Selecting Suitable Scales

This Infosheet covers:

- The key factors to consider when purchasing a weighing system which include:
  - the weighing facilities and environment,
  - the number of animals and stock classes to be weighed,
  - the amount of information required at the point-of-weighing,
  - data management and analysis requirements,
  - data transfer, and
  - after sales support.

Key points

- Before investing in weighing equipment, consider what you want the technology to do and what you want to do with the resulting data.
- Make sure new equipment is compatible with any existing equipment.
- Carry out background research before you complete your purchase.
- Weighing systems need to be set up properly to allow regular, simple and accurate weighing.

Getting started

Before investing in new weighing equipment, think about the information to be collected. What are the goals - what should the technology do and what will be done with the results? For example, the equipment may be shifted between multiple properties, or groups of animals may be drafted for different feeding regimes, or reports on heifer progress may go to multiple stock owners, or it will simply be used to determine the progress of the heifer mob.

Also, if weighing equipment is already in use the new equipment will need to be compatible.

FARMER VIEWPOINT

Scales are so important. They help differentiate the bit you can’t see. Visually you can’t pick up a 5 to 10 kg difference when the animal is small but scales can. Weighing has been a real eye-opener for our grazier.

Dairy farmer, 225 cows, Palmerston North, Manawatu
**Homework**

To make the most of the money spent and avoid disappointment, research available equipment. Will it work like it says on the box? Talk to other farmers who have purchased the same, or similar, equipment to understand the pros and cons.

**Key factors**

When purchasing weighing equipment, consider these six key factors:

1. the weighing facilities and environment,
2. the number of animals and stock classes to be weighed,
3. the amount of information required at the point-of-weighing,
4. data management and analysis,
5. data transfer, and
6. after sales support.

Most weighing equipment suppliers will provide decision matrixes to help in product selection.

1. **Facilities and environment considerations**

Are the facilities permanent or temporary? Will the equipment need to be shifted between farms?

Some equipment will be heavier and more time consuming to shift, although the heavier equipment is often more robust. The facilities' construction material, reinforcement and quality may dictate which equipment is best suited. Lighter weight material may need to be replaced more often or require more maintenance.

*Is electricity available?*

This will determine if a mains electric system can be used to power the scales or if they must be battery operated.

*How exposed will the equipment be? Are the yards covered?*

Different weighing equipment will vary in resistance to the weather and physical abuse, e.g. animal damage to cables.

*How easy is it to read ear tags? What access is there to animals in the races? Is there a crush or a box?*

There are three different ways to read tags:

- visually and record with pen and paper,
- visually and then type the tag number into the weighing system,
- scanning an electronic identification (EID) tag.

Some systems allow you to type the number into the system as well as scan an EID tag.
Automated tag readers can be more efficient at reading tags, but can also come with more technology-related issues. There are a variety of tag readers available on the market, all of them need to be reasonably close to the animal’s ear to read the EID. This improves accuracy as it prevents misreading or reading multiple animals’ tags.

Hand or wand tag readers can be used in any facility. To use a hand reader you will need easy access to animals, e.g. an elevated walkway next to the race. Stationary tag readers are usually part of a box or crate facility. Wand tag readers, in addition to a fixed box reader, can be useful when several people are involved with weighing e.g. when separately making health observations, administering treatments or recording other animal details.

Multi-way drafting?

More sophisticated technology can control multi-way drafting. This is useful for grouping animals by weight, age, pregnancy date, feeding level or health treatment, and reduces labour needs.

2. **Number of animals and different stock classes to be weighed**

   *How many animals will be weighed and how frequently?*

   The more animals, or more often the equipment is being used, the more justification there is to invest in sophisticated equipment to make the job faster.

   *What are the stock classes and weights of animals?*

   Load bars have different maximum weight capacities e.g. on a farm finishing bulls as well as grazing dairy heifers the load bars will need to be able to handle the heavier animals.

3. **Amount of information required at the point-of-weighing**

   *How much information is required for each animal at the point-of-weighing?*

   Weighing systems can store a range of information and management options. When there is more information at the point-of-weighing, it becomes easier to make immediate management decisions which reduces later re-yarding.

   *How often animals are yarded, how easily animals are brought to the yards, and the other time demands on farm will influence the system selection.*

4. **Data management and analysis**

   *How much data needs to be stored? What level of analysis is required?*

   Some systems can store more than ten pieces of information about each animal. Individual animal reports on weight, liveweight gain, animal health treatments, date of birth, breed, due date for pregnancy or pregnancy status, are possible along with whole mob reports and data analysis. The most basic systems do not store information and simply provide a weight.

   Some systems integrate with software which allows setting of targets for different stock classes, use their in-built targets, or manage multiple farms’ data.

5. **Data transfer**

   *What data transfer technology is required?*

   EID readers have Bluetooth capability, but consider what other file transfer needs may be required. The options for file transfer are USB, Bluetooth, and WiFi. When transferring files, think about the devices to be used, the software for analysis, and how the information will be accessed e.g. by computer, smart phone, tablet, or another device, such as a smart watch.
6. After sales support

How much, and what type of, after sales support will be available?

A variety of support is offered with newly purchased systems, but technical support may not be available when purchasing used equipment.

User support can be supplied in a range of formats, such as printed material, phone advice, email, online ‘how to’ videos, on-farm training and support. Consider what is required for annual services and upgrading data management software.

Find out what support the supplier will give regarding installation, usability, functionality, troubleshooting faults or errors, and software updates and maintenance. Ask where and when the equipment can be serviced and how long repairs and updates usually take.