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HILL FARMING RESEARCH ORGANISATION

FARM REPORTS AND SUMMARY OF FLOCK RECORDS

1975

C O N T E N T S

I. FARM REPORTS - 1975

A. GLENSAUGH

WEATHER

The winter of 1974-5 was comparatively mild and there were only two brief snowfalls of any consequence. However, cool weather persisted until late May and terminated with a snowfall in early June. Much of the summer and autumn was warm with sunshine above average.

SHEEP

With the exception of the North Country Cheviot flock on East Finella all regular breeding sheep are now involved in the various Research Projects. Consequently, sheep management is governed by the requirements specified in Research Schedules. Detailed results of these experiments are reported elsewhere.

Greyface Flock

Sheep numbers were increased in autumn of 1974 so that a full complement of Greyface ewes and gimmers were mated to Dorset Down rams. Mating in 1974 was successfully arranged to produce an early and a later lambing flock in 1975. However, in keeping with experience in other districts, the onset of oestrus was later in 1975 and, therefore, the mating of the later groups had to be delayed by eight days. Consequently a more protracted lambing period is anticipated in 1976. The weaning percentage was 8% below that of 1974 and lamb weaning weights showed a reduction of 0.4 kg/head.

Mid and West Finella Flocks

Though these two flocks are managed and grazed separately for most of the year they are combined in a study to test the effectiveness of improved genotypes in utilising better hill land resources. The performance and production of pure Blackface, BF x Texel and BF x Border Leicester ewes are being compared when mated to Dorset Down rams. In addition, tupping groups of ewes are formed to produce and maintain the parent crossbred and pure Blackface flocks.

These sub-flocks are managed in a controlled system and the land resources contain a substantial area of re-seeds. Some fence lines have been altered and fences renewed to meet the requirements. Although these flocks will have access to additional pasture during mating and lambing, the system will place greater restrictions on the grazing compared with previous years. The hoggs are wintered on the farm outwith the grazing system.

The sub-flocks of crossbred ewes are in the process of being created and the first comparative data will not be available until 1976.

The percentage of lambs weaned per ewe mated was 13.9 and 11.6% lower in 1975 than in 1974. The mean lamb weight at weaning of Mid Finella was similar to that of 1974; that of West Finella showed a substantial increase of 3.6 kg per head.

Cairn and Birnie Flocks

Both these flocks are being utilised in a Development Project concerned with the integration of heather hills with inbye pasture. The allowance of re-seed pasture is approximately one acre per six ewes. The number of weaned lambs was substantially greater in 1975; the increases were 15.9 and 25.1% for Cairn and Birnie, respectively. However, though the Birnie lamb weaning weights were similar to 1974, those of the Cairn lambs were 3.3 kg lower. This decline is partly due to the increased numbers of twin lambs, but there is evidence to suggest that a copper deficiency may be implicated.

Winter Feeding

		Hay (kg/head)	Conc. (kg/head)
Ewes:	Cairn and Birnie	38.2	29.6
	Greyface	69.1	98.0
	Cost per head	£4.09	

Cairn and Birnie hoggs were wintered indoors and fed hay and concentrates during the period mid-December to end of April. The total food consumption was 88.4 kg hay and 28.2 kg concentrates per head at a cost of £3.48 per head. Finella hoggs were wintered in fields with supplements of kale, hay and a mixture containing equal parts crushed oats and protein concentrate.

Sheep Health

A comprehensive programme of prophylactic treatment was given in accordance with veterinary advice. The overall death rate of ewes was 5.7% and 10% for hoggs. The latter figure includes nine deaths in the Cairn and Birnie hoggs which was attributed to louping ill during late autumn 1974. The Cairn and Birnie sheep are now vaccinated against this disease.

Lamb deaths between birth and weaning were: Cairn 15.2%; Birnie 15.8%; Mid Finella 8.2%; West Finella 6.0% and Greyface 14.5.

Apart from the effect of an incidence of scouring probably due to helminthiasis in the Greyface flock, all lambs were reasonably good at weaning. However, after weaning and while the lambs were in fields before sale time, nearly all lambs suffered a severe check and approximately 25 died during the post weaning period. This is in keeping with the experience of previous years and the problem is being investigated by the Veterinary Section. It is thought that it may be a compound effect of helminthiasis associated with cobalt and copper deficiencies.

Following firm indications of a cobalt deficiency in 1974, all lambs were given a cobalt bullet at 6 to 8 weeks of age. However, a repeat of the cobalt dosing trial in 1975 did not confirm the 1974 result.

An outbreak of a pneumonia type disease also occurred in a flock of cast ewes which were being used in an experiment concerned with the effect of body condition on the fertility of Blackface ewes.

One ewe death due to Jaagsiekte was recorded during 1975.

Disposal of Lambs

In addition to lambs born and reared on the farm, 226 Blackface wedder lambs were brought in from Lophinmore for fattening on rape and stubble turnips.

Three hundred and twelve ewe lambs were retained for flock replacements, 967 lambs were sold store, 108 lambs sold fat and 180 lambs are still to be disposed of.

Seventy-five Dorset x lambs from the Greyface flock, sold fat during July and early August, averaged £11.47 and 175 from the same flock, sold as stores in mid-August, averaged £12.04. The top draw of Blackface store wedder lambs averaged £8.87 and light-weight Blackface wedder lambs, sold fat in December, averaged £10.67. Top lambs from the North Country Cheviot flock averaged £11.80.

CATTLE

The cattle research programme is being continued, the 1974-75 project being a variation of nutritional treatments during the last eight weeks of pregnancy followed by ad libitum feeding during lactation. The pregnancy feeding levels had a marginal influence on calf birth weights but not on subsequent milk production or calf growth.

The milk production of 30 cows was measured at 2-week intervals during a 22-week period from calving. Though the shape of lactation curves were similar the mean daily milk production of the Hereford x Friesian cows was approximately 1 kg greater than that of the Shorthorn x Galloway cows. The mean live-weight gain of calves was approximately 1 kg/day and there was little difference between breeds.

The calf scour problem which persisted throughout the 1974 experiment, re-appeared in 1975. The cause of the scour has now been identified as viral diarrhoea and with treatment, its effect was much less during 1975.

At the termination of experimental recording, the cows and calves were put out to pasture and the calves weaned at the end of July. Although the calves were grazed on apparently good pasture they ceased thriving after weaning. Some improvement resulted from supplementing the grazing from feeding concentrates at 2 lbs, increasing to 4 lbs per head per day.

Thirty calves were sold off grass in September and October 1975 and the remainder housed in the cattle court from that date. The housed calves were fed approximately 25 lb silage, 5 lb hay plus crushed oats and protein concentrate increasing from 2 to 7 lb/head/day. After a slow start these calves have thriven well and will be sold during early 1976.

Post-weaning ill-thrift also occurred in calves in 1974 and analysis of blood samples indicated a copper deficiency. A similar situation was found in 1975, and copper injections given when the results of the analysis were known.

Preparations for the 1975-76 beef cow experiment were started in 1975. A young Charolais bull was purchased and his semen used for artificial insemination of cows following synchronisation of oestrus of four groups of cows. Inseminations were completed before the cows were turned out to graze accompanied by the Charolais bull. Four cows are yeld.

Fourteen bulling heifers were mated with a hired Aberdeen Angus bull.

Calves sold September/October 1975

Breed of Cow	Sex	No.	Pre-Sale Weight	Average Price
			lb	£
H x	B	4	659	123.50
H x	H	6	633	110.50
B.G.	B	11	603	116.09
B.G.	H	5	612	107.80
Heifers	B	3	612	115.00
Calves	H	1	559	99.00
A.A. x				

Other Experimental Work

In addition to longer term experiments in progress, the following studies which placed a demand on farm resources were undertaken in 1975:-

Lactation performance and grazing intake measurements of Greyface ewes.

The effect of body condition on the fertility of Blackface ewes.

An investigation into the cobalt and copper levels in the blood of weaned lambs.

An assessment of the oxytocin technique of estimating the milk production of beef cows.

Cropping 1975

Rape and Stubble Turnips	11 acres
Kale	9 "
Hay	50 "
Silage	32 "

The acreage available for crop conservation was much reduced due to the higher requirement for cattle and sheep grazing. This situation will probably continue in future years.

Heather Burning

Four areas totalling approximately 22 acres, were burnt on the Cairn and Birnie hills in early winter 1975. These areas will serve as useful fire-breaks for further burning on these hills in spring 1976.

Fencing 1975

The entire Brae field fence and the fence along the roadside from Clattering Brig to the farm has been renewed and new gates hung. Fencing has been renewed around the re-seeds on Mid and West Finella hills. The farm boundary fence along the East side of Finella hill has also been renewed.

Further plans are in hand to renew or upgrade fences to make them cattle proof.

Farm Steading

Work on the new implement-foodstore building adjacent to the cattle shed was completed in 1975.

An office, dairy and store room were erected within the cattle shed for use in connection with the cattle research programme.

The asbestos roof and Yorkshire boarding on the cattle shed was painted.

Much of the older parts of the farm steading are in need of extensive repair, including repairs to the roads and drains in the vicinity.

An attempt is being made to improve the entrance to the steading using farm resources but professional assistance is necessary to meet requirements.

Farm Cottages

Some repairs and outside painting have been completed on the cottage at Bows and those in the vicinity of the farm buildings.

Manager's House

Some improvements have been made such as renewal of faulty windows and re-wiring of electric circuits. Further work is still required.

Hostel Accommodation

The plans to convert the hostel into two flats are now being implemented and it is hoped that the work will be completed on schedule. However, because of a slow start and interruptions, the work is not likely to be finished before May 1976.

Office and Laboratory

A door has been provided at the rear of the building. The building has been redecorated internally and exterior paintwork renewed. The roof has been scraped to remove an accumulation of moss etc. from the tiles.

Electricity Supply

Some difficulties have arisen with regard to the mains electricity supply. This has been investigated by the Hydro Electric Board who maintain that the supply to the farm is satisfactory.

The internal wiring and electric loading on circuits has been thoroughly surveyed by a competent electrical engineer. His full written report is not yet to hand but a preliminary assessment suggests that the internal distribution and loading of circuits are not satisfactory.

Roads

A major improvement was made to the hill road leading to the Freyface wintering area and the hill beyond. Consequently this road is now safe to use for most of the year. Further improvements to the surface are planned for 1976.

Limited improvements were also made to the roads giving access to Cairn and Birnie hills and the road to West Finella hill.

B. LEPHINMORE

WEATHER

The first three weeks of January were mainly wet and mild, followed by a period of severe weather (snow, sleet, heavy rain) to the end of the month. February began mild and sunny and, although the second half was colder, it was an excellent month on the whole with daffodils in bloom by the fourth week. March began very mild with good growth, but in the main the month was cold and dry with some rain in the third week. April continued cold and dry with little growth until the end of the second week, but thereafter with rain mainly at night and warm sunny days, growth was excellent. The last week was cold with blustery showers, but on the whole lambing weather was very good. The first ten days of May were sunny and warm but too dry weather for the remainder of the month retarded growth. Apart from a cold start, June was mainly warm and sunny with rain only on isolated days. July continued mainly dry and sunny until mid-month when much needed rain fell to relieve an acute water shortage in fields and domestic supply. August was mainly warm and sunny with outbreaks of thundery rain mid-month followed by a last week of hill fog. September was mainly wet with heavy rain at times which continued into October but the second half of the month was warmer and drier. The first half of November was excellent being mainly mild and calm; tupping began in good weather but the last week of the month was cold with snow and heavy rain at times. December began cold with snow lying about 800 feet, but on the whole was a good month with below average rainfall.

Rainfall 1975

	mm	
January	331.9	
February	63.5	
March	65.3	
April	97.0	
May	40.4	
June	85.8	
July	114.5	
August	85.8	
September	224.3	
October	136.1	
November	252.2	
December	121.2	
1975	1618.0	(63.71 ins)
1974	1903.9	(74.96 ins)

Open Day

The end of the long dry spell throughout May and the beginning of June coincided with the Open Day held on 5th June 1975, but despite a rainfall of over one inch combined with low cloud and hill fog a most successful Day was held.

The demonstration of the Mid-hill project to approximately 400 visitors was made possible by the involvement and total commitment of a number of external and headquarters staff throughout the day, which brought to a satisfactory conclusion the weeks of hard preparatory work carried out by experimental and farm staff at Lephinmore.

In retrospect the Open Day at Lephinmore can be judged as having made a material contribution not only in the dissemination of information to farmers but also in furthering the good relationship already established between the Hill Farming Research Organisation and the hill farming industry.

SHEEP

Mid-hill ewes came through the winter in relatively poor condition but good lambing weather plus an early start to supplementary feeding reduced losses. The lower weaning percentage this year is due to a high number of tup eild ewes which it is thought resulted from adverse weather at tupping time.

Viewing Mid-hill hirsel commercially it is likely that results could be improved by a reduction in stock numbers and a consequent reduction in summer grazing intensity on the improved pastures leading to improved lamb growth in July and early August. This could also allow the conservation of areas of improved pasture, e.g. Field 8, for post-weaning grazing of lambs. The view is also held that a later weaning date, thus obviating the need to sell lambs in early August, would be more in sympathy with current market trends.

Barnacarry ewes were given access to the 'fresh' grazings of Feorline from 24th February and offered Rumevite as from 26th February and as a result came through to lambing in strong condition.

Despite the good summer, lamb weaning weights were disappointing as was the overall weaning figure of 85%.

Figures for previous years were:-

Year	%
1974	87
1973	97
1972	97
1971	96
1970	82
1969	87

Ewe winter feed costs were:-

Barnacarry	0.96p
Mid-hill	£1.63
Low End	£5.28

A total of 226 second and third draw Mid-hill wether lambs were sent to Glensaugh on 19th August. Forty-six top wether lambs were sold at Paisley on 10th September at £8.45 per head and 60 ewe lambs averaged £6.30. On 24th September 58 wether lambs averaged £5.45 per head and 43 ewe lambs realised £4.88 per head. One hundred and thirty-four cast and draft ewes were consigned to Glensaugh.

Hogg Wintering

As in previous years Barnacarry hoggs were away wintered at Point Farm, Ardlamont, at a cost of £3 per head, exclusive of transport charges (46p per head). Mid-hill hoggs were home wintered at grass. Coming off the hill in November they were housed for two weeks and turned back out to grass when trough feeding, returned to the hill on 8th April. Over the winter period 107 lbs hay and 37 lbs concentrates were fed at a cost of £3.25 per head. Low End hoggs were housed from 13th November until 18th March when they returned to the hill. During housing 1½ lbs hay plus 4 oz concentrates was fed per head and 6 oz concentrates per head on the hill until 18th April. Winter feed costs amounted to £4.80 per head. Hay valued at £40 per ton, concentrates at £80 per ton.

HILL CATTLE

Winter feeding of the August/September calving cows began on 4th November and the calves were weaned and housed on 23rd January, the cows returning to the lower slopes of Barnacarry for the remainder of the winter. Feeding stopped on 18th April and a total of 15½ cwts hay and 3¾ cwts concentrates was fed at a cost of £46 per head. Total supplement to the calves during the winter amounted to 6½ cwts hay plus 2½ cwts concentrates at a cost per head of £23.

Eighteen spring calving cows were fed from 28th November until 31st May; hay feeding stopped on 7th May. A total of 25 cwts hay, ¾ cwt straw, 3½ cwts concentrates and 1 cwt sugar beet nuts was fed at a cost of £68 per head. Hay valued at £40 per ton, concentrates at £80 per ton, straw at £20 per ton and sugar beet nuts at £60 per ton.

Calving at the end of January coincided with extremely severe weather conditions and five calves were lost; 4 died at birth and 1 drowned at two weeks old. Four calves were purchased and twinned on.

Five bullock calves were sold in August at £50 per head and 5 heifer calves were sold at Dalmally in September at an average of £57 per head. A further 6 bullock calves were sold in October to a top of £109 and averaged £88 per head. Three heifer calves averaged £47 per head. Four bought-in Friesian calves averaged £75 per head.

Twelve in-calf cows were sold in October/November at an average price of £127 to a top of £150 and two farrow cows were sold at an average of £96 per head. The stock bull Luing Joker was sold in August realising £210 and replaced in October with Luing Scottish Soldier at the same price.

Calf Weaning Weights - Luing x

	September 1974			September 1975		
	No.	Wt.(lbs)	Wt.(kg)	No.	Wt. (lbs)	Wt.(kg)
Heifers	9	438	199	6	444	202
Bullocks	9	495	225	6	517	235

Hill Cows - January/February Calvers

	October 1974			October 1975		
	No.	Wt.(lbs)	Wt.(kg)	No.	Wt.(lbs)	Wt.(kg)
	19	988	449	18	1008	458

Herd Reconciliation

Born	October 1974	Deaths	Sales	October 1975
1968	9	-	5	4
1969	10	-	8	2
1970	11	-	1	10
1973	4	-	-	4
1974	-	-	-	4

ARABLE GROUND

Due to the dry spring and early summer and the utilisation of fields for the Open Day, only Field 4 N was cut for hay, yielding approximately 7 tons of hay from 4¼ acres and barn dried at a cost of £1.30 per ton (electricity only).

Heather Burning

Due to adverse winds no heather burning was carried out in the spring of 1975.

Barnacarry/Feorline Project

The hill road giving access to Feorline was completed during the summer. Plans for a sheep fank at the roadside in proximity to Barnacarry hill grazings are at present being prepared.

Buildings

As all farm cottages are now occupied by farm staff other than shepherds, an additional three dog kennels were built adjacent to the hostel garages using farm labour.

The steel framed windows in the farm cottages which were neither wind nor water tight were replaced with timber frames.

C. SOURHOPE

WEATHER 1974/75

Once again little snow fell during the winter months, although this period was very wet with just over 12" of rainfall during November, December and January. This was followed by an exceptionally dry February. Wet conditions prevailed at the onset of lambing and, although conditions improved as lambing progressed, the close of lambing brought an unwelcome return to wet and relatively cold conditions which culminated finally in a considerable fall of snow on June 2nd. Thereafter there was a marked improvement in temperature as conditions approaching drought set in and persisted throughout most of June, July and August, giving the best summer weather and highest temperatures experienced at Sourhope for a number of years. Although the total rainfall for these three months was almost 8", nearly half of this fell in the first few days of June or last few days of August. With the advent of unsettled weather in September grass growth, which had been seriously curtailed in the drought, was renewed and continued on right through the autumn to give the best tupping conditions for a number of years. Total rainfall for the 12 months to the end of October 1975 at 34.6" was the same as for the previous year.

Rainfall 1974-75

	Month	Rainfall (mm)	
1974	November	107.3	
	December	77.2	
1975	January	122.4	
	February	13.0	
	March	76.8	
	April	73.4	
	May	96.8	
	June	65.5	
	July	56.5	
	August	79.6	
	September	82.0	
	October	28.1	
	Total	878.6	(34.6 inches)
1975	November	43.5	
	December	25.1	

SHEEP

The majority of the ewes, with the exception of the Rigg ewes, entered the winter in better condition than in the previous year. Overall pre-tupping weights of North Country Cheviot, Blackface and South Country Cheviot ewes and gimmers were on average 2.1, 3.9 and 0.4 kg heavier respectively. With the exception of Gairs and Alderhope, however, the pre-tupping weights were still not back up to the levels of November 1972. Feed requirements of outwintered ewes were well below that for the previous year and even below that for the 1972/3 winter. A total of 53.7 lb dry matter (hay, beet pulp and concentrates combined) was fed on average to all outwintered ewes at a cost of £1.77 compared with 66.4 lb at a cost of £1.73 in 1973/4. With the average feed cost of the 1574 outwintered ewes at £1.77, the range for individual hefts was from £2.12 to £1.38. The average feed cost of outwintered ewe hoggs was £1.95 per head, compared with £1.23 the previous year.

The Rigg and Gairs sheep stock was again inwintered, the ewe hoggs coming into the shed on the 23rd January, the Rigg ewes on the 20th January and the Gairs ewes on the 29th January. A total of 189.1 lb dry matter on average was fed to the ewes at a cost of £4.53 per head, compared with 162.9 lb at a cost of £3.18 in 1973/4. For the inwintered ewe hoggs the feed cost was £3.48 compared with £2.08 for 1973/4.

Some feed data for both inwintered and outwintered sheep is shown in the following tables, the feed items being costed as follows: (1973/74 prices in parentheses) - Hay £40 per ton (£30), Sugar beet pulp cubes £64 per ton (£50), Concentrates £80 per ton (£70), Grass cubes £66 per ton (£59), ewe and lamb food £95 per ton (£80), Promax 42p per gallon (33p), Feed blocks £91 per ton (not used in 1973/74).

Ewe Feed Data

	Period	Hay (lb)	Sugar Beet Pulp Cubes (lb)	Concentrates (lb)	Feed Blocks (lb)	Average Cost per Ewe
Outwintered Ewes and Gimmers	Storm Feed (i.e. to 17/3 incl.)	1.0	7.5	-	5.8	£0.48
	Pre-lambing Feed (i.e. 18/3 to 17/4 incl.)	5.1	4.3	16.7	2.2	£0.90
	Post-lambing Feed (i.e. from 18/4 incl. that fed to twins)	0.4	-	10.5	0.2	£0.39
	TOTAL	6.5	11.8	27.2	8.2	£1.77 (£1.73)*
Inwintered Ewes and Gimmers	Pre-lambing Feed (i.e. to 17/4 incl.)	105.4	40.6	30.6	-	£4.13
	Post-lambing Feed (i.e. from 18/4 incl. that fed to twins)	2.3	0.8	9.4	-	£0.40
	TOTAL	107.7	41.4	40.0	-	£4.53 (£3.18)*

Hogg Feed Data

	Hay (lb)	Ewe and Lamb Food (lb)	Grass Cubes (lb)	Sugar Beet Pulp Cubes (lb)	Concentrates (lb)	Average Cost per Hogg
Outwintered Hoggs	14.2	2.3	23.4	26.8	3.9	£1.95 (£1.23)*
Inwintered Hoggs	87.4	1.6	11.6	11.6	33.2	£3.48 (£2.08)*

* 1973/74 costs

In addition to the above feed inputs a total of 52½ gallons of Promax was fed to the Park Law ewes and gimmers (total number 171) at a total cost of £22.05 (£0.13 per ewe). Forty-three gallons of this was fed during the storm period and 9½ gallons during the pre-lambing period (£0.11 and £0.02 per head respectively). This adds 1.4p to the total feed costs per head of all outwintered ewes and gimmers.

A more detailed study was carried out to observe the pattern of Promax feeding. Each of the two feeders was observed from first light on two occasions - the 4th March and 21st March, and each visit to the feeders by ewes was recorded. Identification of the ewes without disturbance was made possible by fitting neckband number plates beforehand. A summary of the results of the survey is shown in the following table: (Promax was on offer to the ewes from 11/2/75 to 28/3/75).

EWES		NUMBER OF VISITS TO SELF-FEEDERS					
		NIL visits		1-3 visits		4 (& over) visits	
Age	Nos.	4/3/75	21/3/75	4/3/75	21/3/75	4/3/75	21/3/75
1969	22	2	2	16	14	4	6
1970	20	3	4	13	13	4	3
1971	54	11	4	32	35	11	15
1972	40	6	11	30	21	4	8
1973	33	15	7	17	19	1	7
All ages	169	37	28	108	102	24	39

Information gained for individual ewes shows that there is a lack of consistency in the pattern of Promax feeding from day to day. However the following trends emerge from the results:-

a) The three oldest ages of ewes had a greater appetite for Promax than did the gimmers and one crop ewes.

b) Of the 37 and 28 sheep which did not visit the feeders on 4/3 and 21/3 respectively, only 8 were non-feeders on both days.

c) Sheep making more than four visits to the feeders on the second day were mostly the same sheep as on the first day.

Total expenditure on feed for all outwintered sheep, including ewes, ewe hoggs, wethers and tups, expressed per outwintered ewe to the tup was £2.73 compared with £2.39 for the previous year.

Bodyweight loss over the tupping period was, with the exception of Auchope ewes, more severe than (Park Law, Near End Hairney Law, Rigg ewes) or very similar to (Gairs, Alderhope) the previous year. However, since the majority of the ewes joined the tup in better condition than in 1973, they were mostly (with the exception of Rigg ewes) in better condition after tupping. Dung samples were taken for fluke and worm egg counts at the beginning of January from all ewes and as a result of these the Park Law only were worm dosed. All outwintered sheep were dosed prior to lambing, and subsequently all twin-bearing ewes and their lambs were dosed in mid-May while grazing on inbye fields. All twin lambs were dosed in mid-June and again in mid-July, while all single lambs were dosed during late June, early July. Inwintered ewes were given their routine fluke and worm drench ten days after housing, and this year were given a further worm drench prior to lambing as a result of dung samples showing Ostertagia infestation. In September the Park Law ewes were given a further worm drench following positive results from dung samples.

While being in much better condition at the start of lambing this year, most ewes suffered a much more severe bodyweight loss over the lambing period and through to "marking" than in 1974. Undoubtedly the adverse weather conditions, particularly over the later part of this period, were largely responsible for this bodyweight loss. In general, however, lambs were heavier at marking this year, but lamb growth rates thereafter were depressed for all lambs, except the twin lambs from Project I and III, and the single lambs from Park Law and Alderhope. This was to be expected due to the drought conditions mentioned earlier which prevailed throughout most of June, July and August and resulted in a shortage of fresh grazing. Overall weaning weights for the lambs of Project I were unchanged from last year, those for Project II were down by 1.2 kg and those for the lambs of Project III up by 1.8 kg.

Reference was made in last year's Annual Report to the problem of copper deficiency in the Alderhope twin lambs grazing the reseeds, and its effect on their weaning weight. This year blood samples were taken at regular intervals from the twin lambs and indicated steadily declining copper levels as shown in the table.

Date	No. of lambs sampled	Mean blood copper level (µg Cu/100 ml)
15/5/75	20	75.2
16/6/75	43	69.4
14/7/75	27	69.5
5/8/75	102	55.7

Normal range is 60 - 160 µg/100 ml

The lambs were split into a treatment group and a control group on the basis of their live-weights on 6th June, their age distribution, and their sex, and after blood sampling had been completed on 5th August, the 75 lambs comprising the treatment group were injected with Cuprin, the 27 lambs of the control group remaining untreated. All lambs were subsequently weighed and blood sampled at weaning on 21st August. Results are summarised in the following table.

Group	No. of lambs	Mean of blood copper levels (µg Cu/100ml blood)		Mean body-weight (kg)		Liveweight gain (kg)
		5/8/75	21/8/75	5/8/75	21/8/75	5/8/75 to 21/8/75
Injected	75	55.0	109.6	25.0	26.8	1.8
Not injected	27	58.3	44.2	24.7	26.4	1.7

While with the injected lambs there was a highly significant ($P = 0.01$) increase in blood copper level together with a marked improvement in the appearance of the lambs, there was no difference in liveweight gain over the 16 days between the two groups. It is perhaps to be expected that a longer period of time is necessary to achieve improvement in growth rate from the injection and it is hoped to establish this next year.

The weaning percentages for South Country Cheviot, North Country Cheviot (including NCC x SCC) and Blackface ewes were 89, 103 and 109 respectively, to give an overall weaning percentage of 99.2, compared with 93.5 last year. With the majority of the ewes in better condition at tupping in the autumn of 1974

this increase in the lamb crop was to be expected, although the weaning percentage for the inwintered Rigg and Gairs ewes was again disappointing.

Fleece weights were on average 0.1 kg heavier than last year and the greatest weight of wool ever dispatched from Sourhope (12,631 lb) realised on average 30.0p/lb. The drop of 0.5 kg in average weight of the Rigg and Gairs hogg-fleece weights can be ascribed to the change-over in breed from South Country Cheviot to Blackface.

Reference was made in the 1974 Annual Report to trials which are being carried out to determine the effectiveness of cobalt bullets at Sourhope. This work is continuing and to this end half of the Near-end Hairney Law, Auchope and Park Law ewe hoggs were dosed with a cobalt bullet in November 1975. Mean bodyweight changes of treated and untreated sheep are being compared as are all aspects of lambing performance including weaning weights of lambs.

Last year it was reported that serum blood cobalt levels in lambs dropped markedly from the end of June to weaning. It should be noted that these lambs were from nursing ewes which had either just received a cobalt bullet or had as yet not been given a cobalt bullet. In 1975 a further trial was carried out with single lambs from the Near-end Hairney Law and the Rigg hefts, all of which on this occasion were from nursing ewes to which a cobalt bullet had been administered. Lambs on each heft were split into three groups according to marking weight (end of May), date of birth and sex, and a group from each heft allocated to one of the following treatments on 30th June:
(1) Control; (2) Vitamin B12 injection; (3) Cobalt bullet.
Liveweight change to weaning was subsequently recorded and, whilst the data has yet to be subject to statistical analysis, bodyweight changes are shown in the following table. Serum blood cobalt data for the lambs in each group is not yet to hand.

Treatment	NEAR-END HAIRNEY LAW LAMBS				RIGG LAMBS			
	Nos.	Liveweight (kg)			Nos.	Liveweight (kg)		
		Treatment 30/6/75	Weaning 11/8/75	Weight Gain		Treatment 26/6/75	Weaning 18/8/75	Weight Gain
Control	44	20.3	26.3	6.0	73	16.4	23.9	7.5
Vit. B12 Injection	46	20.0	26.1	6.1	80	16.1	23.2	7.1
Cobalt Bullet	40	21.2	27.6	6.4	72	16.4	23.2	6.8

Last winter the trial using a Vitamin D_3 injection for the housed Rigg and Gairs ewes and gimmers was repeated, the first year's trial being referred to in the 1974 Annual Report. Again no benefit was gained from the Vitamin D_3 in bodyweight, fleece weight, or lambing performance. After two years with no response, the trial will not be continued any further.

Disposal of Lambs

The bulk of the lamb crop was sold through the store market with Cheviot lambs averaging £0.163 per lb liveweight (top price £0.188) and Blackface lambs averaging £0.132 per lb liveweight (top price £0.146). A total of 463 North Country Cheviot lambs (and NCC x SCC) averaged £8.31 per head, 752 South Country Cheviot lambs averaged £10.01 per head, and 358 Blackface lambs averaged £8.74 per head.

In addition to the above, 121 Blackface lambs were fattened on 5 acres of rape and 17 chasers were also sold fat. The average carcase weight and price per head for these 138 lambs sold fat were 34.7 lb and £12.42. The overall average price for 1,711 lambs sold was £9.48 per head, which showed a substantial increase over last year's price of £7.00 but was still below the 1973 price of £9.69.

Details of the disposal of the 1975 lamb crop are as follows:-

Ewe lambs retained as stock replacements	381
Wether lambs retained as wether stock replacements	30
Tup lambs retained for breeding	1
Lambs sold store	1573
Lambs sold fat	138
Lambs as yet unsold	18
Total	2141

Cheviot draft ewes sold to a top of £9.40 and an average price of £8.38. Blackface draft ewes sold to a top of £8.00 and an average price of £7.17.

Death Rate

The overall death rate of the sheep stock in the twelve months since November 1974 was 3.9 per cent, with the percentage death rate of ewes, gimmers and hoggs being 4.6, 1.4 and 4.1 respectively. The overall death rate for the previous twelve month period was 3.4 per cent.

Sheep Stock Autumn 1975

Except for a few cold spells with severe frost the autumn in general has been very favourable, being milder and much drier than in 1974, and with an abundance of grazing. With the exception of Gairs and Alderhope, the ewe stock has been put to the tup in better condition this year, than in November 1974. Details of pre-tupping weights of ewes and gimmers are given in Table 3 (Flock Records - Sourhope) from which it can be seen that the greatest improvement in weight over pre-tupping 1974, is that of the Project I ewes and gimmers. This improvement in autumn bodyweight should be reflected in increased weaning percentage in the coming year.

The build up in stock numbers required by the Development programme has continued and a total of 3051 sheep will be overwintered this year at Sourhope.

CATTLE

Cattle Stocks

Seventy suckler cows were wintered at an estimated cost of £52.34 per head. Promax liquid feed was again used, this being fed along with ad lib straw from early December, with silage being introduced in mid-January. On average each cow received 4.2 tons silage, 1.6 cwts hay, 7.3 cwts feeding straw, 16.9 gallons Promax and 2.4 cwts magnesium fortified hill cow cobs. The cost of all purchased feed, i.e. excluding silage, was £25.04.

Calving started on 26th January and was reasonably straightforward, with only three calf losses. However the calf numbers were low due to a high number of eild cows - nine out of a total of 69 cows which were run with the bull. In last year's Annual Report the injury to the stifle joint

sustained by the senior Hereford bull was referred to. This was thought to be a possible cause of the high number of eild cows. This year, however, the problem is recurring, with seven cows confirmed to be eild following a pregnancy diagnosis. It is believed that the problem may be due to a mineral inbalance and it is hoped to correct this by feeding a high phosphorus mineral.

The management of the nursing cows from April to the end of the year was again dictated by their use as "grazing tools" on the three Development Project areas. Creep feed was offered to the calves over the last 48 days to weaning. Some calf performance data for 1975 are shown in the following table:-

Calf Breed	Sex	Nos.	Average birth weight (lb)	Average weaning weight (lb)	Average liveweight gain-birth to weaning (lb)	Average daily liveweight gain (lb)
Hereford x	Bullock	15	83.1	556.2	473.1	1.9
Hereford x	Heifer	15	76.5	522.9	446.4	1.8
Angus x	Bullock	15	79.0	542.4	463.4	2.0
Angus x	Heifer	14	74.8	492.6	417.8	1.8
Friesian	Bullock	3	82.0	592.7	510.7	2.0
All Calves		62	78.6	532.2	453.6	1.9

Of the 62 calves weaned, 60 were sold at the October sales to average £102.22, an increase over last year's price of £39.35, but still slightly below the 1973 price of £102.45. The average price per cwt was £24.65 for Hereford bullocks, £20.54 for Hereford heifers, £24.63 for Angus bullocks and £21.39 for Angus heifers. The remaining 2 calves are being overwintered at Sourhope.

Of the 8 calves kept from the 1974 crop, one heifer has been retained for breeding, the other 7 being sold in May to average £88.57. The overwintering cost for the 8 calves was £33.06 per head.

Muirburn

No burning was carried out in the spring of 1975.

Cropping

Forty-two and a half acres of grass were conserved as silage and 6 acres as hay.

A total of 10 tons of 16% Super slag was applied to 24 acres of inbye fields.

Five acres of direct-drilled rape were grown this year on the Rigg field. The area was sprayed with Paraquat in late June at 3 pints per acre and again in early July at 2 pints per acre. On 7th July 4 lb Liragold seed and 7 lb slug pellets per acre were direct drilled. This was followed immediately by rolling and 3 days later by applying 4 cwt of a compound fertiliser and 2 cwt high Nitrogen fertiliser per acre. Details of lambs fattened on the rape were given earlier in this report. Total costs of growing the rape were £42.80 per acre.

Last May as much as possible of the Schilgreen was worked with discs and bar rotavator and oversown with 20 lb per acre of a ryegrass, timothy and clover mixture.

Any further cropping work carried out in connection with the Development Projects is included in the section headed Development Work.

Bracken Spraying

No bracken spraying was carried out during 1975.

Buildings

The hogg-inwintering shed was completed towards the end of last winter after several delays. A new potato/feed store was erected during the summer and is primarily to provide storage of special seed potato stocks under investigation by the Scottish Plant Breeding Station. When their investigations are completed the shed will become available as a feed store which will be a great asset at Sourhope. Cattle grids have been installed at two further points along the circular farm road. An extension to, and upgrading of, the covered working area at the Auchope sheep yards is at present under way. The exterior repainting programme has been continued with the painting of the Yorkshire boarding sides of the new hogg wintering shed, the cattle court, the Agronomy section animal house, and all paintwork around the old steading block. Alterations to all houses on the station have been completed, including exterior redecoration.

Development Work

Good progress has been maintained in the Development Projects.

In Project I approximately 25 acres of P2 were oversown on 8th June after rotavation with a "spike" bar during the latter half of May. The seed, a mixture of perennial rye-grasses, timothy and clover was applied at a rate of 25 lb per acre. This was followed by a dressing of 2 cwt per acre of a 21:14:14 compound fertiliser and heavy rolling. Following the oversowing, very dry weather persisted for some time and at this point in time the oversowing can only be claimed to have been partially successful.

A fundamental change in the management of the sheep stock comprising Project I was made in the autumn of 1975 which will effectively lead to a complete abandonment of any reliance on the hefting instinct of the hill ewe. Whereas previously the sheep stock were run as two separate flocks, one on the Near End of Hairney Law and the other on the Far End of Hairney Law/Auchope, now the two flocks have been merged and split according to age and condition. The gimmers, one crop ewes and poorest of the two crop ewes are now all run on the Far End/Auchope ground, while the 4 crop, 3 crop and remaining 2 crop ewes are on the Near End. One advantage of the changed management system is that it will be easier to give preferential treatment to the sheep that are most in need of it, i.e. the younger ages, by having them all together.

The extra inputs to Project I over the last two years (referred to in the Report of 1974) have quickly taken effect in improving individual ewe performance. The pre-tupping weights of the ewes increased by 1.9 kg in November 1974 (compared with November 1973) and by a further 2.3 kg in November 1975. Weight of lamb weaned per ewe mated was 23.8 kg for 1973-4 and was 26.7 kg for 1974-5.

Additional inputs to Project II during 1975 were confined to the application of $2\frac{1}{2}$ tons per acre of ground magnesium limestone and $7\frac{1}{2}$ cwts per acre of 16% Super slag to the reseed E2 on Gairs.

With the Alderhope reseeding programme (Project III) completed in 1974, during the summer of 1975 all four reseeds received an application of 2½ tons per acre of ground magnesium limestone and 7 cwt per acre of 16% Super slag.

Shelter Belts

In conjunction with Roxburghe Estates several new shelter belts (making up a total of 35½ acres) were planted in the spring of 1975 in three main areas.

(a) Two plantations on the Near End of Hairney Law to provide shelter for the Hotts lambing field and P3.

(b) A long plantation on the North-facing side of Fasset hill, between Fasset hill and Auchope Park. This will provide shelter for Auchope Park and Schil Park (Banks lambing fields) and will improve shelter for the Alderhope reseeds A1 and A2.

(c) Three plantations to form three sides of an area of hill ground between Gairs and Fasset which was limed and slagged in 1974. The new enclosure within these shelter belts has been designated E3 and will provide a much improved lambing area for the Rigg and Gairs ewes. In the long term plantations (b) and (c) have been planted with a view to providing potential off-wintering sites at a future date for hill ewes as such sites become a necessary requirement of an extended Development Programme.

D. HOUSE O' MUIR

WEATHER

Once again the year started with a good open winter and this continued into lambing time when the weather was good although cold. Apart from odd short spells the summer was dry and good for stock and this in fact continued into the autumn until September which was very wet.

Rainfall 1974/75

Month		Rainfall (mm)
1974	December	134
1975	January	127
	February	35
	March	39
	April	55
	May	44
	June	26
	July	49
	August	60
	September	177
	October	32
	November	30
	Total	808 (31.8 inches)

The ten-year average is about 810 mm.

SHEEP

The hill ewes were in good condition at mating time and the number put to the ram was slightly up on the previous year. A number of the ewes were put to a Westphalian ram for experimental purposes. They came through the winter well and no hay was consumed by the hill ewes. Pre-lambing and post-lambing feeding of the ewes consisted of beet pulp to begin with, followed by a compound in lactation. The marking percentage worked out at 125.6%. The death rate in the ewes was higher than last year mainly due to a pneumonic condition in some ewes after having been on experiment. Ewes with twins were retained inbye (both pure and cross) to give them a better chance. Of the 125.6% lambs marked 124% were weaned. One hundred and two ewe hoggs were wintered and came through the winter well and returned to the hill in good condition at the beginning of April.

Eighty wether lambs were also wintered on hay, barley and nuts. These were added to the wether pool in the spring.

Disposal of Stock

The disposal of the 542 lambs weaned in August 1975 was as follows:-

Sold store	315
Sold to Research Account	108
Retained for Stock Replacements	104
On hand 22/12/75	9
Deaths	6
	542

Prices obtained per head were as follows:-

101 BF wether lambs	£ 9.90
100 BF wether lambs	£ 9.00
38 BF x Westphalian lambs	£10.00
30 BF ewe lambs	£12.50
85 BF ewe lambs	£11.00
38 Small BF ewe lambs	£ 7.60
23 Mixed small lambs	£ 6.14

Ewes

Only 17 cast ewes were sold outwith the Organisation, the balance being required for research purposes.

CATTLE

The heifers for the new suckler herd were split into two lots and 21 were considered fit to be mated. These were put to the bull and are due to calve from February 1976 onwards. Further purchases were made and the herd now consists of 21 in-calf heifers and 13 to be bulled for the first time in 1976. As there will be no research demands on cattle until the new unit at House o' Muir is complete it has been decided to outwinter all the stock during the winter of 1975-76.

Buildings

Both building programmes at House o' Muir are nearing completion. The Dale shed (apart from water and electricity) is now complete and 50% of it has been slatted in order that it may operate as a combined sheep and cattle unit.

The cattle metabolism unit being constructed in the old steading is progressing in a satisfactory manner and should soon be completed.

Fencing and Dyking

Some repairs to dykes have been carried out during the year and some 1000 yards of new fencing has been or is being erected to effect some degree of control on the grazing of the inbye enclosures which presently are open to the hill.

It was hoped to restore some of the hill/inbye dykes but the cost of such work is prohibitive and it is likely that these dykes will have to be replaced by fences.

Muirburn

No muirburn was carried out in 1975.

II. SUMMARY OF FLOCK RECORDS 1974/75

A. GLENSAUGH

TABLE 1

Reconciliation of Ewe Numbers 1974/75

Heft	Ewes and Gimmers Nov.1974	Draft and Cast	Deaths	Gimmers bought in	Ewes and Gimmers Nov.1975	Hoggs born 1975
Cairn	190	28	8	50	204	62
Birnie	204	32	13	62	221	63
East Finella	149	37	4	47	155	55
Mid Finella	150	53	8	60	149	66
West Finella	150	45	14	59	150	66
Greyface Flock	233	46	18	63*	232	-
TOTALS	1076	241	65	341	1111	312

* Purchased 1975

TABLE 2

Weaning Percentages and Lamb Liveweights

Heft	Ewes to Ram 1974	Lambs Weaned			Weaning Weights (kg)	
		No.	% 1974	% 1975	1974	1975
Cairn	190	212	96.3	112.2	28.0	24.7
Birnie	204	235	90.1	115.2	26.9	26.2
East Finella	149	195	111.3	130.9	-	-
Mid Finella	150	178	132.6	118.7	31.4	31.7
West Finella	150	187	136.3	124.7	26.7	30.3
Greyface Flock	233	350	158.9	150.9	30.8	30.4

TABLE 3

Liveweight (kg) of Sheep - November 1974 and 1975

Heft	Ewes		Gimmers		Hoggs
	November 1974	November 1975	November 1974	November 1975	November 1975
Mid Finella					
Blackface	66.6	60.9	60.2	53.8	35.4
Texel x BF	-	-	63.2	54.8	34.5
B. Leicester x BF	-	-	-	57.6	33.1
West Finella					
Blackface	61.6	59.8	53.9	49.8	32.4
Texel x BF	-	-	-	49.5	32.7
B. Leicester X BF	-	-	-	54.0	33.1
Cairn	58.1	51.5	50.0	46.1	30.4
Birnie	57.4	55.4	49.4	43.3	31.4
Greyface Flock	74.6	71.6	57.5	63.8	-

TABLE 4

Other Sheep on Farm - December 1975

Breed	Age	Type	No.
Blackface	Adult	Wedders	84
Blackface	Hoggs	Wedders	35
Blackface	Adult	Fistulated Wedders	7
Blackface	Adult	Ewes	16
Blackface	Hoggs	Fattening	124
Cheviot	Hoggs	Fattening	56
Cheviot	Adult	Feeding ewe	1
Greyface	Adult	Feeding ewe	1
Blackface	Adult	Feeding ewe	8
Blackface	Adult	Feeding Wedders	5
Rams			
Cheviot	Adult	Stock	5
Blackface	Adult	Stock	30 *
Border Leicester	Adult	Stock	3
Dorset Down	Adult	Stock	17
Cheviot	Hoggs	Vasectomised	11
Texel	Adult	Stock	2**

* Includes 13 for use in fertility of ewes research programme

** On loan.

TABLE 5

Cattle Stocks - December 1975

	Hereford x Friesian	Blue Grey
Cows in-calf to Charolais bull	31	38
Eild cows	1	3
Heifers in-calf to A. Angus bull	6	8
Bulling heifers	8	6
Totals	48	55

Other Cattle

One Charolais bull
34 one year old calves

B. LEPHINMORE

TABLE 1

Reconciliation of Ewe Numbers 1974/75

Hirsel	Ewes & Gimmers Nov. 1974	Draft and Cast Ewes	Deaths*	Gimmers bought in	Ewes & Gimmers Nov. 1975
Barnacarry	227	40	11 (7)	67	243**
Midhill	434	73	18	116	459
Low-End C	176	16	7	46	199
T	174	24	5	45	190

* Includes Black Loss (in brackets)
** Includes 19 five crop ewes

TABLE 2

Weaning Percentage 1974/75

Hirsel	Ewes to tup	Lambs Weaned Total	Percentage 1974	Percentage 1975	Weaning Weights Singles (kg)	Weaning Weights Twins (kg)
Barnacarry	227	178	82.4	78.4	25.2	27.2
Midhill	434	395	98.2	91.0	24.7	22.9
Low End C	176	144	78.4	81.8	27.2	24.0
T	174	145	75.3	83.3	26.8	22.8

TABLE 3

Weights of Ewes, Gimmers, Hoggs (kg) 1974/75

Hirsel	Ewes Nov. 1974	Ewes Nov. 1975	Gimmers Nov. 1974	Gimmers Nov. 1975	Hoggs Nov. 1974	Hoggs Nov. 1975
Barnacarry	48.9	46.8	41.5	41.3	27.1	24.5
Midhill	50.3	48.5	39.7	43.2	25.1	27.3
Low End C	47.0	46.5	41.5	40.9	24.8	24.3
T	50.9	47.0	43.2	41.5	25.2	25.0

C. SOURHOPE

TABLE 1

Reconciliation of Ewe Numbers - 1974/75

Heft	Ewes and Gimmers Nov.1974	Draft & Cast Ewes	Deaths	Purchases Ewe Hoggs	Hoggs Nov.1975	Gimmers bought in	Ewes and Gimmers Nov.1975
SCC							
Fasset	215	37	8	-	49	48	218
Rigg	298	39	17	-	-	-	242
Gairs	297	44	13	-	-	-	240
TOTAL	810	120	38	-	49	48	700
SCC x NCC							
Hairney Law/ Auchope	601	107	12	-	154	139	621
NCC							
Park Law	171	23	8	-	36	28	168
BLACKFACE							
Rigg	-	-	-	75	75	65	65
Gairs	-	-	-	75	75	65	65
Alderhope	242	42	12	-	60	67	255
Banks	345	59	14	-	82	81	353
TOTAL	587	101	26	150	292	278	738
FLOCK TOTAL	2169	351	84	150	531	493	2227

TABLE 2

Weaning Percentages and Lamb Liveweights 1974/75

Heft	Ewes to Tup	Lambs Weaned			Weaning Weights	
		Total No.	Percentage		Singles (kg)	Twins (kg)
			1974	1975		
Rigg SCC	298	267	91.0	89.6	23.5	23.2
Gairs SCC	297	259	87.0	87.2	25.3	22.0
TOTAL	595	526	89.1	88.4	24.3	22.4
Fasset SCC	215	195	83.7	90.7	-	-
Auchope SCC x NCC	309	342	93.4	110.7	25.5	24.9
Hairney Law SCC x NCC	292	275	89.5	94.2	25.4	29.7
TOTAL	601	617	91.5	102.7	25.5	27.1
Park Law NCC	171	174	101.7	101.8	27.0	24.2
Alderhope BF	242	282	109.0	116.5	29.8	26.7
Banks BF	345	358	95.9	103.8	-	-
TOTAL	587	640	101.1	109.0	-	-
SCC TOTAL	810	721	87.6	89.0	-	-
NCC (+NCCxSCC) TOTAL	772	794	93.8	102.8	-	-
BF TOTAL	587	640	101.1	109.0	-	-
FARM TOTAL	2169	2152	93.5	99.2	-	-

TABLE 3

Weights of Ewes, Gimmers and Hoggs (kg)

HEFT	EWES		GIMMERS		HOGGS	
	November 1974	November 1975	November 1974	November 1975	November 1974	April 1975
Rigg SCC	51.9	52.8	43.3	-	-	-
Rigg BF	-	-	-	48.2	32.6	32.4
Gairs SCC	56.2	55.0	47.2	-	-	-
Gairs BF	-	-	-	49.3	32.6	32.7
Hairney Law/Auchope SCC x NCC	58.2	60.0	48.1	50.8	34.9	31.2
Park Law NCC	58.8	58.4	50.4	51.8	34.9	35.9
Alderhope BF	57.1	56.2	51.4	49.3	31.7	34.3

TABLE 4

Wether Stock at November 1975

Year of Birth	1970	1971	1972	1973	1974	1975
SCC	27	33	33	29	30	30

D. HOUSE O' MUIR

TABLE 1

Reconciliation of Ewe Numbers - 1974/75

Ewes and Gimmers November 1974	Cast Ewes	Deaths	Gimmers bought in	Ewes and Gimmers November 1975
437	24	16	136	353 (Hill) 180 (Inbye) 533

TABLE 2

Weaning Percentage

Ewes to Ram November 1974	LAMBS WEANED		
	Number	Percentage 1975	Percentage 1974
437	542	124	118

TABLE 3

Blackface Wether Stock November 1975

ADULTS	HOGGS
125	100