better indication of how accurate the dataset is. A perhaps more intuitive use of the SEM is the use to calculate a confidence interval. The 95% confidence interval provides you with a range of plausible values for the true mean for 95% of individuals.

In order to visualise the data, the standard error bars (unless otherwise stated) are based on standard error of the means. We chose a confidence interval of 83.4%, because, in general, at 83.4% the error bars of statistically different treatments do not touch, it is likely that $p < 0.05$, for individual treatments. The use of 83% confidence intervals is simply to aid the reader to eyeball the data and visually estimate what may be statistical differences. For example, if you look at Figure 1 (right), you can infer from the error bars that Treatment 1 is not different from Treatment 2 and Treatment 3 because the error bars overlap (red line). However, Treatment 1 is different from Treatment 4 because the error bars do not touch (dotted green line). Sometimes, even if two treatments don't overlap, the *p* value may be <0.05.

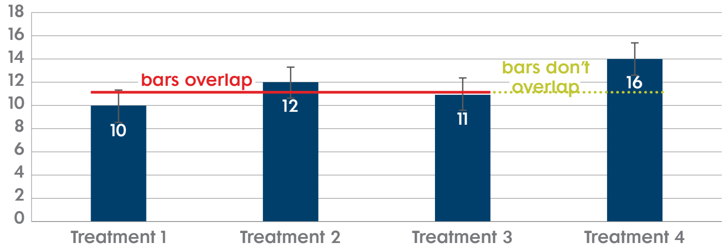

Figure 1. Example graph

What is a *p* value?

In statistics, we ask the basic question, are treatments the same, or are they different? The *p*-value in simple terms is the probability that you would observe the differences between treatments by chance alone (i.e. there is no treatment effect). Or in other words, the *p*-value describes the probability of finding a false positive – what is the probability that this finding represents a true treatment effect and not a chance finding? By setting the *p*-value at 0.05, we accept that the false positive rate is 5%.

The lower the *p*-value, the more likely it is that the effects we see between treatments is due to the effect of treatments.
A common fallacy in statistics is that the inverse (i.e. 1-*p*-value) is the chance that you would see this effect. For example a *p*-value of 0.1 does not mean there is a 90% chance you would observe this effect.

The *p*-value is a number between 0 and 1 and is generally interpreted in the following way:

- A small *p*-value (typically ≤ 0.05) indicates strong evidence against the null hypothesis, so you reject the null hypothesis i.e. there is a difference between the treatments
- A large *p*-value (> 0.05) indicates weak evidence against the null hypothesis, so you fail to reject the null hypothesis i.e. there is no difference between the treatment

Why do we sometimes present data with $p > 0.05$?

Although many scientific and governing bodies recognise the cut off for statistically differences is $p < 0.05$, this is an arbitrary number. Selko® feed additive product claims are based on a *p* value of $p < 0.05$ for monogastrics and $p < 0.10$ for ruminants*.
*Canadian Food Inspection Agency $p < 0.05$ for ruminants.

Some customers, however, will recognise the value of differences above $p > 0.05$ as "commercially interesting" depending on factors like how big the difference is, the risk/benefit, switching cost and what the measurement was. When the *p*-value is above the product claims value it may be included in a TRS only as a numeric difference, however, the actual *p*-value is also reported so readers can draw their own conclusions.

Furthermore, in the interest of increasing credibility and transparency, we also present non-significant production data so customers are able to fully see the impact of a product on production data. It is not uncommon for competitors to promote the positive effects of a product on one aspect of production performance while negatively impacting others (and sometimes ultimately resulting in no ROI or a loss). For example, an improvement of body weight gain may not always be profitable if feed conversion is sacrificed. By presenting the main production performance factors (regardless of significance), we enable customers to give an accurate value to our products and programmes and improve our credibility with our openness and neutrality.

Why do we now include normal curves for some data?

Variation is inherent in any biological system and is a challenge to manage in modern livestock businesses. This inherent variation within an animal population can be very costly, especially to large integrators, using all-in, all-out production systems. Typical drivers to reduce animal variation are:

- as a result of the need to select on farm to meet market specifications
- phase feeding means diets are formulated for certain life stages, a larger variation means some animals at the tail ends may not be receiving the ideal ration
- fast-food companies, food-service and retail operators that have tight purchasing specifications and if the processing plant does not match their requirements, output from the processor will be downgraded or rejected
- challenges associated with health management

As a consequence, any management practice that can be applied to reduce variation has the potential to improve the profitability and overall efficiency of a livestock enterprise.

A normal curve is a bell-shaped curve showing a particular distribution of probability over the values of a random variable, such as final body weight. Positives shifts in curves can include, movement of the average (i.e. greater body weight) or a reduction in variation. If the bell is narrow, the population is relatively uniform, because most of the measurements are close to the mean; if the bell is wide, the population is less uniform, because more measurements are found further from the mean.

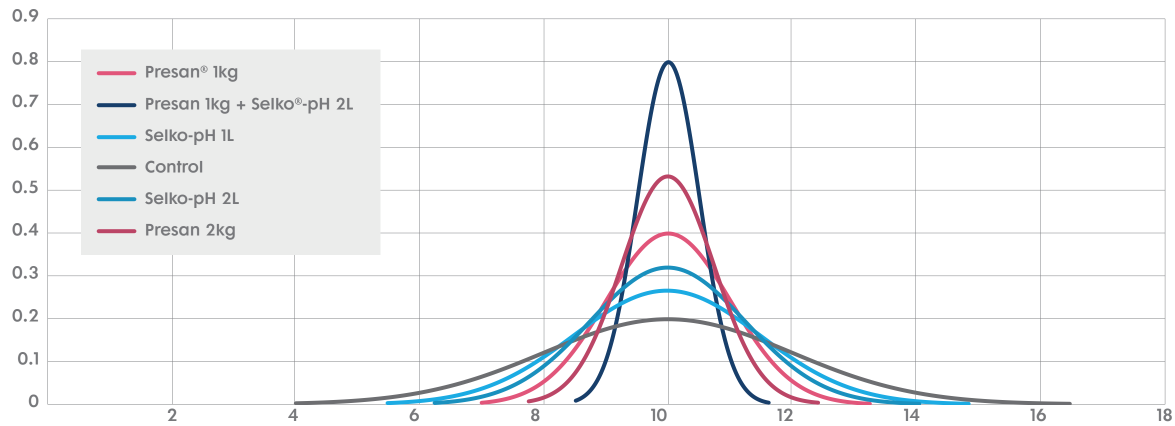

Figure 2. Example distribution of piglet bodyweight (kg) by treatment group

Why do the TRS have different colours?

Each product has a colour assigned. When the TRS is about a single product, its colour is used in the document. When two products are tested, a gradient combining two colours is used.

What is the naming convention for TRS?

The documents are identified always with the same naming convention: Product name | Trial report summary number.
The numbering is consecutive and each product has its own numbering.

Where do I find the TRS?

You can find all global TRS:
Brandportal: https://imageshop.no/en/trouwnutritionintern/Login
Showpad: https://nutreco.showpad.biz/login
Feed Additive Service Guide (Nutranet): https://nutreco1.sharepoint.com/sites/teams01/SelkGlobMark/ServiceGuide

My customer wants more information, how do I get it?

Behind most TRS there is a research report(s). Please contact the relevant Product Manager to help you get that extra information you need.