



Farm Management Handbook Update

Department of Agriculture
Falkland Islands Government

November 2007

THESE PAPERS WERE PASSED AT THE SEPTEMBER 2007 MEETING OF THE AGRICULTURAL ADVISORY COMMITTEE

Title of report: Artificial Breeding Programme and PIP Funding

1. Purpose

- 1.1 To promote best practice management on farms where PIP funding is used to purchase genetic material. To ensure return on FIG investment is maximised.

2. Recommendations

- 2.1 That farms utilising PIP funding for genetics have a realistic Breeding Plan in place with objective, quantifiable targets to reach.
- 2.2 That *Guidelines for Sheep Artificial Insemination* (appendix a) be implemented for the 2008/2009 PIP year.
- 2.3 That *Guidelines for Sheep Embryo Transfer* (appendix b) be implemented for the 2008/2009 PIP year.
- 2.4 That direct costs such as micron and yield testing be available through PIP funds for up to 200 ewes per 1000 breeding ewes on the farm. This would form a part of the overall genetic component of the PIP.
- 2.5 That the genetic component of the PIP be increased to £3,500 per 1000 breeding ewes to assist in covering these costs, without a reduction in the funds available for genetic material itself.

3. Background

- 3.1 PIP funding has been available for the last two years to purchase animal genetics as part of the Artificial Breeding Programme co-ordinated by the DOA. In this time, genetic progress has been made, and the quantification of this progress is currently part of a major review being conducted by the DOA.
- 3.2 The paper 'Use of PIP Funds to Purchase Live Rams in the Falkland Islands' that was presented to the AAC in April 2007 (appendix c) is a part of this process of identifying and continually working towards a realistic breeding objective.
- 3.3 There is strong scientific and practical evidence that objective measurement when linked with effective subjective sheep classing, increases the rate of gain towards any breeding objective. Recently published data on a large ewe flock (670 ewes) using such a system has shown a gain of 1.0kg of clean fleece weight, a reduction of 2.4 microns in fibre diameter and an increase of adult ewe average body weight of 1.5kg. This was done with correct application of a dual purpose breeding objective and objective measurement over a 10 year period in a closed flock situation.
- 3.4 There is scientific evidence from in the Falkland Islands and around the world that ewes weighing 40kg and above at joining have a greatly increased chance (from between 10% to 16% above ewes less than 40kg) of surviving winter and rearing a lamb through to weaning time.

- 3.5 An example for a complete ram team change of 30 rams for 1500 ewes produced by AI would be as follows –
- a) The best 400 ewes visually selected by the farm.
 - b) The top 300 ewes decided after individual classing of the ewes which are individually tagged.
 - c) Fleece weights, body weights, yield and micron taken from those 300 ewes. (**# Note** – The DOA is currently negotiating with a wool laboratory in Uruguay to enable fleece testing to be carried out more cost effectively for farmers. More detail on this later).
 - d) The information is processed with an index that matches the farm's breeding objective.
 - e) The top 200 ewes are selected based on the results of the index, visual classing of the animals, and ensuring that they are all above 40kg.
 - f) These 200 ewes are artificially inseminated, resulting in 120 progeny (60% lambing).
 - g) The resulting 60 male progeny are individually tagged, and have their body weight, fleece weight, micron and yield tested at the first shearing.
 - h) This objective information is used in conjunction with visual classing to select the best 30 rams to complete the ram team change.
- 3.6 The ability to repeat this process for several years would allow extremely heavy selection to be placed on rams retained for breeding and also on ewes used in the breeding programme.
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Guidelines for Sheep Artificial Insemination

The following guidelines are recommended to give the best possible chance of survival of viable animals and return on FIG investment in farm genetics through PIP.

1. That farms utilising PIP funding for Artificial Insemination (AI) have all ewes in the programme with individual tag numbers. Ewe selection should be based on characteristics working to achieve the farm breeding objectives. Information should include bodyweight, fleece weight, yield and micron with data indexed against the farm breeding objective.
 2. That all ewes artificially inseminated utilising PIP funding have a bodyweight over 40kg on the day that insemination takes place.
 3. That farms utilising PIP funding for AI record the fleece weights, body weights, yield and micron from the resulting male progeny at the first shearing, and that the information is used to index those animals based on the farms breeding objective for selection purposes.
 4. Ewe management systems for the period following AI are appropriate to sustain pregnancy and produce viable lambs.
 5. Scanning of the ewes be carried out to determine the percentage that is pregnant and to allow management decisions to be based on animal pregnancy status.
 6. Hoggets (born as a result of AI) are managed in a system from weaning to shearing that ensures that each animal has the opportunity to express its genetic potential and that it is not hampered by nutritional factors which can be overcome by farm management.
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Guidelines for Sheep Embryo Transfer

The following guidelines are recommended to give the best possible chance of survival of viable animals and return on FIG investment in farm genetics through PIP.

1. That farms utilising PIP funding for Embryo Transfer (ET) have donor and recipient ewes above 40kg bodyweight on the day that the embryo is collected/implanted.

2. That farms utilising PIP funding for ET, record the fleece weights, body weights, yield and micron from all of the resulting progeny at the first shearing, and that information is used to index those animals based on the farms breeding objective for selection purposes.
3. Ewe management systems for the period following ET are appropriate to sustain pregnancy and produce viable lambs.
4. Scanning of the ewes be carried out to determine the percentage that is pregnant and to allow management decisions to be based on animal pregnancy status.
5. Hoggets (born as a result of ET) are managed in a system from weaning to shearing that ensures that each animal has the opportunity to express its genetic potential and that it is not hampered by nutritional factors which can be overcome by farm management.

Title of report: Use of PIP Funds to Purchase Live Rams in the Falkland Islands

1. Purpose

- 1.1 This paper seeks to outline a funding framework for the DOA to utilise for farmers using PIP funding to purchase live rams.
- 1.2 Funding levels are based on the potential of the various breeds/purity levels to achieve gain on farms and also on costs associated with their generation. For some of the breeds funding levels have been benchmarked to average sales prices achieved for the breed at recent DOA sales.

2. Recommendations

- 2.1 That the AAC approve the following funding maximums for farmers seeking to utilise Pasture Improvement Programme (PIP) funds to purchase live rams.

Breed or type	Maximum PIP Funding	Details/comments
Polwarth or Cormo	£75.00	Based on recent NSF Polwarth sale values achieved 2006 and 2007.
Polwarth or Cormo type ewes X Dohne/SAMM/MPM (50% new blood)	£75.00	Selected performance recorded (PR) rams (10-50% ranking) from PR and potentially, non PR breeding flocks.
Polwarth or Cormo type ewes X Dohne/SAMM/MPM (50% new blood)	£150.00	Selected PR rams (10-50% ranking) from selected PR ewes and elite PR rams (imported AI or leading breed sire).
Breed or type	Maximum PIP Funding	Details/comments
Polwarth or Cormo type	£200.00	Elite ranked rams (1-

ewes X Dohne/SAMM/MPM (50% new blood)		10% ranking). PR rams from elite PR genetic stock.
Breed	Maximum PIP Funding	Details
Polwarth or Cormo type ewes X Dohne/SAMM/MPM (75% new blood)	£200.00	Selected PR rams (1-50%) from elite PR ewes and elite PR rams.
“Pure” blood SAMM/MPM/Dohne	£300.00	Selected performance recorded rams (1-50%) from elite PR genetic stock.

- Note: -
1. Performance recording (PR) should be based on a minimum of 20 animals of the same sex, breed and age located at the same farm.
 2. Performance recording includes consideration of live weight (at 100, 180 and 365 days), fibre diameter, greasy and clean fleece weight plus subjectively assessed characteristics such as face cover, pigmentation and conformation. DOA agricultural advisors are available to assist “stud” breeders with animal ranking and performance recording of their stock.
 3. Price maximums for other breed/combinations that emerge over time will be determined on a case by case basis by the SAA and added to the maximum funding table.

3. Background

- 3.1 PIP funds have been available for use by farmers for several years for the purchase of sheep genetics.
- 3.2 The funds have primarily been utilised to cover costs associated with AI & ET programmes but have also been utilised to purchase live rams at the DoA “Saladero” ram sale and on a small number of occasions, live rams from other farmers.
- 3.3 It is likely that the desire to utilise PIP funds to purchase live rams from other farmers will increase significantly over the next few years.
- 3.4 The intention of this paper is to establish a clear price framework for farmers wishing to use PIP funds to purchase live rams of farms other than the DoA.
- 3.5 It is clear that the price framework needs to recognise the ability of the genetic material to achieve improvement in profitability and productivity for farmers. The price framework must also address differences in quantity and demand for the various options.