

THE WOOL PRESS

May/June 2019

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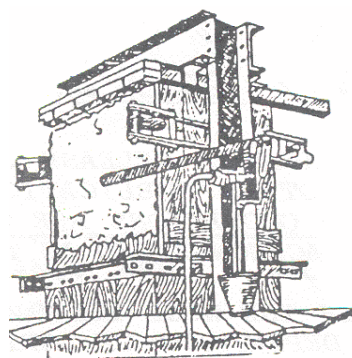
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Edited By Tracy Evans

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EDITORIAL

Welcome to this edition of the Wool Press! While this is generally considered a 'slower time' in the farming community, it's remained fairly busy within the DoA. We've recently had Michylla Seal here for a 4 week AI program. This year the program utilised a significant amount of locally sourced fresh semen. Mic has written a great article in this edition that explores the possibilities for us to use locally sourced semen more extensively in the future. The fact that we are now looking at this option is testament to the genetic progress that has been achieved across the Falkland Islands sheep flock in the past 10 years. Daniel has also written a great article reaffirming the importance of managing ewe condition in the lead up to lambing and the importance that ewe selection can have on the rate of genetic gain.

Pleasingly the recently concluded budget process approved funding for an Optical Fibre Diameter Assessment (OFDA) machine. The machine is due to arrive in the Islands in early October and will be launched via a series of field days across East and West Falkland. The OFDA will allow us to provide information on fibre diameter and length of mid-sides for around £0.40, as opposed to the current £1.85 for an equivalent test performed at an overseas lab. This offers fantastic potential for mid-side testing to be undertaken across stud and commercial flocks alike! See Tracy's advert on page 7 for more information.

Naomi has written a great summary of the biosecurity workshops that were recently hosted in the Islands. As always remains the case, prevention is better than a cure. James has written a good article on thistle identification and control, as with any invasive pest, good surveillance and early action to address an emerging problem can save a lot of pain further down the track!

Zoe's article on the vet's role at FIMCo is all about offering consumers assurances that their product is ethically produced and safe. While such assurances have traditionally been limited to the food sector, it is an ever expanding requirement in the fibre sector- with consumers constantly demanding assurances about the production and origin of goods that they purchase. This was a key theme discussed at the recent IWTO congress that Vikki, Farrah, Robert and myself attended and will be discussed in more detail during farmers week.

It's pleasing to see another great report on the RBA show. Congratulations to all those who took prizes home, especially North Arm. You'll also see that the RBA has a great programme for the upcoming Farmers Week. We appreciate that many people will be unable to make the DoA sessions for various reasons and can advise that all DoA presentations will be uploaded to the DoA website at the end of Farmers Week.

Hopefully you'll enjoy reading this edition!

Adam Dawes
Senior Agricultural Advisor

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AGRICULTURAL RETURNS

Agricultural Returns for 2018/19 are due soon!

Part A: It is a legal requirement to complete and return these to the Department of Agriculture before the 30th June 2019.

Part B: It is a legal requirement to complete and return these to the Department of Agriculture before the 31st October 2019.

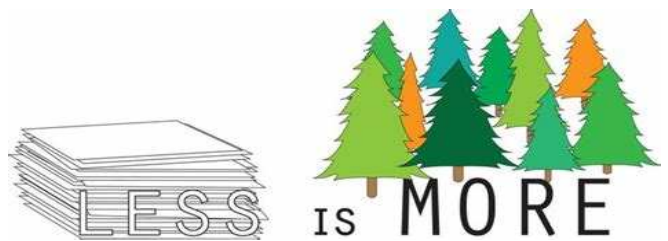
Contact details are:

Tel: 27355: Fax: 27352:

Email: Lucy on lellis@doa.gov.fk
or Tracy on AgAssistant@doa.gov.fk

DOG DOSING DATES FOR 2019/20

Date	Drug
Wednesday 9th January 2019	Drontal
Wednesday 13th February 2019	Droncit
Wednesday 20th March 2019	Droncit
Wednesday 24th April 2019	Droncit
Wednesday 29th May 2019	Droncit
Wednesday 3rd July 2019	Drontal
Wednesday 7th August 2019	Droncit
Wednesday 11th September 2019	Droncit
Wednesday 16th October 2019	Droncit
Wednesday 20th November 2019	Droncit
Wednesday 18th December 2019	Droncit
Wednesday 9th January 2020	Drontal



NOTICE

To reduce our environmental footprint, the Wool Press is now printed in this smaller size.

The Wool Press can also be accessed online via the DoA Website & the DoA Facebook page.

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.

The Falkland Islands Government

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Animal Health Top Priority for Falklands Biosecurity

- Naomi Baxter

The week of 8th April saw three biosecurity workshops taking place in Stanley. These were aimed at getting input from a wide range of stakeholders on how we can improve the biosecurity service and prevent any new pests, weeds or diseases getting into the Islands.



Animal health workshop

We started with animal health, arguably the most important part of biosecurity in the Falklands. Helen Roberts from DEFRA explained how the UK manages the risk posed by importing animals and meat products and we discussed how we were doing in the Falklands. With the relatively few animal imports, and strict regulations on any that are imported, that route is pretty tightly controlled. Similarly, all meat imports, which we know can also bring in foot and mouth disease as well as a raft of other nasties, are controlled via import permits and health certificates. The difficulty is when you have people essentially smuggling in meat in their luggage. It may seem a strange thing to want to bring meat to somewhere like the Falklands where the quality is so good but people like to bring a taste of home with them and we

regularly find risky home-made salamis, sausages and biltong being brought in via the airport. We decided one way to help prevent people bringing in illegal meat would be to have detector dogs at the airport – they can search 100% of passengers without having them open their luggage and are much more effective than a human could ever be. Luckily the detector dog programme is actively looking for new scents to add to the dogs' repertoire so meat is now next on the training list.



Dogs can search a fishing vessel for rodents in ~20-30 minutes, much faster and more efficiently than a human; could they provide another layer of protection at the airport?

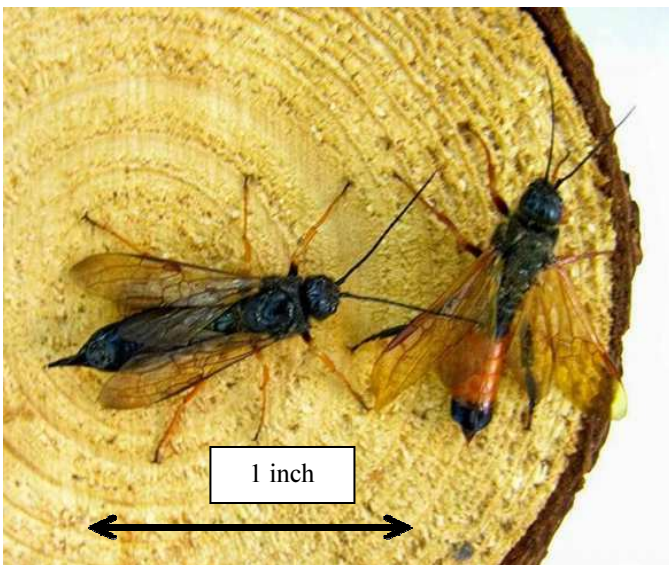
The next workshop focused on the marine environment and the invasive species that could come in on fouled hulls of boats and in ballast water. This is a global issue and is a really challenging one. New Zealand have only just imposed restrictions on vessels with un-clean hulls entering their waters. The discussion on biosecurity for marine invasives centred around data gathering – how much of an issue is this for the Falklands? Are vessels coming into the harbour with heavy fouling

and are all vessels equal? This means the top priority is inspecting a wide range of vessels and understanding the problem better so we can decide what would be the most appropriate action.

The third workshop was about terrestrial biosecurity; the insects, animals and diseases that can stowaway in our imported goods. Some pathways are relatively well controlled such as the import of fresh produce, but others need some attention. This was highlighted recently when some inch-long wood wasps started emerging from a batch of imported wood. These wood wasps had made their home in the raw timber, which had been imported to the UK and then made its way down to the Falklands. The wood wasp's eggs are laid by the mother deep into the wood and covered over with a paste to seal them in, so they can't be seen from the outside. Once the wood had been put in a warm house, the wood wasps developed, hatched and

The issue of weeds was also raised. Weed seeds come in through various means: as rogue seeds in packaged seeds, with soil, compost, sand and aggregate. It is very difficult to spot seeds at the border so getting certified compost and fumigating imports prior to arrival really helps. Ultimately, plant surveys around areas where compost and aggregates are spread seemed like one of the best use of resources in tackling this problem.

Overall, the key issues were having enough biosecurity staff to complete all the tasks that were highlighted, and having the legislative backing to enforce the guidelines that we currently have. With this in mind the work plan for 2019-20 will focus on: drafting a biosecurity policy to enable us to progress the legislation; collecting baseline data; increasing public awareness of what can and can't be imported and why it matters; reviewing the potential invasives coming in on the Brazil flight pathway and adding 'meat' as a new scent for the detector dogs.



Female (left) and male Sirex woodwasps that were found emerging from imported timber



Terrestrial biosecurity workshop

proceeded to chew their way out of the wood. So, we are going to be looking at developing guidelines for timber imports.

Thanks to all those that gave their time to attend the workshops and those who couldn't make it but still passed their on comments.

Department of Agriculture *Webpage*



Falkland Islands Government

www.fig.gov.fk/agriculture



A VET'S DAY AT THE ABATTOIR

By Zoe Fowler

You're no use now, they're all dead (ho ho ho)
.....is a common joke the vets are met with when we run into folk at the abattoir. It's a fair point – resurrecting something that has had its head removed is beyond the talents of the most expert neurosurgeon. But did you know that it is a requirement to have a suitably qualified vet at the abattoir when slaughtering is taking place? Not for resurrection purposes, or even to be the one doing the despatching (there are qualified and very experienced slaughtermen for that) but to ensure that the animals are killed humanely, the carcasses are disease and contamination free and that FIMCo are adhering to numerous food hygiene requirements that make the meat safe to eat (e.g. the temperatures that it is chilled and then frozen at).

So, what do the vets actually do all day at the abattoir? Well, first of all and most importantly, there is a great deal of jargon that you can bandy about when you work in food hygiene. The OV must ensure that the FBO follows a suitable HACCP plan to ensure, among other things, that the TVCs are within limits as they are a good way to validate that your CCPs are controlled properly. If you can understand and explain this sentence then give me a ring, we'd probably like to offer you a job.

OV stands for Official Veterinarian – a suitably qualified vet – you need to have done a bit of an extra course to work in meat plants, you need to know what a normal dead sheep looks like, and a normal live sheep come to think of it, and you need to have a vague idea what all the legislation says. FBO means FIMCo – the Food Business Operator, the person or company that actually makes the food. FBOs need to have a written HACCP plan (Hazard Analysis and Critical Control Points). This is a document that lists all the things that might go wrong to make the food unsafe and how the FBO intends to monitor them and prevent them from happening. It creates approximately 400 records to fill in each day but it is an internationally recognised system that does

work if done properly. I'm a HACCP nerd, I love a company that actually keeps the records it says it's going to. If anyone wants a powerpoint presentation about HACCP plans, I'm your woman. TVCs are Total Viable (bacterial) Colonies. At regular intervals FIMCo will take bacterial swabs from the carcasses to ensure bacteria levels are not above the allowed levels. Some bacteria are obviously more serious than others. You do NOT want all your carcasses contaminated with *Salmonella* and *E.coli*. However because these bacteria can be found in normal ruminant guts it is paramount that ANY faecal contamination is trimmed, bacteria can also be carried in wool and dust so it's important to have vigilant and skilled workers on the line. Other more 'general' bacteria can be present up to a certain level but when they get too high that suggests your general production hygiene needs to be improved and if levels of 'spoilage' bacteria are too high then your meat is not going to keep as well. These bacteria are unlikely to make you unwell but no-one's going to be pleased with a green slimy carcass are they?

A normal day for an OV starts with going out to the lairage (the holding shed out the back) and checking all the live animals. Anything sick or injured needs to be identified and dealt with appropriately, either ensuring it is slaughtered first to relieve its suffering or, slaughtered and disposed of because it is unwell and not good to go for food. The traceability of food is very important, for example if a box of meat tests positive for antibiotic residues you need to know what farm that meat came from originally. So we cross check the tag numbers and farm codes on the movement certificates with the animals in front of us. A commonly forgotten piece of information about sheep identification is that if you sell sheep to another farm your farm tags should remain in those sheep and the receiving farmer should add their coded farm tags onto those sheep as well, so they have a natty colourful ear display of the journeys they have been on. Admittedly it's not a fail safe system as there is no particular order in which the tags should be in

the ear so if you found such a sheep on the road you couldn't tell really if it resided at farm A or farm B first but it's the best we can do for now. As technology advances it would be ideal if all sheep had electronic ear tags – at the 'bloop' of a wand you could log a sheep off your farm and bloop! There it is logged in to the next. Perhaps the wand at FIMCo may have a less cheery noise. And it DOES matter if you find residues or disease in a particular lot of sheep. During the export season when there is a dedicated meat hygiene inspector here they take care of the majority of carcass inspections, they mark up with coloured tags what carcasses have had boils, bladder cysts etc, found in them and they apply a stamp to carcasses deemed fit for human consumption. During the winter when there is a lot less to kill the vets do this job too. The OV's also need to keep an eye on how the animals are killed (that animals are stunned unconscious before their throats are cut), that all the operatives are following basic hygiene rules and we also note each day any deficiencies in good practice and liaise with FIMCo about those. We collect samples to send away to test for drug and

contamination residues and we periodically check that FIMCo are keeping their records diligently and following up on any deficiencies they identify themselves. Other than ensuring the meat is safe, the other reason we do all this is so that we can sign the Export Health Certificates that accompany the meat to overseas markets. Without a certificate guaranteeing strict welfare and hygiene standards have been adhered to, meat isn't allowed anywhere so our signatures allow the export of millions of pounds of meat out of the Falklands. That's a pretty big responsibility and it's the Veterinary Service that signs the certificates that are responsible for saying 'this meat is safe' so forgive us for nagging about your sheep tags – we have a lot at stake (or should that be steak?).



MID SIDE SAMPLING

DID YOU KNOW THAT THERE WILL BE VARIOUS OPTIONS AVAILABLE FOR MIDSIDE TESTING THIS SEASON:

Test type	DoA OFDA	NZWTA micron	NZWTA micron and yield	NZWTA micron, yield and strength
Micron	Yes	Yes	Yes	Yes
CV of Micron	Yes	Yes	Yes	Yes
Coarse Fibres	Yes	Yes	Yes	Yes
Staple length micron profile	Yes	-	-	-
Yield	-	-	Yes	Yes
Length	Yes	-	-	Yes
Strength	-	-	-	Yes
Cost (approx.)	£0.40	£1.85	£2.50	£6.00

NOTE: DoA OFDA available from mid-October

Please contact Tracy by the end of June 2019/2020 to advise of your testing requirements

When ordering please include the following:

- Your farm name
- What type of testing you require
- How many of each test type you require and for what animals

If you have never considered mid-side sampling before and would like more information, please contact Tracy Evans on AgrAssistant@doa.gov.fk

RBA Show

By Sammy Marsh. Pictures - Mandy Ford

The annual Rural Business Association Agricultural Show took place on the 13th April 2019 at Goose Green. It was a very busy show, with many visitors filling the Goose Green shearing shed.

The day was busy with local arts and crafts stalls, home baked goodies to sample and shearing demonstrations as well as viewing the livestock.

North Arm took the most points across the sheep classes this year, with Hope Cottage and North Arm taking the most across the cattle classes.

This year we have a new prize kindly sponsored by Government House for most points across all classes, sheep and cattle. The winner across the board this year was North Arm with an outstanding 52 points.

The day was ended with a traditional Asado cooked by Tito and his helpers, followed by a very lively evening at the Social Club.

Thanks must go to Keith and Glynis and all at Goose Green who host this fantastic event, and their gang who work very hard to get the shed ready. A massive thank you also to our judges Ron Binnie, Mandy Ford, Duane Evans, John Ferguson, George Smith, Rodney Lee and Donna Minnell who did a sterling job of judging the entries this year.

I would also like to thank Louise Pole-Evans and Gail Miller for taking the entries, and keeping everything running so smoothly.

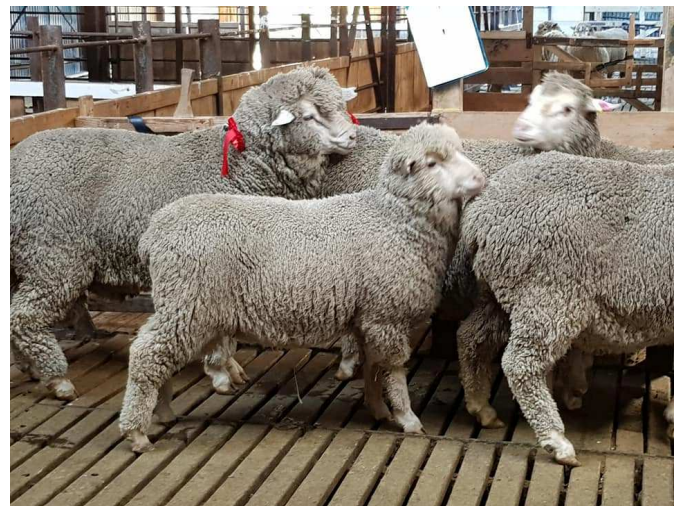
The RBA would also like to thank everyone that sponsored, helped and contributed by bringing their local wares and livestock. We look forward to seeing you next year!



The crowd enjoying the stalls



Prize giving



Some of the stock on show

Results

Class S1 Ram Hogget less than 12 months

1. North Arm 2. Goose Green 3. Hope Cottage

Class S2 Shearling Ram over 12 and less than 24 months

1. Blue Beach 2. North Arm 3 North Arm

Class S3 Mature Ram over 24 months

1. North Arm 2 North Arm 3. Blue Beach

Class S4 Ewe Hogget under 12 months

1. Blue Beach 2. North Arm 3. North Arm

Class S5 Shearling Ewe over 12 months and less than 24 months

1. North Arm 2. North Arm 3. Hope Cottage

Class S6 Mature Ewe over 24 months

1. Hope Cottage 2. Hope Cottage 3. North Arm

Class S7 Pen of three Flock Hoggets under 12 months

1. Kingsford Valley 2. Moss Side 3. Walker Creek

Class S8 Pen of three Flock Shearlings over 12 months and under 24 months

1 Hope Cottage 2. Kingsford Valley
3. Hope Cottage

Class S9 Dual Purpose Ram Hogget less than 12 months

1. Blue Beach 2. North Arm .3 Hope Cottage

Class S10 Dual Purpose Shearling Ram over 12 and less than 24 months

1. North Arm 2. North Arm 3. Blue Beach

Class S11 Dual Purpose Mature Ram over 24 months

1. North Arm 2. North Arm 3. Blue Beach

Class S12 Dual Purpose Ewe Hogget less than 12 months

1. North Arm 2. Hope Cottage 3. North Arm

Class S13 Dual Purpose Shearling Ewe over 12 and less than 24 months

1. North Arm 2. Hope Cottage 3. North Arm

Class S14 Dual Purpose Mature Ewe over 24 months

1. Hope Cottage 2. Blue Beach
3. Kingsford Valley

Class S15 Pen of three Dual Purpose Hoggets less than 12 months

1. Goose Green 2. Hope Cottage 3. North Arm

Class S16 Under 16s open entry

1.Kai Heathman 2 Kai Heathman 3 Hope Cottage

Most Points in Classes 1-8

North Arm

Champion Ram

North Arm

Champion Ewe

Hope Cottage

Class C1 Any Beef Heifer less than 24 months

1. North Arm 2. North Arm 3. Hope Cottage

Class C2 Any Beef Heifer over 24 and less than 36 months

1. North Arm 2. Blue Beach 3. Hope Cottage

Class C3 Any Beef Cow with Calf at Foot

1. Hope Cottage 2. Hope Cottage 3. Blue Beach

Class C4 Any Beef Oxen between 12 and 14 months

1. North Arm 2. Hope Cottage 3. North Arm

Most Points in All Classes

North Arm

Guess the Micron

Jenny Smith 19.12

Guess the Weight of the Silage Bale

Eugene McLaren with 652kgs (Actual bale weight 648kgs)

Guess the Combined Weight of the Sheep

Emily Rose

Fertiliser in the Spring

By James Bryan

Applying a dressing of fertiliser in early spring is a great way to kick-start the season, get some early season growth and set yourself up for the season ahead.

This is an ideal strategy, especially if you plan to have some of your high value livestock close to the house or want to give something a bit of preferential treatment, such as your AI ewes or perhaps your hoggets.

Nitrogen fertiliser should be applied when plants are actively growing, as nitrogen is a growth promoter not a growth stimulator,

meaning that when grass isn't growing, nitrogen won't make them grow, but when grass is growing, it will help you grow more grass. As a result when applying N fertilisers soil temperatures should be on the increase and greater than 5°C (ideally >7°C), this is when most grasses will be starting to actively grow (ryegrass won't grow at all below 5°C). Also worth considering is how moist the ground is. Excess soil moisture reduces the ability of grasses to respond to N. If N is to be applied in the early spring, drier free-draining soils should be selected first because they will respond earlier than wet soils.

Pastures should be grazed off through late autumn and winter to remove thatch and dead plant material within the pasture. This helps to allow the plants to respond better once spring comes around, however as the old saying goes, "grass grows grass", so a slightly higher cover in spring time, will help the grass respond to the nitrogen application, a good rule of thumb for this would be to try not to graze below the bottom of the label on a can of Bud.



Application rates are the next thing that affects the amount of grass you will grow. Should the above conditions be met, then you could expect to grow an extra 10kg of grass dry matter (on average) for every kg of nitrogen applied. So..

- If you apply 100kg Urea/ha @ 46% Nitrogen,
 - you apply 46kg N
 - therefore $46 \times 10 = 460\text{kgDM/ha}$



So theoretically you will end up growing an extra 460kg of grass/ha over a 4 week period, however this efficiency starts to decrease should you increase the application rate to more than 50kgN/ha. Ideal application rates for the Falklands should be around that 80-100kg of Urea/ha to avoid over application. Ideally this N application should be applied with a dressing of phosphate as well, using a product such as DAP or 20-10-10 to help with the maintenance requirements of the pasture. – remember, if you are removing wool, meat or hay from the pasture, you need to put something back in to help replace it! If you plan to apply the phosphate at a later point then Urea or CAN will suffice.

It's not too late to order any spring fertiliser, the importers are taking orders now to fill their containers, so get in touch with them to book in your requirements.

If you are thinking a capital dressing for your reseeds (over and above maintenance requirements), get in touch with the DoA to work out how much you need, and remember, that capital dressings, are eligible for FIP funding.



SPRINGCREEK CONSERVATION

ECOLOGICAL RESTORATION GRANTS

CAN HELP WITH FUNDS & ASSISTANCE TO RESTORE
WILD AREAS & FALKLANDS WILDLIFE.

Give nature a boost!

Do you have a practical restoration project that benefits Falklands wildlife?

Yes? **We can provide funding of up to £7,000**

We are particularly interested in projects that push forward **larger-scale restoration** or **new techniques**, & help or **inspire others**. These could include:

- Restoring and protecting native plants (tussac, boxwood, bluegrass...) through planting, land management & fencing
- Trialling & monitoring new methods of restoring eroded or disturbed ground with native species
- Producing native seed or propagating native plants
- Control of invasive plants or animals which are impacting important wildlife
- Hosting knowledge-sharing visits or training for land managers or community groups

Grow for it! Closing date 10th July 2019. For application forms & further information, or to discuss ideas, phone **22247** or email Frin on **habitatsrestore@conservation.org.fk**



www.falklandsconservation.com

Falklands Conservation: Registered Charity No. 1073859, and a company limited by guarantee in England & Wales No.3661322

Is using local frozen or fresh semen an option for optimising genetic gain within your flock?

By Michylla Seal

Rams are a high-performance animal and need to work very hard during the joining period. While the selection of ewes and wethers can raise the average performance and productivity of animals retained within the flock, the most influential driver of ongoing genetic improvement is ram selection. A ewe may breed one or two lambs per year, however, a ram can sire 40-80 lambs per year through natural mating.

With these thoughts in mind I ran a workshop in conjunction with the DoA for Falkland Island farmers to discuss semen production in rams, checking rams, characteristics of semen and collection of semen. The objective of the workshop was to get the discussion started on the potential scope of using domestically collected fresh or frozen semen from rams in the Falkland Islands over the greater flock. Genetic improvement of a flock to increase productivity and profitability (Fleece weight, FD, CVFD) takes time. When making selections for the genetic improvement of your flocks it is advisable to have a long-term view of production aims and market requirements for your end product. It is important to know breeding objectives and aims to guide your selection of ewes and rams in your flocks. A good grasp on your markets can provide guidance in your selections. If we can reduce the time it takes to make these genetic improvements in a flock, it can equate to a more profitable flock.

Through the innovation of Falkland Island farmers and the DoA National Stud Flock (NSF) there are numerous elite sires that are thriving and highly productive in the Falkland Islands. There is potential to use these elite rams over a greater number of ewes each year, using fresh or frozen semen in artificial breeding programs (cervical or laparoscopic). Most of the rams purchased mate 40 to 80 ewes per year, however through artificial breeding programs there is potential for an elite sire to inseminate up to 400 ewes per day. As progressive farmers you have the potential to develop this concept and have a greater genetic impact on your flocks.

A good example of utilising fresh semen from elite sires is through the AI program undertaken by FLH – North Arm & Goose Green this season in order to capitalise on their purchasing of an elite ram.

- At this year's ram sale, they purchased an elite ram from Blue Beach for £600. Fresh semen was collected from this ram over 3 days and used to artificially inseminate 355 ewes. The purchased ram then went out to join 80 ewes naturally. Therefore, the purchasing of this ram and the number of ewes he has been joined to artificially and naturally would equate to a genetic cost of less than £1.40 per ewe. We need to keep in mind that this is the genetic cost for just one year and there is the potential to use this ram over numerous years to further reduce the genetic cost per ewe.
- FLH also hired elite rams from the DoA NSF on a trial basis at a genetic price which equated to approximately £0.95 to £2.10 per ewe joined artificially.
- Imported frozen semen can cost between £10 to £30 per dose (including freight charges).
- Comparing the above scenarios to rams purchased solely for natural mating; if rams are purchased for £150 and joined at a 2% joining rate would equate to a genetic cost of £3 per ewe joined in the first year of use.

Table 1: Showing FLH – North Arm & Goose Green investment in genetic value in 2019 AI season

	Purchasing a ram for £600 and using genetics over 435 ewes (fresh semen and natural mating) one breeding season	Trial year of hiring rams and using fresh semen in artificial breeding program	Imported semen (based on semen imported over numerous years)	Examples of purchasing a ram for £150 and using only in natural mating program at 2% joining rate
Genetic Cost per ewe	£1.40 per ewe	£0.95 to £2.10 per ewe	£10 to £30 per ewe	£3 per ewe

With the addition of fees related to artificial insemination programs the cost per ewe joined is higher than that of naturally mated rams, however the potential additional genetic gains in greater use of an elite sire has the potential to have a far greater impact and provide a significant financial return on investment over the lifetime of the progeny. Using local elite rams as an alternative to imported semen also provides us with assurance that his genetics are performing and thriving in the Falkland Islands environment and conditions.

Laparoscopic AI costs (including drugs, freight, professional fees and travel) vary depending on the number of ewes artificially inseminated and the number of properties involved in the season's AI program. In the 2019 season it was between £6.20 to £11.40 per ewe. Cervical AI costs are a lot less as no synchronisation of the ewes is required if you are inseminating to a natural heat and performed over a 12-17 day cycle period. If ewes are synchronised for a day of cervical AI there are still the costs of drugs and freight. Results of cervical AI can be very inconsistent ranging, between 30-60%; whereas laparoscopic AI is on average 65%+. It is not unreasonable to strive for 70%+ in your laparoscopic AI programs, especially if using fresh semen, as conception rates tend to be higher from fresh semen than results from frozen semen. There can be high variability in conception rates from laparoscopic AI programs using frozen semen, for example a property in the Falkland Islands last year had a conception rate of 48% to one frozen semen AI ram and 79% to another ram.



Benefits of Genetic Improvement

You might be thinking 'why should I invest in artificial breeding programs if I can have lambs marked for a lesser monetary input if we factor in the costs of artificial insemination?' A good example of the value adding power in using elite sires over a greater portion of the flock and the resulting lift in profits is Spring Point Farm. Mike and Donna Evans at Spring Point Farm have been cervically artificially inseminating their ewes for approximately 9 years with fresh semen from their Dohne Merino rams, selected for their elite traits. Using these elite sires over most of their ewes, they have been able to dramatically change their wool clip in a short time frame. Their ewe wool clip in 2010/11 had a micron of 25.1 and average CFW of 2.26kg, whereas their 2018/19 ewe wool clip had a micron of 21.98, and an average CFW of 2.47kg. The genetic improvement in their flock at current net Stanley prices would equate to an increase in profit of £8.42 per ewe. If they had not made these genetic gains in their flock, they would have made approximately £36,800 less in this year's wool clip alone. I believe the example at Spring Point clearly shows how investing in genetic improvement over more of your flock can result

continued

in greater profits in your farming enterprise.

Wool Co has also seen the benefits of genetic gain in flocks improving the marketability of Falkland Islands Wool. There are marked improvements in wool clips from farms investing in the genetic profile of their flocks with marketable gains in micron, CVFD, yield, length and strength. The CVFD is a favourable trait for processors due to improvements in processing and wearability of garments. There are wool buyers in the market actively seeking out Falkland Islands wool for its favourable processing characteristics and the story behind wool production in the Islands.

Options to Consider with Fresh or Frozen Semen from Elite Sires in the Falkland Islands

There are numerous options farmers can consider when using fresh or frozen semen and it is up to you as progressive farmers to decide if there is an option that suits you and your enterprise. A few options to consider are;

- 1 Purchasing elite ram/s from sales, or produced within your own flocks, and dispersing their genetics across a greater number of elite or commercial ewes by using artificial breeding techniques.
- 2 Purchasing elite ram/s as a syndicate, with each member of the syndicate retaining semen rights to that ram. That ram could have semen frozen or could be freshly collected at the time of the artificial breeding program. Some syndicates have one purchaser contributing greater amount of funds to retain the ram in their flock for natural mating, and other members of the syndicate only retain semen rights. I highly recommend having the details of the syndicate pre-determined prior to purchase to ensure all parties are fully aware of agreement they are entering.
- 3 Fresh or frozen semen could be purchased from an elite sire that an individual has bred and is not willing to have leave their flock.
- 4 Alternatively, some one could purchase an elite sire then sell semen from that elite sire to other farmers. It enables a farmer to recuperate some of the costs he paid for that ram and, other farmers to be able to utilise elite sires. (Some seed stock producers internationally retain 50% of the semen rights to a ram they breed, therefore retain 50% of the profits from the sale of semen from that ram. It is usually dependent on the price paid for that ram).
- 5 Freezing semen collected from an elite sire in case of injury or death. I have seen many farmers utilise this option rather than insuring an elite ram.
- 6 Rams can be collected prior to the breeding season so they can be used naturally during breeding season, at the same time their frozen semen is used to cover a greater number of ewes.
- 7 Farmers can establish an elite ewe nucleus within their flock to use elite sires over to produce rams to go over remaining commercial flock.
- 8 Moving semen is a lot easier than moving rams and gives many farms the potential to use elite sires bred on numerous farms on east, west and islands in one breeding season.
- 9 Farmers who import semen can further utilise elite sires resulting from imported semen over more of their flock, thus extending the time between importations of frozen semen and fully capitalising on their initial investment in frozen imported semen.
- 10 Potential to trial an elite ram in your flock by only purchasing semen. If you purchase an elite ram sometimes there is pressure to use the ram over as many ewes as possible over numerous seasons to reduce the genetic cost per ewe.
- 11 Offers extensive use of a superior ram which can be joined to 400 ewes in a single day.

- 12 Facilitates sire evaluation testing of Falkland bred rams with minimal cost. There is potential to AI with numerous locally Falkland Island bred rams in one flock to carry out a sire evaluation trial within your own flock and farming enterprise.

These are just a few options to consider and knowing the farmers of the Falkland Islands I am sure you could come up with other options that could benefit your enterprises. It would be fantastic to see a multi-vendor sale of elite sires produced by innovative farmers in the Islands where the ram and/or their semen are available for purchase.

If the Falkland Islands considers freezing semen there is a need to have consistency in the product produced to optimise conception rates in programs. I can provide training for individuals in the freezing process but there is a need to be methodical in the processing and freezing of semen. Semen can be frozen in straws or pellets. A straw is one ewe dose, whereas a pellet is 3 ewe doses. At this stage I think the best option for the Falkland Islands is to freeze in pellets as there are lower costs to set-up, lower ongoing costs and less room for errors in the process. A lot of centres around the world freeze in pellets for domestic use. In general, most centres charge £1.60 to £2.70 per dose to freeze semen in pellets (this does not include the genetic cost). The Falkland Islands is in an amazing position due to the quality of the genetics and the disease freedom status of the country to consider marketing genetics internationally. In order to export semen, there are numerous additional requirements required and semen needs to be frozen in straws for most export markets. If exporting semen was going to be an option there would need to be a far greater investment into freezing semen, but in saying that I do not think it should be excluded as an option in the future. However, analysis into the investment versus gains would need to fully be considered prior to investing into setting up an export semen collection facility.

I still believe there is a need to import semen into the Falkland Islands from overseas, as this has been instrumental in the genetic gains achieved in the Islands. However, with the fantastic genetics that you now have on the ground, there is increasing potential for more farmers to utilise artificial breeding programs to propagate the elite genetics and improve profitability. Farmers can capitalise on those rams that have visual evidence of thriving and performing in the Islands. This is not going to be for everyone and not without some cost to the producer, but this is an option worth considering.

Only you as the farmers can determine where you would like to take this and if this is an option worth considering for your enterprise. The main aim of this article was to put some ideas out there for farmers to consider and create awareness of options available with elite sires performing in the Islands. If you would like to discuss further please do not hesitate to contact the DoA or myself (mic@genstock.com.au). If there is enough appetite for further discussions I could make myself available via Skype for the RBA farmers week.



Spear Thistle

History

Spear Thistle (*Cirsium vulgare*) is a native of Europe and Northern Africa, although with the expansions of western empires throughout the 18th and 19th centuries, is now one of the most widely spread weeds in the world. Spear thistle appears to have been a relatively recent accidental arrival in the Falkland Islands, having been first recorded by Moore in 1983 (Broughton, McAdam. 2002).

Spear Thistle is a threat to productive agriculture, reducing grazing on productive areas. Also the spiny vegetation and seed pappus (fluff) can be a contaminant of wool.

Spear Thistle—the weed

Spear Thistle is a biennial weed, in its first year it normally appears as a dark green, sometimes furry, rosette this can grow up to the size of a large dinner plate. Generally Spear Thistle will germinate in late autumn through until spring. From a seedling the plants will grow into a rosette (see picture right) for their first season. In their 2nd season, the plant 'bolts' sending up a reproductive shoot growing up to 150cm tall, which can contain many branches and flowers.

Spear Thistle has a tap-root. However, it is the only thistle species in the Falkland Islands which has spines on the surface of leaves, in addition to around the leaf margins. Other

species, which are found here only have spines around the margins, or none at all. The foliage is a dark green and can be slightly furry at times.



Where is it

Spear Thistle is relatively limited in distribution around the Islands currently, with most plants being found around Stanley, MPA, Mare Harbour and some of the outlying islands.

As Spear Thistle likes to invade bare ground, it can be found along roadsides and tracks, around settlements and in waste areas.

How it spreads

As Spear Thistle is a biennial plant it can take up to 2 seasons before each plant flowers and produces seed, however the earlier germinating plants in winter can behave more like an annual, flowering within a single season. The flowers are a vibrant purple colour before they become viable seeding units, each flower can produce up to 100 seeds, which become wind blown through the aid of the pappus (fluffy) material which is attached to the seed. However the majority of the seed still falls near by the parent plant.

Other methods of dispersal include water, machinery and contamination of wool.

Following a dry summer and if pastures are over grazed, then infestations can be worse in the following year, so aim to keep your pastures competitive and prevent overgrazing

What to Do

Spear Thistle, once established, can take a long time and a lot of effort to get under control or eradicate.



Control is simple and effective, however due to its ability to prolifically produce

seed and disperse it far and wide, it is important to get on top of it early!

There are several control methods available, however essential, follow up in future years is equally important.

If using herbicide, the best time to do this is while the plant is actively growing in its vegetative stage (rosette).

Methods of Control

Manual and Mechanical Removal

The most cost effective way to remove Spear Thistle is through the use of a chipper or chisel hoe, depending on the size of the infestation. This may not be an option on larger infestations due to the time and effort required. In order to be an effective form of control, it is important that when chipped, the plant is cut to below the crown (growing point) which has all the dormant buds from the base of leaves. The root will not regrow if these buds are removed.

Collection and disposal of viable seed heads should also be considered, to help prevent further seeding should they be present.

Herbicide

Spraying may occur at any point when the thistles are actively growing through the

Spring and Summer, however the smaller they are, the easier they will die. Thistles should be sprayed before flowering, as flowers may still produce viable seed if sprayed whilst in flower.

Back Pack Spraying

For small to medium size infestations, the use of a backpack sprayer is a good option. This allows a reasonable quantity of chemical to be distributed in a short period of time.



When spraying, full coverage is not critical for rosettes, a spray of herbicide, focussed on the centre of the plant will kill the thistle, whilst not harming too much of the grass surrounding it. For larger thistles, full coverage is still important.

DoA recommended rates (active ingredients):

- **Metsulfuron-Methyl** @ 1-2g/10L water
- **Triclopyr** @ 60ml/10L water
- **Triclopyr/Picloram** mix @ 60mL/10L water
- Always add 10ml of **Organo-silicone** penetrant/10L of water to the above
- **2,4-D or MCPA** use 90ml/15L water

Hose and Gun Spraying

For larger infestations, the use of a higher pressure sprayer may be useful along with a good length of hose. This will enable you to cover more ground and spray further into dense thickets. Again, ensuring complete coverage on larger plants is essential in order to obtain complete control, other-wise a spray on the centre of the rosette is usually sufficient. The use of a spray marker dye is a good idea on larger infestations to help ensure you haven't missed any plants. As is ensuring follow up treatment if required.

DoA recommended rates (active ingredients):

- **Metsulfuron-Methyl** @ 5g/100L water
- **Triclopyr** @ 250ml/100L water
- **Triclopyr/Picloram** mix @ 250ml/100L water
- Always add 100ml of **Organo-silicone** penetrant / 100L water to the above.
- **2,4-D or MCPA** use 500ml/100L water

These options mentioned are the most common herbicide options, should you wish to use an alternative chemical, talk to the DoA, for advise on rates and use.

Talk to your supplier for options and brands available

For more information, contact the DoA on 27355

References:

www.ravensdown.co.nz agrochemical label pdfs: sourced 10 July 2018

www.environment.gov.au weed control b:sourced 10 July 2018

www.massey.ac.nz/massey/learning/colleges/college-of-sciences/clinics-and-services/weeds-database/scotch-thistle.cfm : sourced 10 July 2018

Farmers' Week Information

General information

- Non-members are welcome to attend Farmers Week for a daily fee of £20 with the exception of the Expo and the DoA sessions which are free. This fee includes all lectures, presentations, any field trips, lunch and smokos.
- All meetings are in the FIDF Hall and all lunches & smokos will be in the main hall unless otherwise specified.
- If you would like to know more about the RBA sessions, please email Sammy on rba.events@horizon.co.fk
- For more information about the DoA sessions please contact us on telephone 27355 or email kstephenson@doa.gov.fk

The programme included is only a draft version and is subject to change. The final programme will be released closer to the time.

RBA FARMERS' WEEK DRAFT PROGRAMME - 30TH JUNE TO 5TH JULY 2019 SUBJECT TO MINOR CHANGES

Sunday 30th June RBA EXPO - FIDF HALL

2pm-5pm **RBA Expo (organised by the Rural Business Association)**
The Department of Agriculture will be hosting a stand at the Expo.
The Expo is free and open to the public



Monday 1st July FIDF Hall (unless specified otherwise)

0830 - 1000	Rural Business Association committee meeting - committee only.
1000 - 1030	<i>Smoko at the IJS, for those interested to view the artwork (under 11's), FIDF Hall for anyone else.</i>
1030 - 1035	Introduction & Welcome from Lewis Clifton, Chair of the RBA
1035 - 1100	Labour Force Workshop - Balissa Greene
1100 - 1130	Cruise Ship Update - Sullivan Shipping
1130 - 1200	MOD Presentation
1200 - 1315	<i>Lunch provided by the MOD - Hill Side Camp</i>
1330 - 1430	Tourism Update- FITB, Sally Ellis & Julie Sloan
1430 - 1500	<i>Smoko sponsored by FITB</i>
1500 - 1700	RBA AGM - Members Only
1900	Rural Business Association Party - Narrows Bar - Rural Business Association members and invited guests, children welcome

ZUB Passes will be available at Hillside on Monday afternoon after lunch

Tuesday 2nd July
FIDF Hall (unless specified otherwise)

0900 - 0930	Soil Mapping Project - <i>Stephanie Carter</i>
0930 - 1000	Darwin Coastal Mapping Project - <i>Neil Golding</i>
1000 - 1030	<i>Smoko sponsored by Stanley Tower</i>
1030 - 1130	Fire training at FIGAS terminal
1200 - 1300	<i>Lunch sponsored by Workboat Services Ltd</i>
1300 - 1330	FIMCO update - <i>Michael Ledwith & Guido Webb</i>
1330 - 1500	Transport Update - <i>FIGAS, WBS, PWD</i>
1500 - 1530	<i>Smoko sponsored by Décor Services</i>
1530 - 1600	Habitat Restoration - <i>Frin Ross</i>
1600 - 1630	Hummock Island - <i>Sally Poncet</i>
1900 - 2000	Five Aside Football Match - West vs East - <i>Stanley Leisure Centre</i>



Wednesday 3th July
FIDF Hall (unless specified otherwise)

0820 - 0830	Opening Address - <i>John Barton/MLA</i>
	WOOL
0830 - 0900	Wool Marketing Outlook - <i>Chris Wilcox (pre recorded)</i>
0900 - 0915	2019 Wool Testing Results - <i>Adam Dawes</i>
0915 - 0930	Scouring, - top making and spinning - <i>Adam Dawes</i>
0930 - 1000	Report on 2019 IWTO Congress 'Wool in Excellence' - <i>Adam Dawes</i>
1000 - 1030	<i>Smoko hosted by Department of Agriculture</i>
	GENETICS
1030 - 1050	ASBVs what do they mean and how are they generated? - <i>Sally Martin</i>
1050 - 1100	How can I use ASBVs without fully performance recording my flock? - <i>Sally Martin</i> <ul style="list-style-type: none"> • Improving the quality of your ram teams at sale time • Importing the right semen
1100 - 1130	Setting a breeding objective SMART goals - <i>Sally Martin, Daniel Preira & Adam Dawes</i>
1130 - 1150	Genomics - new technology and its application in the Falklands - <i>Sally Martin & Daniel Preira</i>

Wednesday 3rd July continued...

1150 - 1200	Costs of different genetic improvement Strategies - Adam Dawes
1200 - 1300	<i>Lunch hosted by Department of Agriculture</i>
	FARM BUSINESS BENCHMARKING
1300 - 1320	Farm Business Benchmarking - how it works - Sally Martin
1320 - 1330	Knowing your effective/ useable farm area and its impact - James Bryan
1330 - 1340	Farm Business Benchmarking early pilot findings - Adam Dawes
1340 - 1420	Farm Business benchmarking group workshop - Sally Martin & Adam Dawes
1420 - 1440	Farm Business Benchmarking - presentation and discussion of group results - Sally Martin
1440- 1500	Data collection and performance recording - if you don't record it you can't improve it - Sally Martin & Adam Dawes
1500 - 1530	<i>Smoko hosted by Department of Agriculture</i>
	RESEARCH AND TRIAL ACTIVITIES UPDATE
1530 - 1540	Wether Trial Process and results - Daniel Pereira
1540 - 1550	Liming/calcified seaweed the benefits revisited - James Bryan
1550 - 1600	Herbicide control of diddle-dee what we know so far - James Bryan
1600 - 1610	Calafate - seasonal wrap up and the way forward - James Bryan
1610 - 1630	Fly strike prevention and control - Daniel Pereira
1630 - 1645	Hydatid Phd Update - Dominic West
1800 - 1930	HE The Governor's Reception - Government House - Invite Only
1930	Falklands Conservation Supper @ Stanley Arms - All involved in Farmers Week invited to attend



Thursday 4th July

FIDF Hall (unless specified otherwise)

0900 - 0930	Labour Needs - Balissa Greene & MLA Pollard
0930 - 1000	FIDC Update - Martin Slater
1000 - 1030	<i>Smoko</i>
1030 - 1200	Tele-communications - FIG update
1200 - 1300	<i>Lunch sponsored by Stanley Services Ltd</i>

Thursday 4th July continued...

1330 - 1600	Fire Station Tour and Demonstration - <i>Please make your way to the Fire Station for 1330</i>
1330 - 1600	Claybird Shooting

This afternoon we will have the options to go on a tour of the Fire Station or claybird shooting.

Please ensure you have signed up for your activity by Wednesday lunchtime. Sign up sheets will be in the main hall.

Our thanks to Gene Berntsen at the Fire Station and the Gun Club for hosting these activities.



Friday 5th July

FIDF Hall (unless specified otherwise)

0830 - 0900	Informal Update with His Honour the Acting Governor
0900 - 0930	MLA Update on the Budget
0930 - 1000	MLA Question & Answer Session <i>Chaired by Lewis Clifton</i>
1000 - 1030	<i>Smoko hosted by Pro-Install Interiors</i>
1030 - 1200	MLA's Question & Answer Session <i>continued</i>
1200 - 1300	<i>Lunch</i>
1300 - 1500	FITB workshops in the main hall - Insurance & Public Liability Help and Guidance.
	DEPARTMENT OF AGRICULTURE SESSION
1300 - 1315	Lamb Marking - timing and pain relief options - <i>Zoe Fowler</i>
1320 - 1345	Biosecurity - <i>Naomi Baxter</i>
1345 - 1400	Revisiting livestock transport and holding standards - <i>Zoe Fowler</i>
1400 - 1415	FIMCo end of season wrap up - <i>Zoe Fowler</i>
1415 - 1500	Question & Answer with the DoA - times are a changing what do we want?
1530 - 1630	RBA Committee Wash Up Meeting - <i>RBA Committee Only</i>
2100	Camp Education Dance in the Town Hall £5 on the door, 18 years and over only

RBA FARMERS' WEEK DRAFT PROGRAMME - 30TH JUNE TO 5TH JULY 2019
SUBJECT TO MINOR CHANGES

Getting Maximum Benefit From Genetics

By Daniel Pereira

Good nutrition - the key for maximising genetic improvement

All sheep farmers know the feeling that comes when lamb marking is high, knowing that you will “potentially” be able to keep the very top performing animals selected from a huge number of lambs. The opportunity to offload a reasonable number of young excess animals, either to re-stockers or FIMCo is a fantastic side benefit. The opposite happens in bad years, when by contrast you must keep almost all lambs for replacement, potentially limiting genetic gains across the flock.

Lamb survival is largely influenced by body condition of the ewes pre-lambing and this is highly linked to a good autumn recovery of the ewe between weaning and joining. Therefore nutrition of the breeding ewe is a key aspect to consider when investing in genetics.

The main reason for using the word “potentially” in the first paragraph is that lamb marking only represents the first stage to achieve genetic improvement at a flock level. There are two other steps to consider: growth rate, and mortality between lamb marking and first shearing and reproductive maturity.

Genetic improvement programs are mainly focused on comparing the performance of individuals with that of their relatives, or other animals running under the same management conditions.

Good growth is essential to be sure so that individuals achieve their true genetic potential at first shearing, and are able to transmit it by reaching reproductive maturity and weaning lambs. The possibility of including younger animals (i.e. shearlings) in the breeding flock also increases genetic gains through a reduction of generation interval.

Increased mortality in young animals reduces

the number of animals available at the first selection, and therefore reduces a farm’s ability to apply selection pressure while maintaining a sufficient number of replacement animals. Adult mortality, especially in ewes, increases the number of animals needed for replacement, further reducing a farm’s ability to apply selection pressure. Both act as significant barriers to genetic improvement if unmanaged.

It’s easy to recognise that these three factors; lamb marking, growth and mortality are influences (but not exclusively influenced) by nutrition.

Mortality (including new-born lambs) and poor growth are considered as sources of inefficiency and/or wastage costs, when considering the costs of genetic investments.

The genetic contribution of the ewe

While the greatest influencer of genetic gain in a flock context is the ram, it is important to remember that the genetic potential of that ram is always limited by the genetics of the ewe. As a result it is essential that we regularly assess our ewes to determine if they should remain within the ewe (or the stud) flock.

All ewes should go through the following stages of assessment:

Subjective assessment

Ewes should be free of obvious structural or visual faults. The list of faults is long and usually well known, however some examples could be undershot jaws and hairy breeches.

Undesirable traits would only be tolerated to a minimum degree/score.

Some undesirable traits, which would be tolerated to a certain degree in the commercial

flock, will not be acceptable in a stud flock. The limits should be carefully determined by each farmer, as a key part of setting breeding objectives. Some small faults can at times be tolerated in very good animals. For example: an animal which is small but has an excellent fleece may be acceptable.

A good quality fleece, minimum weight, open face, good feet and conformation are some of the important traits to be considered in all wool focused operations.

Objective measurements

It is very important that only the best performing ewes are included in the stud flock, so it's essential to record wool traits (mid-side sample and fleece weigh at the first 2 shearings) along with other key traits, such as body weight and condition score.

To get a fair comparison, all animals being compared within a group should have been raised under the same environment (nutrition and management).

Opening the stud nucleus

If you have been using good rams in your studs for some time, it is probable that the performance of your commercial flock will get gradually closer to the stud flock. When that point has been reached, you should think of introducing new genetics to the stud flock. This could be done by including the best performing ewes from the commercial flock. They will substitute the worst performing animals of the stud. So each year, you will be removing the worst performing ewes from the stud, and selecting the best ewes from the commercial flock to include in the stud.

The Department of Agriculture has been investing in elite genetics, managing nutrition and focusing on accurate pedigree and performance recording to inform selection decisions. With this it is evident that excellent important progress has been achieved, allowing the NSF to consistently supply a good number of rams to farms across the Falkland Islands.

In this edition of the Wool Press you will see that Michylla Seal has made a very interesting proposal about the possibility of using local frozen semen in the future to further accelerate our rate of genetic gain in the future.

I look forward to discussing the points of this article with you at Farmer's Week, and as always, encourage you to contact me directly if you have any questions or comments.

RIVERVIEW FARM

Is pleased to announce that they are now agents for IAE Livestock Equipment.

We have a catalogue if anyone is interested.

Please contact Darren/Stacey on 31106 or email

rvf.bagley@horizon.co.fk

