

THE WOOL PRESS

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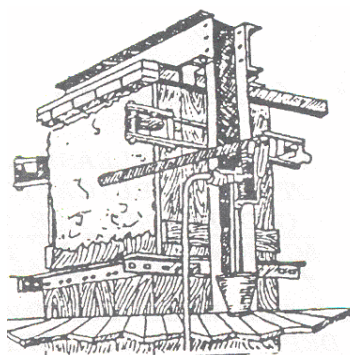
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Edited By Tracy Evans

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EDITORIAL

Having taken a quick read of the content for this edition of the Wool press, I thought I would focus on wool, given that has been and continues to be a hot topic.

Firstly, the Wool Support Scheme. I'm pleased to report that following the purchase of around 4,000 bales from the 2019/20 season, our wool agents have been busy selling our stock pile over the past 2 months. Recently this has picked up to such an extent that we should have shifted all but a few bales out of the FIPASS wool warehouse in the coming weeks. This is a huge relief for both ourselves and I'm sure for all of you, as you have embarked on shearing for this summer season. When FIG purchased your wool earlier this year we really weren't sure how quickly we would be able to sell it, and we took steps to ensure that had we not managed to sell it all that we would have sufficient storage space available as a backup, to facilitate the transit of this year's wool clip. The wool stored at Bower Green is also steadily reducing, and we look forward to completing selling of those bales in due course.

Secondly, the subject of a permanent wool storage facility is not yet resolved, but I am working with colleagues to help progress this as quickly as possible (noting it has been moving at a glacial pace until now!).

Finally, it is great to see the progress being made on the RWS thus far, I understand many farmers are extremely keen to get started and we look forward to working with you to help launch this scheme across the Falklands. As market challenges increase it is important that we work together to firstly maintain but secondly to maximise our return on our wool by using any economic tools available to us.

On that note I'm going to sign off..... it is also my first anniversary of being at DNR on the 1st November, I can honestly say, it's been a bit of a blur, but it has been a pleasure working with a great team and helping them help you. I do hope to see much more of you in camp in my second year, so long as the dreaded Corona is kept at bay.

Andrea Clausen

Director of Natural Resources

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DOG DOSING DATES FOR 2020/2021

Date	Drug
Wednesday 22nd January 2020	Drontal
Wednesday 26th February 2020	Droncit
Wednesday 1st April 2020	Droncit
Wednesday 6th May 2020	Droncit
Wednesday 10th June 2020	Droncit
Wednesday 15th July 2020	Drontal
Wednesday 19th August 2020	Droncit
Wednesday 23rd September 2020	Droncit
Wednesday 28 th October 2020	Droncit
Wednesday 2 nd December 2020	Droncit
Wednesday 6 th January 2021	Drontal

Regular weighing - it is important to keep a check on dog's weights to ensure correct dosage is being given.

All dog owners are responsible for worming their own pets. Please remember to contact the Veterinary Office and confirm this has been done. After normal working hours, please leave a message or email.

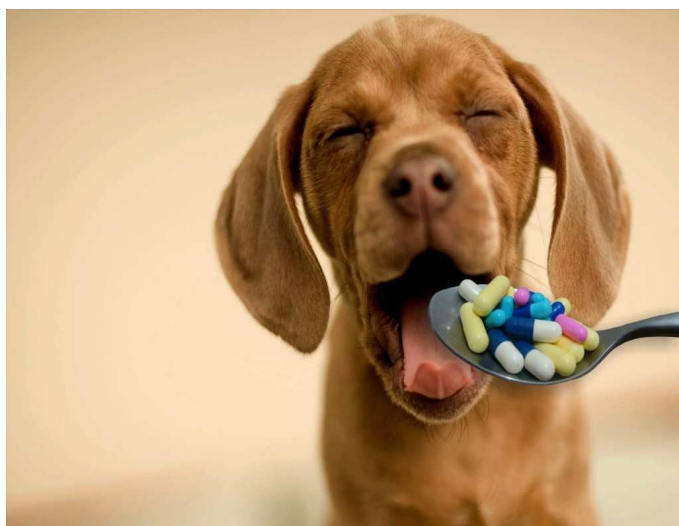
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AGRICULTURAL RETURNS

Agricultural Returns Part B for 2019/2020 are due soon!

Part B: It is a legal requirement to complete and return these to the Department of Agriculture by the 31st October 2020.

Contact details are:
Tel: 27355 Fax: 27352
E-mail: Tracy Evans on
AgrAssistant@doa.gov.fk

Pears with Speedy Chocolate Sauce

Ingredients

2 x 410g cans pear halves in syrup
100g chocolate chopped into small chunks
8 scoops vanilla ice cream
2 tbsp. chopped hazelnuts

Method

Step 1

Drain the pears over a small pan. Divide between 4 dessert glasses or bowls. Boil the syrup on a high heat until reduced and thick. Take off the heat and stir in the chocolate until melted.

Step 2

Add 2 scoops of ice cream onto each portion of pears and pour over the hot choc sauce. Top with the chopped nuts.

Recipe from Good Food magazine, March 2011



The Falkland Islands Wool Company Ltd

WOOL WAREHOUSE LOGISTICS

By Vikki Berntsen

It's that time of year again when I remind you all of the wool warehouse logistic necessities we require to run an efficient facility and service.

- **BALE WEIGHTS** – Please can you ensure all bales for sampling in the Islands are above 110 greasy kgs, this is a requirement for the NZWTA machine sampling schedule. If the bales are underweight they and the lot they are committed to, **MUST** be manually hand cored. This is not a service WoolCo provide, and is the responsibility of the wool producer who will either sample them themselves or organise someone to sample on their behalf. At the other end of the scale please can you ensure bales are not over weight, the recommended bale weight is 190-195kg, absolute maximum is 204kg. If we receive any bales exceeding 204kg (greasy) for sampling, the lot will also need to be manually hand cored. In the 2019/20 season the core/grab machine had a total of 5 welding repairs and further repairs in the outer season, please understand if we continue to sample overweight bales it may result in the break that cannot be fixed and all wool would have to manually sampled. Not to mention the health and safety risks when dealing with overweight bales.
- **BALE DELIVERIES** – You are all aware there is still a large number of bales in the FIPASS wool warehouse. To avoid further congestion please give as much advanced notice of wool deliveries as possible, no later than 24hrs notice. **Please only deliver wool which is ready for sampling, selling or shipping.** We ask for clear instructions (preferably on a wool specification sheet (as shown on page 5)), stating lotting, sampling instructions e.g. grab, shipping instructions e.g. FIC or SAAS. Regarding the FIG/Atlink users agreement, we must give notice for all wool deliveries and hauliers/visitors to the warehouse must sign in and are required to wear high-vis.
- **WAREHOUSE STORAGE** – As stated above there are still a large quantity of bales in the current wool warehouse space. FIG have organised with Atlink to have the remaining areas in the warehouse cleared for the storage of wool bales, these areas will be cleared by the end of September. This will give room for an estimated further 1000 bales, giving us until early –mid Nov if deliveries are similar to last year. FIG has asked for additional warehousing to be cleared in the west end of the south centre warehouse, this will also be cleared at the end of September. At this stage it is unclear if this space will be suitable for the storage of the FIG wool, once the area has been cleared and cleaned we will have more of an idea how many bales can be stored in this area. If it is not suitable FIG have a contingency plan for onshore warehousing. Please be assured FIG and WoolCo are working on a storage solution, however we need your co-operation regarding bale deliveries/storage. If you have bales for group lotting please do not deliver until the end of the season, if you are considering holding your wool because you would prefer to wait for improvement in the market, please do not deliver bales.

Many thanks and we wish you all the best for the coming season.

What will the amendment to Livestock and Meat Products Regulations mean for me?

By Zoe Fowler

The answer is probably very little!

Background:

Part of our red meat public health duties at the vets is to ensure that our national laws are valid and up to date and show that we regulate our food production industry in line with the laws, guarantees and expectations of our markets and consumers. This protects our export markets and gives us the guidance we need to ensure we regulate the industry correctly to protect public health. Lots of the legislation is based on EU law so if those regulations are subject to a significant amendment we have to ensure we amend our national law as well.

However, we also draft our legislation to ensure that the law is relevant and appropriate to the Falkland Islands and we are not legislating requirements that are not relevant or possible here (for example we do not require that risk material for burning is dyed a very obvious blue because the incinerator is across the yard. It doesn't have to be transported in a lorry and there is no chance it can be mistaken for anything else in that 3 minutes transport.)

Regarding meat killed on farm: when the 2015 Regulations were drafted it was agreed that banning farm kill was not in anyones interests. Farms need to feed themselves, many farms make some income from supplying Christmas lambs, for example, and it would not make logistical or financial sense for small numbers of carcasses for farm consumption to have to travel to an abattoir and back. It was also agreed that regulating farm kill the same as commercial abattoir kill was not possible. It would be unrealistic to expect every farm to have a small abattoir, and if we did, then who would inspect, monitor and regulate it? The vets could not be present for every farm kill! So the current legislation exempts, from any regulation, all farm kill that is for private domestic consumption – you can kill and eat anything you like on your farm and this is not going to change. However, it would seem ridiculous (not to mention unacceptable to external markets) to have strict laws for commercial meat production via the abattoir but to also allow unlimited meat to be killed and sold under completely different conditions from farms. So, limits are imposed for the amount of sheep or beef meat that can be sold from farms. These 'small quantities' must be sold direct to the final consumer, which means they must go direct to private buyers, not to shops, cafes or restaurants. It makes sense that the risk of hygiene problems arising increases with the amount of meat produced hence limits were imposed. Selling direct to the final consumer means the consumer is aware of where their meat has come from and they have that choice to buy meat that is not under any hygiene regulation. Specifically exempting this meat from legal regulation shows auditors and overseas markets that we, as the competent authority, are aware of such meat production but deem it of such low risk to public health to not require any formal regulation other than on quantities per farm and on supply to consumers.

The Amendment:

1. As well as mutton and beef, other types of meat could be supplied direct from farm eg pork, goat and poultry. These are not explicitly mentioned as exempt from the regulations so to ensure the picture is complete we will exempt small quantities of these types of meat from formal regulation also. In addition to the current small quantities of 240 sheep and 12 beef carcasses per year per farm, the exempt limits will include supply of up to 36 pig carcasses per calendar year, 24 goat carcasses, 100kg of deboned poultry meat and 60 poultry carcasses (numbers to yet be completely confirmed). Like for beef and mutton, if you want to supply OVER these limits you need to contact us to work towards setting up an approved small slaughter facility. ***Are these limits realistic and appropriate? – we would appreciate farmer feedback on this.***
2. While these limits will be exempt from pretty much all the meat hygiene regulation it is not

unrealistic to expect providers of farm kill meat to keep records relating to animal health and the people that they provide meat to. Therefore farm kill will be exempt from all the regulation EXCEPT clause 28 which is the requirement to keep records about medications given to any animal on farm, any disease investigations that have occurred and the results from that (eg copies of lab results from the vets etc). To this clause we will add in a requirement to keep a list of how much meat is produced on farm and to whom it was supplied. These animal health records should already be kept as part of a farming enterprise and records of invoicing should already give you the list of people to whom you have supplied meat, so we don't feel that making this a requirement is much of an ask, but comments are welcome.

3. The type of meat that is exempt from regulation refers to carcasses and joints from domestic animals only. The Livestock and Meat Products Regulations do not apply to game (eg reindeer or upland goose) and we have chosen not to mention or include items such as sausages and burgers or cooked items such as sausage rolls or empanadas in these meat regulations. These items, and the selling thereof, are basically covered in the Public Health Ordinance (as amended).
4. The final items in the amendment are 'housekeeping' ones. Grammar corrections and ensuring that all definitions are used in the right context within the piece of legislation – I won't bore you with all individual corrections!

So, do you supply much meat privately? Are these amendments going to affect your enterprise? Do you want to hear more about the amendments or have anything clarified? It is important that the industry the law affects has it's say so please contact the vet service on 27366 or zfowler@doa.gov.fk if you have any questions or comments. Thank you.

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## **Andy Pollard - Introduction**

Whilst I am confident that I know every farmer in the Islands, it won't hurt to introduce myself, especially to any other readers of the Wool Press I don't know. After leaving school in the days before the internet! A year after Keith Knight I will add. I was employed 'on and off' by the Department of Agriculture (DoA) over a 20-year period, with time spent at Peter Symonds College and the University of Plymouth in the UK and Lincoln University in New Zealand. More recently, I was employed as the General Manager of Falkland Landholdings for just over 3 years. I now run my own business, Falklands Nature a wildlife guiding and photography business.

For now, my life has taken a full circle and I am now back in the west wing (furthest office west in the DoA). Largely because of Covid 19, I have been employed by FIG for a period of 11 months as an Agricultural Advisor and have been assigned a number of projects to work on. The primary project being the Responsible Wool Standards, to which I have written an article in this Wool Press.

I very much look forward to visiting as many people as possible over the next year. I will probably leave the didgeridoo at home, except for special occasions!

# Saladero News

By Andrew Bendall

August - September 2020

How do we capitalise on our successful joining and scanning results. It was stated in the last Wool Press that a large percentage of our saved swede crop had been damaged and eaten by geese. Our options were recognised as being;

1. Buy in supplement feed
2. Feed ewes best we can through regular shifts and monitor any body condition loss
3. Tighten up young stock and use some of their designated camps
4. Set stock into saved lambing camps early and hope for a kind season
5. Do nothing

A short commentary on each:

**1. Buy in supplementary feed,**

- ♦ Sheep nuts have a cost of £2.40/ewe for 300 grams fed every 2<sup>nd</sup> day for one month. Ideally this would be every day so really looking at £5.00/ewe cost. Or spending the £5 /ewe but over 60 days.
- ♦ The cost of this particular swede crop was £300/ha and given its final damaged yield lasted 40 days along with some run off camps. So it also has approx. £5/ewe cost. This would be naturally lower with a better yielding crop, however there is no guarantee on this without significant investment prior to the crop being established.

The true benefit and value of the above feeding regimes can only really be measured after lambing and weaning and some benefits will run through to mating next year. Benefits will and should include;

- ♦ Being able to set stock into saved lambing camps later
- ♦ Holding BCS & Liveweight (if only minimal) prior to set stocking
- ♦ Improved udder development and milk production
- ♦ Better ewe – lamb bond at lambing
- ♦ Heavier birth weights of new born lambs
- ♦ Increased weaning weights of both lambs & ewes
- ♦ Better development of the secondary wool follicles in the unborn lamb
- ♦ Overall better survivability of lambs & ewes

**2. Feed ewes best we can through regular shifts and monitoring body condition loss,**

- ♦ This was done at Saladero to some degree for two weeks after scanning to gain us a bit of time but then we made the call to buy some sheep nuts as we felt the ewes were starting to lose condition on feed available.

**3. Tighten up young stock and use some of their designated camps,**

- ♦ Both Ram & Ewe hogs have been on minimal weight gains over the winter months within their own rotations and they have been under a moderate worm challenge. With young stock in my opinion a priority, who historically struggle to gain weight until spring without quality feed. So this option was ruled out.

**4. Set stock into saved lambing camps early and hope for a kind season,**

- ♦ Possibly the most common practice to be done when in this predicament, however without any sort of measurement of entry weights and body condition its hard to really define the true cost of this. Feed gets eaten early and then at the stage when the ewe and lamb really needs that available feed it's not there.
- ♦ This feed shortage at this time has significant effect on the potential milking ability of the



ewe and subsequently effects lamb growth rates. It also reduces the potential for the ewe to gain weight over spring/summer while lactating.

## 5. Do nothing,

- ♦ Well you'll get what you get, and with no real reference and reason why apart from putting it down to "one of those seasons"

## So what did we do post scanning;

The ewes at scanning were split into two mobs, singles with BCS 2.5 and above (420) and twins (56) with the lighter BCS singles (224).

The mob of 420 were grazed on swedes in 4-5 day blocks and due to the damage by the geese also had a run off onto two adjacent native grass camps.

The mob of 280 were rotated around their mating camps and had the last of some lupins every few days. Realising that this mob were not holding condition we purchased some sheep nuts. These were fed every 2<sup>nd</sup> day for the last two weeks of September. In hind sight they should of received a more regular ration of the nuts to supplement the lower quality feed on offer. Or better still they should have had the swedes and the better conditioned singles had native grass.

## Weight & Body Condition Comparisons (Complete Mob)

|                   | Weight June (kg) | BCS August | Weight October (kg) | BCS October |
|-------------------|------------------|------------|---------------------|-------------|
| <b>Ewes</b>       | 50.3             | 2.8        | 52.7                | 2.3         |
| <b>Shearlings</b> | 43.5             | 2.9        | 44                  | 2.4         |

## Weight & Body Conditions Between Mobs

| Benefit of a high value feed sources for 40 days |                  |            |  | Swedes            |     | Native forage & Some lupins |   |
|--------------------------------------------------|------------------|------------|--|-------------------|-----|-----------------------------|---|
|                                                  | Weight June (kg) | BCS August |  | Weight (kg) & BCS |     | Weight (kg) & BCS           |   |
| <b>Ewes</b>                                      | 50.3             | 2.8        |  | 54.3              | 2.6 | 50.6                        | 2 |
| <b>Shearlings</b>                                | 43.6             | 2.9        |  | 44.4              | 2.5 | 41.5                        | 2 |

With ewes now set stocked into their saved lambing camps and due to start lambing in early October we can only hope that the weather stays relatively stable.

## Other Saladero News;

The ram and ewe hogs were crutched earlier in August, and have received a post winter drench and Glanvac vaccinations. Both mobs had elevated faecal worm counts, enough to have a negative impact on growth rate. I will discuss the impact of worm burdens in the next issue of the Wool Press.

Tenders went out for the installation of the "Farmquip" sheep yards and for the removal of the "Millennium Dome" these were won by Nigel Bishop with work being started in October. Really looking forward to having "fit for purpose" sheep yards.

Mandy Ford has after a long wait for her hip replacement headed to the UK for this operation in October. Macaulay Davis has taken over management during her absence.

# On – Farm Biosecurity: Sheep Shearer

*By Dani Baigorry, Biosecurity Officer*

Biosecurity is defined as preventative management practices that protect the health and wellbeing of both animals and humans from the entry or spread of disease agents. The concept of 'biosecurity' is not new, however it is likely that renewed awareness has been accelerated by international events such as the outbreak of Foot and Mouth Disease (FMD) in the United Kingdom and Bovine Spongiform Encephalopathy (BSE, mad cow disease) in Europe and the United States. For on-farm biosecurity to be successful everyone involved with animal production and product harvest, including the shearers and the shearing crew, must pay attention to their role in minimizing the risk of spreading diseases between animals and to other farms they visit. This is why biosecurity is so important. Biosecurity efforts are designed to prevent the introduction and spread of disease. These efforts can be further categorized into external measures (external biosecurity), those directed at prevention of entry of new diseases into a group and internal measures (internal biosecurity), those directed at prevention of spread of disease within a group.

Sheep diseases can be brought onto the farm by people and equipment moving from one location to another during the shearing season. Therefore appropriate cleaning and disinfection is critical to breaking transmission cycles of disease agents that contaminate housing, feeding, and equipment. Personal hygiene of animal handlers is also crucial to stopping the transmission of pathogens from animal to animal, or even from animal to humans. Personal hygiene should include frequent hand washing, cleaning and disinfection of boots, and thorough washing of clothing to accomplish the full removal of all organic debris (faeces, urine, milk, sputum, etc.).

Shearing time sees an increase in the risk of the spread of pests and diseases due to yarding and shedding of large numbers of sheep. In addition, the movement of shearers from property to property increases the risk of transferring pests, weeds and diseases that may have settled on clothing, shearing equipment or vehicles. Thus it is important shearers and sheep producers recognize disease risk and take measurements to minimize the risk of disease spread between flocks and animals within a flock.

The Falkland Islands are fortunate to be free of many farm animal diseases that cause significant losses in other countries, such as Foot-and-Mouth Disease (FMD). An outbreak of a disease such as FMD in the Falkland's would have a massive detrimental impact on the wool industry. In the event of an outbreak, there would be an immediate halt to exports of animal-related products including wool, which could last 6 to 12 months at a minimum.

Currently on the Falkland Islands there are two common sheep diseases, these are Caseous lymphadenitis (CL) also known as boils and Orf. - Boils is a contagious bacterial disease of the lymphatic system of sheep, the clinical sign of boils is abscesses involving the lymph nodes on the side of the head or beneath the jaw (and many other glands). These abscesses are often ruptured or cut during shearing and can be spread on equipment, clothing or even the shearer's hands to other sheep they have contact with. The bacteria can live for long periods of time on infected equipment, premises and soil. For this reason, the healthy, young animals should be shorn first, followed by animals of questionable health. If an abscess is ruptured during shearing, the shearer should disinfect shearing equipment exposed to the abscess fluids immediately. Orf, on the other hand, is a viral disease which causes red nodules, blisters and/or scabs to form primarily on the lips and around the mouth of sheep. This virus can also be seen around the udder regions of nursing ewes. Orf is caused by a "pox" virus that can also affect humans, so caution should be used when handling sheep with orf.

As shearers have a key role in harvesting wool on sheep farms, it is essential that shearers and shearing crews incorporate biosecurity management techniques to protect other flocks and themselves from the spread of a disease. Techniques such as:

- Properly maintaining and cleaning all equipment and clothing when working between

different farms and between different flocks on the same farm

- If you shear a potentially infected sheep, be sure to clean your equipment prior to shearing other sheep in the flock to minimize spread between animals within the flock
- Reduce exposure to infected animals within a flock. Shear healthy young sheep first, followed by older sheep. Shear potentially unhealthy or sick sheep last. If sheep have lumps or potential CL, handle them last and try not to cut or rupture the abscess.
- Be sure to clean organic material, mud and manure off your shoes before you disinfect. Manure and mud on your shoes can also transfer disease between flocks.
- Dispose of any excess wool product or waste that you may have picked up before starting
- Farmers should ensure facilities and disinfectants are available on their farm for biosecurity measures.

One biosecurity plan is not going to work for every shearer or shearing scenario. Therefore use a common-sense approach to prevent the accidental introduction of infectious agents to sheep within a flock and most importantly to other flocks you shear.



*caseous lymphadenitis (Boils)*



*Orf*

*Shearing gear and moccasins retained by Biosecurity for cleaning, due to being in an unacceptable state of cleanliness upon entry into the Falkland Islands*



# SAMMY the BIOSECURITY DETECTOR DOG

By Naomi Baxter

Do you have an island you would like checked for rodents? Reckon you could get your hands on a rat and freeze it? If the answer to either of those two questions is yes, then read on, because Sammy the biosecurity detector dog and handler Naomi Baxter would like to hear from you!

Sammy is the first biosecurity detector dog in the Falklands. He visited the islands for two trial periods in 2018 and 2019 and is now permanently stationed here with me, his handler (Naomi), as part of the Biosecurity Dog Programme established by the Government of South Georgia & South Sandwich Islands (GSGSSI).

In 2018 South Georgia was declared free of rodents after a long and expensive eradication programme lead by the South Georgia Heritage Trust. Ridding the islands of rats helped protect the stunning wildlife and habitats which the rats were destroying. Rats and mice may seem small and innocuous, but they can wreak havoc in areas with ground-nesting birds, mainly by eating their eggs. So, with a lot of money and time invested in ridding the islands of rodents, keeping them that way is imperative.

Sammy is employed by GSGSSI to provide a sniffer dog service through the charity Working Dogs for Conservation. I train with him regularly by trapping mice and rats in and around Stanley; a volunteer will hide the live rodent, its faeces or hair and Sammy will search for it. I reward him with food, usually chicken, cheese or hotdog. While mice have been practically swarming into my traps it has proven much harder to catch the smarter rats; they evade my traps like a teenager avoids a bath. So, a plea to readers: if you're catching rats out in camp and would be kind enough to freeze them and send them into town, please do! We would cover the postage and it would be great for Sammy's training. Although Sammy has done a great job making the olfactory jump from mice to rat, there's nothing quite like smelling a dead frozen rat to get him going!

It's an important job sniffing out rodents on vessels and cargo bound for South Georgia, however, Sammy is only fully occupied on this task when there are boats going south, that is, in summer when there are over 70 cruise ship visits to South Georgia and then a shorter fishing period in early winter, with sporadic visits by other vessels throughout the year.

To make sure Sammy's nose is fully utilised year round, I submitted an Environment Studies Budget application to ensure Sammy is put to work in the Falklands as well. Last year a grant was given for the dog team to check cargo transported on the Concordia Bay to outer islands, some of which are rodent free. This adds another layer of protection for those islands eager to keep rats and mice out. Over the past year we've checked



around 52 containers of cargo at the Workboat Services yard. Although some 'residual' odour (urine) was identified by the dog, no live rats or mice were found. The ferry has also been checked, as well as the WBS warehouse and New Haven area, where rodent boxes are in place.



Another part of the project involves checking some islands around the Falklands where rodents have either been eradicated, re-invaded or the status is unknown. This year we are checking Kidney, Top and Bottom Islands, Great Island and surrounding islets as well as a few others still to be decided, but likely in Choiseul Sound.

Our first island check this year was done on Kidney. Working through dense tussac was a new challenge for Sammy and certainly not a habitat he was used to in his native Virginia, USA. The main focus of the search was the coastline nearest to the mainland as we suspect that is the most likely way rats could find their way back to Kidney. Sally Poncet's work has found that rats in the Falklands are surprisingly good swimmers and can swim up to 1 km if they are seeking a new habitat or food source.

Sammy didn't find any rodent scent on Kidney, Great or Tickle Islands, which is great news and gives us confidence that the islands are still rodent-free.

*Sammy ready to get to work on Kidney Island*



*Searching around the cliffs on Great Island*



We have just been awarded a three-year grant from ESB so the plan going forward is to continue with the regular checks of the inter-island cargo and ferry and to investigate any other islands that should be checked. If you would like your island to be checked and included in our searches over the next few years, or are able to send in a frozen rat or two, please

contact Naomi Baxter on 55166,  
or on facebook [https://  
www.facebook.com/  
SABDetectorDogs/](https://www.facebook.com/SABDetectorDogs/)



*A well-earned rest at home*



**SEEN ANYTHING  
STRANGE LATELY??**

**IF SO CONTACT THE  
DEPARTMENT OF  
AGRICULTURE ON 27355  
OR VETERINARY  
SERVICES ON 27366**



## **Trace Element - Calcium (Ca)**

### **Calcium – a critical mineral**

*By Phillip Van Der Riet*

Calcium is the most abundant mineral in the mammalian body, with 99% found in the skeleton. The remaining 1% lies outside the skeleton and both stores are critical to survival and health. The calcium in the bones functions to create the density and thus strength of the bones, but also acts as an essential store which the body can use when needed. Calcium outside of the skeleton can be found bound to other chemicals and proteins, or as a “free chemical” – the calcium ion. The free ion form in the blood stream is essential to nerve and muscle function. And that’s *all* muscles, from the heart to the intestine to the thigh. Calcium also plays important roles in blood clotting, enzyme health, the immune system and cell function. Basically, it’s critical to life.

Having received a healthy store of calcium literally from the bones of their mother, young animals then need to access it in their feed to grow in good health. But calcium does not just enter the body from the food in a simple manner. A specific form of Vitamin D, called calcitriol, must be present for calcium from food to cross the intestine and enter the blood stream. A previous article described the importance of vitamin D, the role of sunlight in its formation, and the effect of deficiency of Vitamin D resulting in the disease called Rickets. Previous articles were included in issues 238 November 2009, 239 December 2009 and 250 November 2010, if you would like copies of these articles please get in touch with Tracy Evans (phone 27355 or email [agassistant@doa.gov.fk](mailto:agassistant@doa.gov.fk)) at the Department of Agriculture and she will email them to you.

Although calcium in the feed (either naturally present or supplemented as, for example, limestone) can be manipulated easily and quickly in intensive farming situations, it is important to be aware that the physiological pathways of the body are such that there is almost complete reliance on the stores in the bones when the body is naturally looking for calcium. The body will not simply take calcium from the food in increased quantities when it needs calcium, it will look to the bone stores. This means that animals that have long term calcium depletion, with poor calcium reserves in their bones, may still develop signs of disease even if calcium is made available at increased levels in their feed.

Slow deprivation of calcium for the bones comes about through inadequate calcium in the diet, inadequate vitamin D in the body, or excessive removal of calcium from the body by parasitism or disease. Older animals will also have poorer calcium stores. In severe long-term cases the result is weakened and even fractured bones in adult animals, and poor growth or skeletal and dental abnormalities in younger animals. In addition to this, poor milk yield, weakened immune systems, and hormonal disruptions affect health and productivity.

Even if these signs are not evident, poor bone calcium stores are likely to manifest as disease

processes when there is a sudden increase in demand by the animal's body. This is generally at exactly the time we want our stock to be at their healthiest – when producing and raising young. And if the bone stores of calcium at this time are not adequately prepared in the preceding months and years, it may be too late to change the situation simply by increased supply in feed.

Sudden increase in demand comes about when the body enters a state of pregnancy and lactation. Physiologically, the priority of producing milk for the young and providing calcium for their developing skeleton is greater than that of preserving the mother's health. The body tries to mobilise calcium from the bones to satisfy the demand, but if reserves or nutritional supply are not adequate then the blood portion of calcium – the free calcium ion – decreases, and disease results. The manifestation of this varies across the species.

Cows typically develop Milk Fever (common name for bovine hypocalcaemia or "low blood calcium") shortly after calving, showing signs of weakness, recumbency, tremors, convulsions and death if not appropriately treated. This problem is far more commonly seen in dairy cattle than beef.

Sheep develop signs of Parturient Paresis (ovine hypocalcaemia) before lambing, showing restlessness, then weakness, depression, panting respiration, rectal and perineal atony, and ruminal bloat, before progressing to recumbency, coma and death if not appropriately and promptly treated. The occurrence of hypocalcaemia is increased when pregnant animals with poor calcium reserves are put out on lush calcium-poor pasture, or come from pasture grazing to an intensive feeding situation where low-calcium feed is fed. The condition typically occurs suddenly, and often within 24 hours of a stress event such as a change in feed, bad weather, or management interventions such as shearing or transport. In these circumstances the pregnant body's need is put under additional stress relative to reserves and intake, and disease occurs.

It is worth noting that in twin-bearing ewes, there is overlap of these signs with those that result from energy deficiency in late pregnancy (Twin Lamb Disease or Pregnancy Toxaemia). In this condition, food deprivation, transport or other stress triggers disease. More typically in this condition, signs include tremors, apparent blindness, grinding of teeth and excessive response to handling before recumbency sets in. The course of this disease is typically longer than hypocalcaemia and the response to treatment poorer.

Treatment for clinical acute hypocalcaemia (i.e., where the animal is showing signs of disease as described above) involves injections of calcium-containing medications under the skin or into the bloodstream. Given appropriately (the right amount at the right time for the right condition), this can result in dramatic improvement in clinical signs and be truly life-saving. Unfortunately, too much calcium given too quickly into the bloodstream can be dangerous, and this route of treatment should be used cautiously.

As a general treatment guideline, injecting 80 to 100ml of Calciject 20 solution under the skin is the safest treatment. Dividing the volume into 3 different injection sites will help it be absorbed into the bloodstream more quickly. Slow injection (over about 2 minutes) of 20 to 30ml of the same calcium solution into a vein will give quicker results, but carries higher risk. It is also valuable to dose the affected animal with an energy-rich drench, both to help recovery and in case there is a degree of Pregnancy Toxaemia present. However, typically true hypocalcaemia cases will respond promptly to treatment. Once recovered, further calcium supplementation – either by further injections under the skin or orally – should be considered.

In extensive farming conditions, knowing the calcium status of the flock can be very difficult to determine, but any ewes entering the latter half of pregnancy in poor body condition should be considered at risk. Farms that encounter calcium-related health problems on a regular basis should look at feed management measures to address these concerns in advance of the lambing season.



# Responsible Wool Standards (RWS)

By Andy Pollard

## What is the RWS?

The Responsible Wool Standard (RWS) is an international certification scheme for wool. As with traceability and standards schemes for other industries – such as foods, coffee and forestry, these are increasingly crucial to access new markets, secure a premium in existing markets – and meet the demands of ever more informed and critical customers.

The RWS is an international, voluntary standard that addresses animal welfare in sheep farms, the land they graze on and the chain of custody of wool from certified farms to the final product.

The RWS requires all sites to be certified, beginning with the wool farmers and through to the seller in the final business to business transaction. Usually the last stage to be certified is the garment manufacturer or brand. Retailers (business-to-consumers) are not required to be certified. Farms are certified to the Animal Welfare and Land Management and Social Modules of the RWS. Subsequent stages of the supply chain are certified to the Content Claim Standard requirements



During the development of the RWS, much consultation was had with everyone in the wool supply chain, and importantly, included those non-wool industry environmental and social bodies interested in seeing global standards improve. The result, is a robust basis from which the scheme was developed, with real interest in future sustainability.

## RWS Benefits to Farmers

A key benefit to farms is in maintaining or increasing the access to market in difficult trading times. One of the largest buyers of Falkland Island wool has estimated that 40-50% of new enquiries were for RWS certified wool. If your wool is RWS certified this potentially allows you to access 100% of global markets, whereas non RWS wool might restrict you to 50-60%. New Zealand has its own national standard, the ZQ Platform stating “the importance of ZQ teaming with international standard RWS to ensure the very best value adding is achieved for New Zealand growers” Future benefits of premiums has potential but there is no guarantee.

The scheme also provides and opportunity to continually review and enhance animal welfare practices, along with land management and erosion control.



## **Who is currently involved in progressing the RWS?**

The RWS is a project that was identified and sits within the Falkland Islands Development Corporation (FIDC) Wool Innovation Project. The RWS Steering Group is comprised of the following:

FIDC –Director of Wool Innovation  
Department of Agriculture (DoA) – Senior Agricultural Advisor, Sheep Agricultural Advisor, Project Officer  
Woolco - Manager  
Falkland Woolgrowers - Manager  
Falklands Landholdings – General Manager

## **What stage is the RWS project at?**

The RWS standards have been reviewed by the steering group and a number of 'gaps' have been identified that require further investigation to determine the potential impact on Falkland Island farms. This information will be sought from the Control Union in Uruguay, who are an external auditor accredited by Textile Exchange, who are the certification body. The contact in the Control Union visited the Islands with the Uruguayan delegation in 2018. At this stage we are optimistic that the majority of standards are being met.

The Department of Agriculture, working with the Steering Group, has been collating the relevant documentation for Saladero. The process has involved a data collection phase, which chiefly involves a discussion on farm with the Farm Manager. In addition, records of animal husbandry procedures, animal health, shearing, mortality and other events on the farm were reviewed. The information collected has then been analysed and a written plan has been drafted for the auditor to review. I would like to thank both the Farm Manager and Agricultural Advisors for their involvement in this phase of the project.

In parallel, the Director of Wool Innovation has been investigating the physical aspects required to join the scheme. In addition to this an investigation into the costs involved, both for initial certification and also future audits.

The next meeting of the Steering group will occur on the 12<sup>th</sup> October. At this meeting the Saladero documentation will be reviewed and a presentation of the costs and funding options will be considered. If agreed, the next step will be to send the Saladero documentation to the external auditors for review and feedback. It is important to highlight that at this stage we are not seeking certification, just feedback on the process.

When the steering group are content with this feedback, stage two will then involve putting together written plans for interested farms.

As woolgrowers, we want you to become part of the project, so to register an interest, or simply have a conversation to find out more. Please contact either myself or Greg Green, by email or telephone.

FIDC's Wool Innovation Director Greg Green on 27211 or [ggreen@fidc.co.fk](mailto:ggreen@fidc.co.fk) or Project Officer Andy Pollard on 27355 or [apollard@doa.gov.fk](mailto:apollard@doa.gov.fk)



**Department of Agriculture** *Webpage*

*Falkland Islands Government*

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# How Many Tups?

*By Phillip Van Der Riet*



The importance of optimising conditions for the successful breeding of the sheep flock is obvious. Having healthy, well-conditioned breeding stock – both tups and ewes – is critical, as is the timing and duration of the joining period. When it comes to the males, whether using teaser (vasectomised) tups to tighten the breeding season, or putting in the stock tups to “get the job done”, the health and willingness of the animals is critical.

Farms will carefully select tups, using fairly objective criteria such as body condition score, conformation, age, testicular anatomy and joint health. Even then, it is difficult to know whether a tup will demonstrate good libido, mating ability and stamina.

A further complication is deciding on an optimum number of tups to use on the breeding flock. Having lower numbers of tups allows strict selection for the best quality tups, but too few tups may mean that the ewes do not all get mated successfully. Ratios as high as 1 tup per 20 ewes may be needed for some circumstances, whereas it is more commonly advised to have one tup per 50 to 100 ewes.

The reasons for this variation lie in the nature of the flock and the nature of the farm. For successful breeding to happen, a willing and able ram must be in close proximity to a ewe for the brief period of time (24 hours) that she comes on heat, and he must then have opportunity to successfully inseminate her. Large paddocks with multiple water points may result in a widely dispersed flock, with higher instances of ewes cycling when no capable tup is available. These systems will need more tups available to achieve adequate ewe exposure.

The simplest thing would seem to be to have as many tups as possible, to ensure good exposure of the females. However, the more tups encounter and interact with each other, the more they will demonstrate competitive behaviour that will distract them from their job. This behaviour may even result in injuries that compromise breeding ability. Furthermore, where the intention is to use the best genetics available, having many male animals inevitably means having to select weaker tups into the breeding pool.

In the Falkland Islands the average number of tups used at breeding is reported as about 1 per 30 ewes. These are generally used over an extended breeding season of 10-12 weeks or longer. Although lambing percentages suggest most ewes are getting exposed to the tups in this time, there are concerns that the resulting long lambing period creates management problems as the lambs mature at different times. Also the relatively high number of tups inevitably means that the best genetics available are being “diluted” by poorer quality tups.

Consideration could be given to easing these concerns by having a shorter breeding period – possibly using synchronisation techniques such as the Ram Effect – and creating better conditions for early conception with the best tups. To achieve this, access to ewes could be optimised by concentrating them into smaller paddocks. This would also allow lower numbers of tups to be used, and thus the best quality tups to access the ewes.

Individual farm and flock characteristics will override any broad prescriptions, but generally speaking management should aim to allow the few best quality tups to successfully mate with the full breeding flock within the shortest period of time practical, to allow the best lambs to be produced when the climate and feed situation is likely to be optimal.

# Udderly Interesting

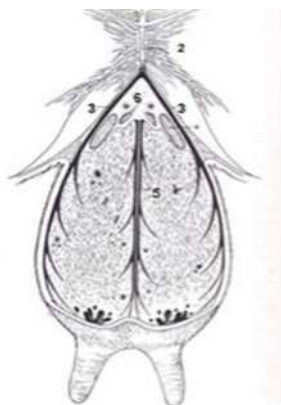
By Phillip Van Der Riet

As lambing season commences, the importance of udder health in the ewes comes to mind. Lambs born to ewes with udder defects have a death rate 3 to 4 times higher, and a growth rate significantly lower (thus lower weaning weight), than lambs born to ewes with normal udders. In intensively managed flocks, udder health assessment and monitoring is a valuable tool to identify lambs that may struggle for nutrition, to identify ewes that should be culled rather than rebred, and to monitor disease presence in the flock. Although more difficult in extensively managed flocks, udder assessment should still be in the stockperson's awareness.

Udder assessment is based on visual appraisal, physical handling, and milk sampling. Visual appraisal can be done from a distance, and will identify poor udder conformation, udder asymmetry and indications of udder disease. However, physical handling of the udder is necessary to properly assess udder fill and detect unusual lumps or consistency, udder pain, or other indications of trauma or disease. Drawing a milk sample from the lactating udder will allow visual detection of blood, clots, wateriness or pus in the milk, and also laboratory detection of disease-causing bacteria.

Ideally, all ewes' udders would be checked. At the least, any ewe suspected on visual appraisal of having udder problems should be properly assessed. If significant abnormalities are present, she should be considered for cull rather than rebreeding. Even if only a single side of the bag is affected, she will be compromised in raising offspring. If detected early enough, intervention may be useful -such as treatment interventions, fostering the lamb(s) onto another ewe, or sampling the milk for disease investigations. The optimum time to routinely assess flock udder health by palpation is 4 to 6 weeks after weaning, to detect problems before the next breeding season. If permanent change is likely to be present, and especially if one or both glands are likely to be unproductive, then the ewe should be marked for culling. This also applies to animals with poor conformation, as this is believed to be genetically passed on and to predispose affected offspring to episodes of mastitis.

NORMAL UDDER ANATOMY



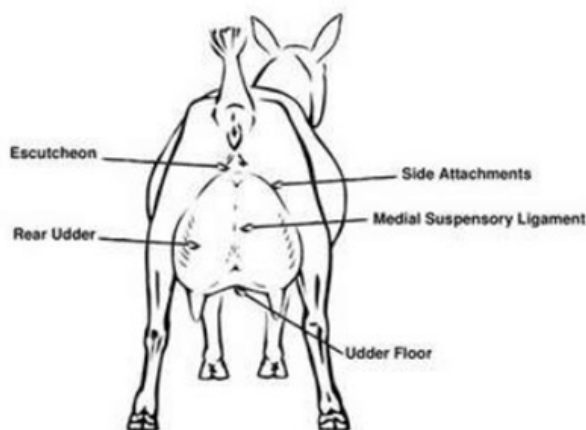
PENDULOUS UDDER



GOOD UDDER



GOOD UDDER CONFORMATION



LUMPY UDDER



# A Rapid Visual Assessment Technique for Native Pasture Assessment

By Dr. Matthew McNee

This article describes a pasture assessment technique that is easy to learn and quick to use.

BOTANAL is a dry-weight ranking technique that uses visual estimation for botanical composition (species) and herbage mass. The % green, % groundcover and % species can all be assessed at the same time.

Other methods have been promoted in the past, but these are mainly suited to simple estimations of grass quantity in re-seeded fields. Such methods are generally unsuitable for grazing lands with whitegrass, mixed heath, dwarf shrubs and fine grass zones in large camps.

Under these circumstances, information on the composition of plant species and the percentage of edible green material are likely to be the most instructive for grazing practices.



In subsequent articles I intend to present data from Saladero and some participating farms. I'll explore whether BOTANAL pasture assessment can offer a practical and effective technique for pasture assessment on the Falkland Islands.

Ideally, this is a service that the Department of Agriculture (DoA) could provide to farmers who are exploring new grazing management techniques or would like to know more about changes in state of native camp. However, the method doesn't require much training and could just as easily be adopted by farmers as a pasture monitoring practice with analytical support provided by the DoA.

## HOW IS THE INFORMATION USED?

### *Estimating stocking rates*

A recent trip with Andrew Bendall to Saladero demonstrated how useful this simple type of pasture assessment can be. In this instance we assessed a camp that had been locked up for 4 months before winter.

Saladero Pasture Assessment, Camp 04 – 185ha  
Estimated total herbage Mass: 3500kg / ha  
Percentage green: 40%  
Edible green species: 10%  
Calculation:  $3500 \times 185\text{ha} \times 40\% \times 10\% = 25,900\text{kg}$  of edible feed in the camp  
Over 90 days: 287 kg DM / 1.5 kg DM demand per ewe = 191 ewes in camp 4

In the example on the left, the percentage green figure is probably generous and we would get a much better estimate by assessing different areas of the camp. Your own knowledge combined with soil and vegetation maps might help to extend results from a few sites to other areas of interest on the

farm. This is yet to be demonstrated and will be learnt through experience.

### *Measuring the impact of controlled grazing practices*

There is a desire to improve the 'useful' component of the native pastures in rotational grazing systems. The % green and species composition allows the 'useful' component to be measured on a per hectare basis. These characteristics can both be manipulated with canopy management through controlled grazing practices.



In some situations the plant litter should be estimated separately to the herbage mass. This provides an estimate of the amount of plant material that is returned to the soil as food for micro and macro organisms. Those organisms participate in nutrient cycles that support the recovery of grasslands after grazing.

Controlled intensive grazing practices can be used to trample dead plant material onto the ground, which will modify the ratio of herbage mass to litter in the pasture assessment. Litter/ mulch may provide the conditions necessary for fine grasses to colonise pastures. BOTANAL can be used to monitor progress in species recruitment and the proportion of the species which is edible. These ideas could form the basis of on-farm grazing systems experiments as part of the DoA's Farmer Based Research Program.

## PERFORMING PASTURE ASSESSMENTS

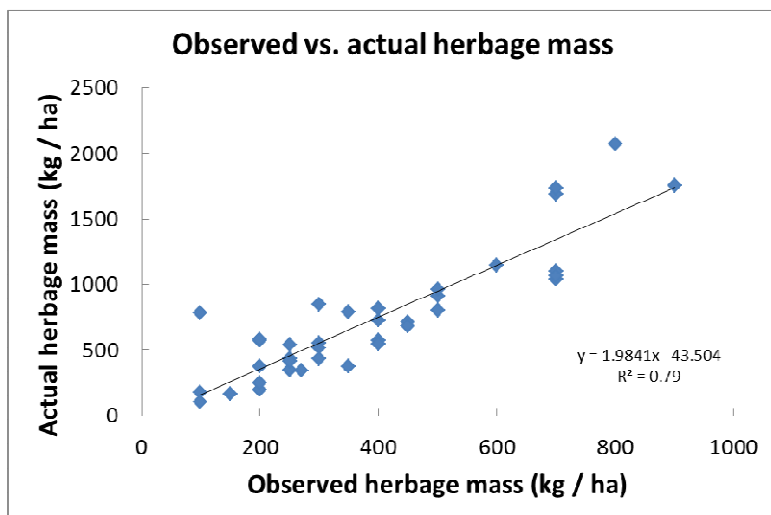
The great advantage of this procedure is that it doesn't require a lot of training to get started and collect useful information. The operator doesn't have to make a "correct" assessment of the herbage mass and various components. They simply have to learn to be consistent in the way that they judge the herbage mass, be able to identify most major species and what is edible for livestock. To begin with it usually helps to have two people, with one recording the numbers while the other calls out the observations. It is important that all observations are made by the same person at a particular site. Enough site information can be gained from only 1 hours work once the operator becomes proficient.



### **Estimating herbage mass**

Total herbage mass is determined by a direct visual estimate in square quadrats. This procedure is not sensitive to the size of the quadrat, but the quadrat must be sufficiently large to capture pasture variability e.g. 0.1m<sup>2</sup> is recommended because it makes conversions on a per hectare basis simple. As a general rule we need 50 observations to account for the pasture variability over a hectare.

In addition, calibration quadrats are used to relate estimated and actual values of herbage mass. All of the herbage in these calibration quadrats is collected then dried and weighed in the ovens at the Department of Agriculture. The number of calibration quadrats depends on the pasture variability we perceive across the 50 observations. It is often sufficient to take only a handful of pasture cuts provided these represent the range of observations that were observed with visual observation.



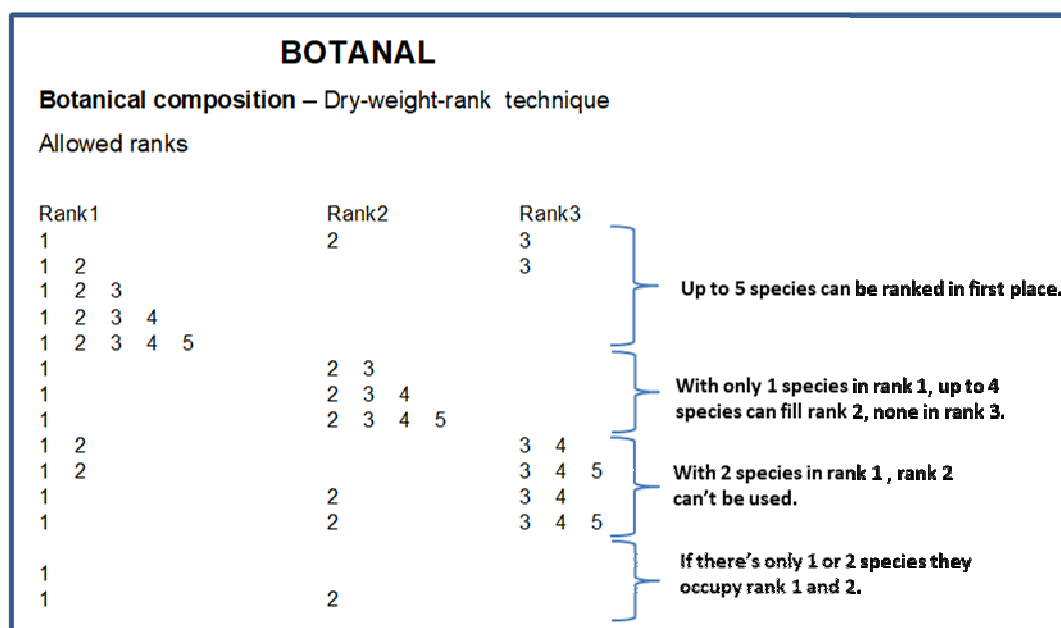
In the example on the left, we can see that the operator's observations (horizontal axis) were quite a bit lower than the actual weight of the herbage mass in each quadrat. This inaccuracy doesn't matter. The main thing is that they were consistently low, yet still quite accurate in distinguishing between low and high amounts of herbage. Once this graph has been plotted it is then a simple process to correct all observations taken at the site using the slope of the line drawn between the points.

*Continued on pages 22 & 23*

## Ranking species

First we must have a numbered species list. The list shown in this article is comprehensive and based on the Falkland Island's Pasture Plant Guide. A much simpler list can be used when many of these species don't apply. When species are recorded they need to be inputted in a certain way for analysis that can be performed at the DoA. Allowed ranks are shown in the figure below. Species are ranked first, second and third according to their estimated contribution to dry pasture herbage mass. The major contributor is given the rank 1, the second largest contributor is given the rank 2 and the third is given rank 3. In order, these rankings have approximate values of Rank 1 – 70.2%, Rank 2 – 21.1%, Rank 3 – 8.7 %. On the next page is an example of a record keeping sheet where the species are inputted on the right-hand side.

| Species # | Common name                    | Botanical name               |
|-----------|--------------------------------|------------------------------|
| 1         | White grass                    | <i>Cortaderia pilosa</i>     |
| 2         | Diddle-dee                     | <i>Empetrum rubrum</i>       |
| 3         | Christmas bush                 | <i>Baccharis magellanica</i> |
| 4         | Common Bent grass              | <i>Agrostis capillaris</i>   |
| 5         | Magellanic bent                | <i>Agrostis magellanica</i>  |
| 6         | Creeping bent                  | <i>Agrostis stolonifera</i>  |
| 7         | Silvery Hair Grass             | <i>Aira caryophylla</i>      |
| 8         | Early Hair Grass (Goose grass) | <i>Aira praecox</i>          |
| 9         | Sweet Vernal-grass             | <i>Anthoxanthum odoratum</i> |
| 10        | Cocksfoot                      | <i>Dactylis glomerata</i>    |
| 11        | Wavy Hair-Grass                | <i>Deschampsia flexuosa</i>  |
| 12        | Couch-grass                    | <i>Elytrigia repens</i>      |
| 13        | Land Tussock                   | <i>Festuca contracta</i>     |
| 14        | Magellanic Fescue              | <i>Festuca magellanica</i>   |
| 15        | Red Fescue                     | <i>Festuca rubra</i>         |
| 16        | Cinnamon grass                 | <i>Hierochloa redolens</i>   |
| 17        | Yorkshire Fog                  | <i>Lolcus lanatus</i>        |
| 18        | Perennial Rye-grass            | <i>Lolium perenne</i>        |
| 19        | Reed Canary Grass              | <i>Phalaris arundinacea</i>  |
| 20        | Timothy Grass                  | <i>Phleum pratense</i>       |
| 21        | Mountain Blue-Grass            | <i>Poa alpina</i>            |
| 22        | Annual Meadow-Grass            | <i>Poa annua</i>             |
| 23        | Tussock                        | <i>Poa flatabellata</i>      |
| 24        | Smooth-stalked Meadow-Grass    | <i>Poa pratensis</i>         |
| 25        | Shore Meadow-Grass             | <i>Poa robusta</i>           |
| 26        | Native Fog                     | <i>Trisetum phleoides</i>    |
| 27        | Squirrel-Tail Fescue           | <i>Vulpia bromoides</i>      |



| EXAMPLE TEMPLATE |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  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# Risk Management Practices: Destroying Infested Lettuces

By Dani Baigorri, Biosecurity Officer

Biosecurity itself is more than a buzzword; it is the vital work of strategy, efforts, and planning to protect human, animal, and environmental health against biological threats. The primary goal of biosecurity is to protect against the risk posed by disease and organisms; the primary tools of biosecurity are exclusion, eradication, and control, supported by system management, practical protocols, and the rapid and efficient securing and sharing of vital information. Biosecurity is therefore the sum of risk management practices in defence against biological threats.

A big chunk of the biosecurity team's job is to inspect products being imported into the Falkland Islands to tackle the entrance of invasive alien species, i.e. non-native organisms that cause, or have the potential to cause, harm to the environment, economy, or human health.

Under this principle, large quantities of fruits and vegetables are being imported every month into the Falklands Islands and the inspection of these commodities represent a key role for Biosecurity Officers purposes as these products are vulnerable to lots of different diseases and organisms that can endanger the environment, as well as to the agricultural crop and livestock industries.

In August during one of our inspections, we came across 300 kg of lettuces infested with at least 4 types of bugs. We usually find some bugs in the fruit and vegetables being imported into the Falkland Islands but our plant material Import Health Standards allow a small percentage of soil or bugs on them. However, on this occasion the amount of bugs was well over the limit established by the Health Standards, therefore we were forced to make a decision regarding these 300 kg of lettuces.

As you may imagine, this decision wasn't easy, and we as residents of the Falkland Islands know and understand that destroying vegetables is very close to a sin. Nevertheless our responsibility as Biosecurity Officers is to protect the Falkland Islands environment, economy, human and animal health by preventing the entrance of any type of biological threats and we were to destroy all 300 kg of lettuces.

One of the bugs we found on the lettuces that led us to decide on destroying the lettuces was a green beetle commonly known as Cucurbit beetle (*Diabrotica speciosa*). This insect is considered to be an important pest throughout South America (except Chile) and is known to transmit several viruses such as comoviruses and different mosaic viruses. In its larvae state it feeds on the roots of crops and as an adult is cold – tolerant, this is what makes it highly hazardous to the Falklands Islands, as the cold is one of our major defences against non-native species threatening the Islands.

*A colourful image of the Cucurbit beetle can be found at the top of page 14.*

