

Not for Publication

H.F.R.O. 196

HILL FARMING RESEARCH ORGANISATION

FARM REPORTS AND SUMMARY OF FLOCK RECORDS

1973

I FARM REPORTS - 1973

A. GLENSAUGH

Weather

January to mid-February was a mild and dull, but relatively dry, period, followed by a cold spell with snow lying for eight days. March, April and May were sunny months; March was very dry and mild, during April the temperature was below average and occasional thundery showers occurred; May was dry but the cold weather continued. June was overcast and dry with a warm spell during the last 10 days. The next two months up to mid-September were mainly dry, warm and sunny with occasional heavy rainfall during the last few days. October was cool but dry, followed by a stormy November and December when it was very cold at times with frequent sleet and snow showers.

Weather Records : January - December 1973

Month	Rainfall (m.m.)	Sunshine (hours)	Mean Daily Air Temp °C
January	67.3	42.0	3.3
February	14.9	117.6	3.0
March	11.2	131.0	5.3
April	82.2	139.3	4.3
May	52.0	128.3	7.7
June	44.4	114.3	12.3
July	59.2	136.9	13.1
August	80.2	171.2	13.0
September	59.6	102.0	10.9
October	47.5	99.3	7.3
November	57.9	68.3	3.7
December	98.6	45.6	5.9
Total	675.0	1285.8	

1972

868.0

1188.7

SHEEP

Greyface:

The rams - one Dorset Down and two Suffolk Downs - were put with the Greyface ewes on 27th October 1972 and mating went very well with 93 ewes out of 96 being covered in the first 17 days.

Blackface and Cheviot:

The Blackface and Cheviot rams together with two Texel rams were put with the hill ewes on the 16th and 17th November. The weather was not particularly good during the period but coverage of the ewes in the first cycle was satisfactory especially on Finella.

The winter was not particularly severe in terms of snow but there were spells of wet and cold, windy weather; just at the start of the hill lambing there was a short bad spell of wind, snow and rain.

Ewe feeding of Greyface, Cairn and Birnie ewes was based on hay, sugar beet cubes and a 16% protein proprietary cube and rations were fed in accordance with research requirements based on regular blood samples. The Cairn and Birnie ewes did not come through the winter as well as would have been desirable.

The ewes on Finella were fed on a roughage ration of silage supported by the same compound as that used on the rest of the ewe stock.

The Greyface lambing was as successful as the Cheviots on East Finella. The two Big Hill stocks were disappointing but this was partly owing to the new split of the ground and sheep stock, where ewes were still strange to their new heft. The Mid and West Finella performance was again difficult to assess because of the removal of the best ewes for research work in the sheep shed and adjoining pens. A considerable amount of disturbance was experienced on Finella owing to the erection of the new Milnathort/Kintore electric power line which ran along the face of the hill and reseeds. As a result the lambs were barely up to last year's standard.

The cobalt problem which has troubled us for the last year or two was again present but, apart from a control group of ewe lambs, all others were dosed with Cobalt Chloride solution and this seemed to be effective in controlling lamb losses. The control group were blood and urine sampled at regular intervals in an attempt to gain further information on the subject.

The general treatment of the ewes throughout the year was the same as in the past - pre-lambing dipping against tick and lice, summer dipping for fly strike etc. and all the ewes were put on the Covexin system and given routine dosing for worms. In addition to this a regular dosing for Liver Fluke was carried out at intervals throughout the year. Head Fly was again a problem but not so bad as in the last year or two.

In all 1,048 lambs were marked and 46 were disposed of to other Research Institutes giving a total of 1,094 (1,160 in 1972). Of these 1,010 lambs were weaned and this, together with the 46 mentioned above, gave a total of 1,056 lambs for disposal.

#### Disposal of lambs.

Ewe lambs retained for stock .....	261
Lambs given to other Institutes .....	46
Lambs to H.F.R.O. Research .....	51
Lambs sold store .....	499
Lambs sold fat .....	93
Deaths since weaning .....	19
Lambs still on hand at 31/12/73 .....	87
	1,056

#### Prices:

With the general upward trend in stock prices in the Autumn, figures obtained for lambs were very satisfactory. Forty-two early fat lambs by the Dorset and Suffolk rams averaged £13.51p, with the Dorset Crosses coming out on top both in killing percentage and price per dead lb. A top price of £16.00p was attained. The balance of Dorset and Suffolk Crosses were sold store fairly early and averaged £12.77p.

Blackface Wether lambs sold store had a top price of £10.50p and averaged £8.85p. Blackface Ewe lambs sold at £8.60p. Cheviot Wether lambs sold to a top price of £12.65p and averaged £12.42p. Small Cheviot Ewe lambs, 34 in number, averaged £12.95p. After research requirements were satisfied, only 6 Blackface Texel wether lambs were left. These were sold later when prices were at the peak and made £14.25p per head.

Wool:

After deducting V.A.T. and Interest, the wool clip was only slightly up at the figure of £1,524.

1973 .....	£1,524
1972 .....	£1,507
1971 .....	£1,308
1970 .....	£1,272

Sheep (General):

Existing fencing on the lower areas of Cairn and Birnie hills has been increased in respect of the new divisions of Big Hill, so that each group can be contained on the correct area.

More Greyface ewes and gimmers have been purchased and the number of breeding stock is now up to 229 and all have been put to Dorset Down rams. Twenty-one Blackface Texel gimmers were available for breeding in November of 1973 and these too have been put to the Dorset ram.

CATTLE

1973 has seen the first full year of the new cattle shed. The 1972 calves were not under any research programme and the whole shed was really used to attempt to resolve any physical difficulties in the working of the shed. The cows were confined to certain areas and the calves were allowed to creep off to the side. As a commercial proposition this worked very well and the calves were exceptionally good bearing in mind that a fairly high proportion were heifers' calves. A limited amount of creep feeding was continued for six weeks when the calves were weaned in May and put to grass. Calf prices obtained were very satisfactory and this will be shown in detail in a later table.

Mating of the cows for the 1973 calf crop was begun on the 9th January 1973 and a vasectomised bull was used to detect oestrus and thereafter artificial insemination was carried out using one nominated polled Hereford over the whole herd for the first two cycles. Anything that was not settled after this was served with our own polled Hereford. This operation could not be called 100% successful because the detection of oestrus was not so accurate and efficient. It appeared that the vasectomised bull tended to stay with one of the cows detected in season with the result that other cows which must have been cycling were spotted in the first period. This, together with a return to service of 30 to 35% of cows inseminated, resulted in a long calving period and there were two unserved cows and an unsatisfactory number of eild cows. This year, it is intended to use two vasectomised bulls to create some degree of competition and also to couple this with a certain amount of synchronisation and oestrus and rectal examination in the hope of obtaining a much shorter calving period.

Part of the research programme this year required controlled feed intakes before calving on varying planes of nutrition and to carry out this work cows were taken into the shed at weekly intervals some twelve weeks before expected calving dates. Weekly weights and blood samples were taken throughout this twelve week period.

At the time of this report the 1973 calving is very nearly completed and the calves are of a high standard. A considerable amount of trouble was experienced with scouring in the calves but Veterinary examination showed this to be a milk scour rather than any of the infectious types. It seems likely that the amount and perhaps the type of ration was responsible at least in some degree for this and it is suggested that careful thought be given to this aspect before next year.

After calving a lactation study was set up on a number of cows from the various pre-parturition feed groups and this work is progressing satisfactorily at the moment. In order to exercise the controls essential to this study it has been necessary to fit restraining gates behind the cubicles to ensure the calf stayed with the dam and this led to difficulties in scraping the dung passage with the existing tractor and scraper. A mini tractor (8 H.P.) with broad back tyres was purchased and a scraper blade made and fitted - this seems to be working in a satisfactory manner.

With the cows coming into the shed for pre-parturition feeding during the summer months a grass surplus, in excess of hay and silage requirements, was a slight embarrassment. Twenty-three grazing cattle were purchased and some taken on from a neighbour to enable us to deal with the surplus. The purchased cattle have now all been sold and left a margin of 10-12% over the inbuying bill.

All but 11 of last year's calves have now been sold and the prices attained were as shown in the following tables:-

Laurenkirk Sale 8/9/73

Number	Type	Pre-sale Wt. (lb)	Price
6	Heifer calves	686	£121.00
1	Heifer calf	672	£118.00

Laurencekirk Sale 15/9/73

Number	Type	Pre-sale Wt. (lb)	Price
2	Bullock calves	770	£143.50
2	Bullock calves	672	£120.50
2	Bullock calves	690	£132.50
2	Bullock calves	672	£118.50

Edzell Sale 6/10/73

Number	Type	Pre-sale Wt. (lb)	Price
2	Bullock calves	700	£141.50
4	Bullock calves	686	£135.50
3	Bullock calves	686	£139.50
1	Bullock calf	700	£134.50
1	Heifer calf	644	£111.00
7	Heifer calves	658	£123.50
1	Heifer calf	630	£ 97.00

Edzell Sale 20/10/73

Number	Type	Pre-sale Wt. (lb)	Price
2	Bullock calves	672	£129.50
1	Bullock calf	672	£137.50
1	Bullock calf	616	£ 99.50
2	Heifer calves	604	£111.50
2	Heifer calves	588	£ 92.00

Laurencekirk Sale 1/12/73

Number	Type	Pre-Sale Wt. (lb)	Price
1	Bullock calf	Scale not working	£137.00
2	Bullock calves	due to ice	£115.00
1	Heifer calf	-	£ 98.50

Cropping 1973Roots and Green Crop

Kale 8 acres  
Rape 19 "

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27 "

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Grass

Hay 80 acres  
Silage 22 "  
Grazing 205 "

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307 "

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For the first time the Kale seed was drilled directly into the old sward after a chemical burn off. This work was done on contract and proved to be a great success resulting in the best Kale crop we have had both in quantity and freedom from annual weeds. As a consequence it is proposed to repeat this next year and also to try at least one field of Rape in the same manner.

Hay and Silage were both up to average despite broken weather in the middle of the season. Once again the Lister Hay Drier proved invaluable.

Heather Burning

Considerably less heather was burned than was desirable, due to a very dry spell with high winds at the tailend of the burning period. This made burning very dangerous and the risk to adjoining property (Forestry Commission) became too great.

Fencing

Some 3,000 yards of new fencing were erected by normal farm staff and repairs were carried out over a further 1,500 yards. In addition, 3,500 yards of fencing were erected on contract in connection with the controlled grazing systems.

Shelter Belts

Apart from filling gaps in existing belts, no planting was undertaken in 1973.

Farm Buildings

The work on the cattle shed was virtually completed during the year including the concreting of the area between the new shed and the original farm buildings. The area round the old steading was laid with asphalt and as a result of money received in compensation for damage by the Hydro Electric Board repairs were carried out to the other roads at the farm. Tarring was also carried out on the first 50 yards of the Bows access road which had become almost impassible owing to continued washing and silting over a period of time.

Farm Hostel

No progress has yet been made with the Hostel alterations and it is currently occupied by an experimental worker on a caretaker basis.

GLENSAUGH : THE RED DEER PROJECTStocking of farm at 1st January 1973.

<u>Born</u>	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>Total</u>
Stags	5	7	11	23
Hinds	9	49	26	84
	<u>14</u>	<u>56</u>	<u>37</u>	<u>107</u>

Adult stock movementsReductions:

1 stag slaughtered for chemical analyses	} - 5
1 " " " sale : £53.00	
1 hind " " " : £60.00	
1 stag shot by poacher	
1 " died from urethritis	

Additions:

2 stags from the Rowett Institute + 2

Calving

57 hinds were put to the stag  
 1 hind was barren  
 56 produced calves  
 3 calves were born dead  
 6 calves died after birth  
 47 calves were weaned 82%.

<u>Calf Weights</u>	<u>Birth (June)</u> (kg)	<u>Wean. (Sept.)</u> (kg)
Stags (3 yr old hinds)	8.1	40.0
Hinds (3 " " " )	6.8	36.2
Stags (2 " " " )	6.8	30.0
Hinds (2 " " " )	6.3	29.0

Castration

8 calves were castrated in September 1973 and retained on the farm.

Supplementary feeding

Hinds were fed from 1st May to 30th June during late pregnancy and lactation, at a maximum rate of 1.0 lbs per head daily on barley cubes containing minerals and molasses. A total of 2.0 tons feed was provided.

During winter 10 bales of hay (400 lbs) were offered.

Stags were fed 20 bales of hay to help their recovery from the rut and also because of the poor quality of the grazing. A total of 800 lbs were fed during the months of January, February and March.

Calves received 1 lb/hd/day of S.A.I. fat lamb pellet with hay ad lib. Hay was not eaten unless the weather was particularly severe. The total consumed by 37 calves last winter was less than one ton of hay. Feeding of calves started in October and ended in April.

Rutting Program

83 hinds were put to the stag in October 1973. Further groups of 2 stags were tried out as the single stag groups last year had a poor performance.

Groups were: 2 stags + 24 hinds  
 2 " + 18 "  
 2 " + 12 "  
 1 stag + 13 "

Synchronisation of Oestrus

An attempt was made to synchronise oestrus with 16 hinds using vaginal sponges - 11 hinds were recorded as being in oestrus in one day. None of the other 5 hinds were seen to have an oestrus but this probably occurred during darkness. Serving the hinds with young stags was unsatisfactory. Three year old stags were required.

Fencing

The Woodside paddock was fenced. One hundred metres of fence was replaced after being burnt on the west side of the Sloch'd. The feeding area was made calf-proof with pig-netting for calf-weaning. Maintenance was carried out on parts of the perimeter and extensively around the fox hole paddock.

The perimeter fence collapsed when a corner march strainer failed to hold in the peat - this was re-erected (Goyle).

The new low single strand fences are proving to be highly stock-proof and have required no maintenance to date.

Forest

The forest still presents several problems. Contorta pine continues to blow on to the edges causing the fence to collapse. Damage done by deer remains negligible. Lack of food in the forest makes the area of little use except for a few beasts for a short period.

Research

Gathering of all stock for monitoring occurs monthly.

Teeth: Observations on the eruption of incisors have been made. The first set of permanent incisors have erupted by 14 months and most animals are full-mouthed by 26 months of age.

Apart from limited damage occurring in the pens no animals have lost any permanent incisors.

Blood samples continue to be taken for various haematological work. Samples have been taken from 16 hinds for Ketone, NEFA and Glucose analyses. Samples are also taken to check for Babesia infection.

Babesia has been found (antibody) in several of our deer and all can be shown to have come from forests where ticks are a problem with sheep farming. Blood samples were obtained from all stock for Brucella infection in December 1973 but all were negative.

Faeces are obtained for internal parasites monitoring - levels are still very low. Faeces are also taken for N<sub>2</sub> determinations.



Skin sampling has finished now and work is being written up on the changes in follicle growth and coat type over the year.

Skeletal growth measurements continue but with good nutrition in the first winter skeletal growth is almost complete by 12 months of age.

Photographs to give details of conformation have been taken throughout the life of some selected animals and these are now complete.

#### Behavioural Studies

1. A trial study was done in West Greenshiels by two students with 12 hinds and 2 calves. This proved to be a useful study which has been written up.
2. The Nature Conservancy did an observational study on calving behaviour.

Udder scoring of hinds in late pregnancy proved interesting and is a useful guide to the date of calving-saving in labour and feed costs. Size of udder does seem to be related to milk yield and calf growth. All hinds were udder-scored from 1st May to end of June twice weekly.

Tuberculosis. A ministry vet carried out a TB test in December. Eight animals reacted to the avian strain. These will be retested in February.

#### Grazings

A record continues to be kept of all stock movements. The farm now carries 144 animals and at 1st January 1974 the stocking rate was 1 adult beast to 5 acres.

#### Stock at 1st January 1974.

Born	<u>1970</u>	<u>1971</u>	<u>1972</u>	<u>1973</u>	<u>Totals</u>
Stags	2	6	12	16	36
Hinds	8	49	26	25	108
TOTALS	<u>10</u>	<u>55</u>	<u>38</u>	<u>41</u>	<u>144</u>

B. LEPHINMOREWeather

January was mild and wet. An 8" fall of snow on the 20th-21st with drifts 2 to 3 feet deep gave some cause for concern, relieved by a quick return to mild conditions. February began mild, but from the 10th a colder spell with above average snowfalls and night frost persisted well into the month. March began wet and cold with snow on the tops but from the end of the first week better weather persisted until the 24th. Little rain fell during the period and while some night frosts and cold days were experienced it was, on the whole, a good month. The first ten days of April were cold, with snow and sleet showers. The remainder of the month was too cold and dry for growth but lambing occurred with no appreciable losses. May continued cold but the second half of the month was warmer. June was mixed but predominantly wet with drizzle and mist, apart from the last week which was very warm and sunny. July began with more than its share of drizzle and hill fog, but the second half showed a promise of summer, unfortunately not fulfilled in August which began wet. A hot, sunny week mid-month was followed by a reasonably good spell which lasted intermittently through September and October and culminated in the most glorious autumn colours seen for many years. November was wet and stormy with a cold spell mid-month. The end of November saw snow and frost and the worst weather at this time on record. December, although milder by comparison, continued wet and windy.

Rainfall 1973

	<u>Inches</u>
January	6.35
February	6.49
March	4.01
April	2.65
May	3.02
June	4.59
July	3.73
August	5.66
September	4.26
October	3.69
November	8.79
December	10.54
	<hr/>
	63.78
	<hr/>
1972	68.38

SHEEP

The out-wintered ewe stock, especially Mid-hill, suffered to some extent from the severe weather in February and the cold dry spring followed by a poor summer retarded recovery. Ewe condition this autumn was less good than at the same time last year. A worse summer weather also affected lamb growth, resulting in lower weaning weights. The overall lamb weaning percentage was 97.

Figures for previous years were:-

1972	97%
1971	96%
1970	82%
1969	87%
1968	70%
1967	80%

At weaning all Mid-hill and Low-End wether and shott ewe lambs were sent to Bush Estate and consigned to rape or grass keep. During the autumn 467 ewe and wether lambs were sold fat, averaging £10.60 per head, after deduction of handling charges. A further 74 were sold store, averaging £4.38 per head. Grazing and veterinary expenses amounted to £1.42 per lamb.

In October, 34 Barnacarry top wether lambs were sold in Stirling store market averaging £8.90 per head. Twenty-five wether lambs were retained for plot grazing trials. Sixty-one draft ewes were sold privately at £10 per head and a further 20 at Stirling averaged £6.95 per head. Sixty-one feeding ewes were sent to Bush Estate for the use of Dr. Angus Russel.

One hundred and five ewe lambs were purchased locally of which 68 were kept as stock on Low-End hirsell, the remainder being re-sold.

### Hogg Wintering

As in previous years Barnacarry ewe hoggs were grass wintered at Point Farn, Ardlamont. Mid-hill hoggs were again home wintered on grass with a supplementary feed cost of approximately £1.80 per head. Low-End hoggs were home wintered and housed from 8th December until 30th March, mainly on a ration of  $1\frac{1}{2}$  lbs hay and 4 ozs concentrates at a cost of £1.91 per head. Sugar beet nuts were introduced on 12th March and the daily ration finally settled out at  $\frac{3}{4}$  lb hay, 8 ozs sugar beet nuts and 4 ozs concentrates.

Hay valued at £17 per ton, concentrates at £44 per ton, sugar beet nuts at £35 per ton.

### HILL CATTLE

Winter feeding of the 15 August calving heifers began on 19th October with 2 lbs per head per day of concentrates and by 9th November a full ration of hay, oat straw and concentrates was being fed. Distillers draff was introduced at the end of February and feeding stopped on 29th April when the cows returned to the hill after weaning. A total of 21 cwts hay, 8 cwts straw,  $4\frac{1}{2}$  cwts draff,  $4\frac{1}{4}$  cwts concentrates was fed at a cost of approximately £31 per head. The 10 calves running at foot were creep fed from 2nd January until sold on 5th May. A total of  $5\frac{1}{2}$  cwts hay,  $1\frac{1}{4}$  cwts draff,  $1\frac{1}{2}$  cwts concentrates was fed at a cost of approximately £8.57 per calf. Winter feeding of the January calving cows began on 16th November and continued until 1st June. Hay feeding stopped on 11th May. A total of  $21\frac{1}{2}$  cwts hay,  $4\frac{3}{4}$  cwts straw,  $4\frac{1}{2}$  cwts draff,  $3\frac{1}{2}$  cwts concentrates was fed at a cost of approximately £28.50 per head. \* Throughout the year the cow herd has taken part in a fluke dosing trial under the direction of John Maddox, MRCVS, of the West of Scotland Agricultural College, Oban.

Three nine month old Aberdeen Angus cross bullock calves were sold at Dalmally on 5th May at £89 per head. Seven heifer calves were sold to a top of £95 and averaged £77 per head.

Eight Luing cross bullock calves were sold at Dalmally on 21st September to a top of £84 and averaged £78 per head. Six heifer calves were sold at Dalmally on 19th October to a top of £81 and averaged £70 per head. Four heifer calves were kept for stock replacements and a further two are being over-wintered for future sale.

Two three year old heifers were culled in the spring, making £160 and £120 at Paisley and Dalmally marts respectively.

\* Hay valued at £16 per ton, straw at £8 per ton, draff at £6.75 per ton and concentrates at £45 per ton.

Calf Weaning Weights

	<u>September 1972 AAx</u>			<u>September 1973 Luinig x</u>		
	<u>No.</u>	<u>Wt.</u>		<u>No.</u>	<u>Wt.</u>	
		<u>lbs</u>	<u>kg.</u>		<u>lbs</u>	<u>kg.</u>
Heifers	11	431	196	12	394	179
Bullocks	16	464	211	9	455	207

		<u>May 1972 AAx</u>	
		<u>lbs</u>	<u>kg.</u>
Heifers	7	396	180
Bullocks	3	400	182

Hill Cows Sh.x Sh.x High  
born 1968 and 1969

<u>October 1972</u>			<u>October 1973</u>		
<u>No.</u>	<u>Wt.</u>		<u>No.</u>	<u>Wt.</u>	
	<u>lbs</u>	<u>kg.</u>		<u>lbs</u>	<u>kg.</u>
20	988	449	19	961	437

Cattle Reconciliation

<u>Year of Birth</u>	<u>October 1972</u>			<u>October 1973</u>
	<u>No.</u>	<u>Deaths</u>	<u>Sales</u>	<u>No.</u>
1968	10	-	-	10
1969	10	-	-	10
1970	15	-	2	13
	<u>35</u>			<u>33</u>

Arable Ground

Fields 5 North and 4 were cut for hay commencing on 21st June. Approximately 20 tons of hay was made and barn dried at a cost of approximately £1.45 per ton (electricity only). Fields 1, 4 5 South and 7 were given a dressing of 11 cwts per acre basic slag (15% P<sub>2</sub>O<sub>5</sub>) and the lab. field 7 cwts per acre basic slag. Approximately 1 acre of Field 2 next to the shore was directly re-seeded.

Heather Burning and Regeneration

An attempt was made in mid-April to burn 25 acres on Mid-hill selected for re-seeding in areas P1 and P2 but this was only partially successful. As no contract labour was available in the district throughout the summer, regeneration was begun on 21st July using farm labour. A lime spreader was hired locally and used in conjunction with a second hand crawler tractor purchased in May, 1973. Seeding began on 25th July and 11 acres in P2 was completed by 1st August. Owing to adverse weather the 14 acres in P1 was not completed until 12th August. In the latter case the grass seed was mixed with the basic slag in the spreader while in the former the Massey-Ferguson spinner distributor was used behind the crawler. Three cwts per acre compound was applied in P2 on 16th August and on P1 areas on 24th August. A good grass take resulted especially in the wetter areas.

Treatment

25 acres regenerated - no surface cultivations  
 2 tons/acre Ground Limestone (N.V. - 46% CaO)  
 10 cwts/acre Basic Slag (14-15% P<sub>2</sub>O<sub>5</sub>)  
 3 cwts/acre Compound (15-15-21)

Seeds Mixture

	<u>lbs</u>
Perennial Ryegrass Dutch Prino Cert.	6
" " Aberystwyth S23 Cert.	6
" " Dutch Berenza Cert.	6
" " Aberystwyth S24 Cert.	6
White Clover Huia	3
Approved Kent Wild White	2
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Seed rate/acre	29

Costs (Net of subsidy)

50 tons Ground Limestone	£119.30
12½ tons Basic Slag	147.92
75 cwts Compound	189.00
Seeds @ £9.50/acre	237.50
Hire of Spreader	57.75

Additional Charges

Farm crawler	85 hours
Farm tractor	28 "
Farm labour	168 "

Stabling

The rusted corrugated iron side sheeting on the hay-shed was replaced and additionally a breeze block retaining wall built to a height of 3' approximately. An exhaust pen was added to the cattle handling complex utilising the waste ground behind the old hostel 'dairy' and a dog kennel was built in the same area for the single shepherd. All sliding doors in the stabling were renewed during the summer and the south end of the barn roof repaired with the insertion of a new roof coupling.

The netting fence round the 'orchard' is presently being replaced and the main farm entrance has been re-fenced with timber rail and posts.

Fencing

The stone dyke forming the perimeter of Field 1 has been replaced by ryelock netting fence. While the falling into disuse of an old stone dyke is to be regretted the passage of heavy traffic on the main road and disturbance by tree roots has made this dyke physically and economically impossible to maintain.

C. SOURHOPE

As in the previous two years the weather throughout the winter months was again open with even less snow this year. The first three months were particularly good with very little in the way of rain or snow and with temperatures much above average. However this was followed by a very cold and wintry April with weather very unfavourable for lambing persisting into early May. Sunshine from May to the end of July, as in the previous year, was below average, again reflected in the lower weaning weights of all lambs reared on the hill. Autumn rainfall, although higher than for the previous year, was still below average and perhaps the most outstanding feature of the year has been the low overall rainfall, the total for the year being only three-quarters of the average for the previous ten years.

Weather Records 1972-73

	Rainfall (mms)	Sunshine (hours)	Mean daily Air Temp. (°C)
<u>1972</u>			
November	72.3	40.4	3.96
December	49.8	48.1	4.52
<u>1973</u>			
January	52.2	38.2	2.96
February	25.2	85.1	3.00
March	12.6	122.5	5.20
April	105.5	116.9	4.30
May	73.2	131.8	9.22
June	38.9	151.5	13.09
July	73.7	115.2	13.78
August	60.0	176.4	13.91
September	61.0	109.2	11.72
October	69.3	63.3	7.40
1972-73	693.7	1,198.6	
1971-72	891.0	1,196.0	
1970-71	916.43	1,277.0	
1969-70	973.07	1,301.5	
1968-69	827.02	1,195.6	
1967-68	1,026.16	1,239.5	
1966-67	1,056.13	1,282.5	
1965-66	1,037.84	1,106.5	
1964-65	877.31	1,238.1	
1963-64	766.57	1,094.1	
10 year average	906.52	1,212.9	

SHEEP

With the open winter and particularly good weather of the first three months of the year less winter feed was required for the outwintered sheep than in the previous season, a total of 58.6 lbs (hay, beet pulp and concentrates combined) being fed to the ewes at a cost of £0.96 compared with 73.7 lbs fed in 1971-72 at a cost of £1.10. Whilst the average feed cost of each of the 1,516 outwintered ewes was £0.96, the range for individual hefts was from £1.37 to £0.68. Average feed cost for outwintered ewe hoggs was £0.80 per head compared with £0.57 the previous year.

The entire Rigg and Gairs ewe stock was again inwintered with no problems being encountered, the ewe hoggs coming into the shed on the 16th January

followed by the ewes seven days later. A feed cost of £2.31 per inwintered ewe compared with £2.29 for the previous year, whilst the feed cost for the inwintered ewe hoggs was £1.38 (£1.30 in 1972).

Some feed data for both inwintered and outwintered sheep is shown in the following table, the feed items concerned being costed as follows (1972 figures in parenthesis): Hay £17 per ton (£16); Sugar-beet pulp cubes £30 per ton (£29); Concentrates £50 per ton (£42); Grass cubes £35 per ton (£37) and Ewe and lamb food £50 per ton (£51).

EWE FEED DATA

	Period	Hay (lb)	Sugar-beet Pulp Cubes (lb)	Concentrates	Average Cost/Ewe
Outwintered Ewes and Gimmers	Storm feed (i.e. feed to 17.3 incl.)	4.7	15.4	-	£0.24
	Pre-lamb feed (i.e. feed from 18.3 to 17.4 incl.)	2.2	9.7	13.7	£0.45
	Post-lamb feed (i.e. feed from 17.4 incl. that led to twins)	1.5	-	11.4	£0.27
	TOTAL	8.4	25.1	25.1	£0.96 (£1.10)*
Inwintered Ewes and Gimmers	Pre-lamb feed (i.e. feed to 17.4)	114.1	43.6	29.4	£2.11
	Post-lamb feed (i.e. feed after 17.4 incl. twin feed)		1.2	8.4	£0.21
	TOTAL	114.1	44.8	37.8	£2.32 (£2.29)

HOGG FEED DATA

	Hay (lb)	Sugar-beet Pulp Cubes (lb)	Grass Cubes (lb)	Concentrates (lb)	Ewe & Lamb Food (lb)	Average Cost/hogg
Outwintered hoggs	8.2	25.0	25.0	-	1.0	£0.80 (£0.57)
Inwintered hoggs	94.5	-	-	29.6	-	£1.38 (£1.30)

\* The figures in parenthesis are for 1971-72.

Total expenditure on sheep feed for all outwintered sheep including ewes, ewe hoggs, wethers and tups, expressed per outwintered ewe to the tup was £1.37 compared with £1.42 for the previous year.

The ewes joined the tup in good body condition in November 1972, but by January some hefts, noticeably N. End Hairney Law, Auchope, Park Law and Fasset were not as fit as one would have wished and all were dosed with a combined fluke and worm drench. At the same time the Blackface ewes on Schil were given a fluke drench.

All outwintered sheep were dosed prior to lambing, and subsequently all twin-bearing ewes were dosed in late June, whilst running on inbye fields. Inwintered ewes were given their routine fluke and worm drench some ten days after going into their inwintering quarters on January 23rd and 24th, but this year were again worm drenched as were sheep from the 'N. end Hairney Law' and 'Park-Law' hefts in late August.

The very cold weather experienced at lambing time through late April and early May has already been referred to. All lambing ewes, both inwintered and outwintered showed an unusually severe bodyweight loss over this period, and this was obviously reflected in depressed lamb growth rates, the subsequent weaning weights of which were down 1.7 to 1.9 kg on average from last year. (It will be recalled that last year's figures were down 1.5 to 2.0 kg on the previous year.) Whilst for the majority of ewes it is easy to postulate that the nutritional stress induced by this very cold spell of weather could not be made good by the nursing ewe as hill pasture growth was simultaneously checked and hence that milk yield would be depressed, in the case of both Gairs and Rigg ewes this argument hardly applies. These ewes, all inwintered, were returning to a hill resource completely rested over winter and supplying an abundance of spring pasture growth, and yet they showed the same excessive bodyweight loss, and lamb growth rates as reflected in final weaning weights were depressed exactly as for ewes on the rest of the hill station.

The overall weaning percentages for South Country Cheviot, North Country Cheviot and Blackface ewes were 91, 98 and 111 respectively, to give an overall weaning percentage of 99 compared with 100 last year. The main feature of weaning was the disappointing performance of the inwintered South Country Cheviot ewes which overall weaned only 89 per cent of lambs.

Fleece weights were little changed from last year and yet again a further increase in total weight of wool was graded the average price of £0.25p per lb being realised. No attempt this year was made to distinguish the clip of inwintered sheep from those outwintered.

Attention must be drawn, as it was in the 1971 report, to perhaps the most difficult problem relating to sheep health here at Sourhope. This remains one of ensuring adequate cobalt levels in the grazing sheep, both ewe and lamb. This past year has seen yet again the presence of sub-clinical cobalt deficiency as indicated by serum-blood Cobalt levels in both ewes and lambs. All ewes were cobalt dosed in January and again in August, all were in receipt of generous quantities of purchased hand feed in late winter and early spring (unlikely to be deficient in cobalt), all have had access to cobalt pining ticks throughout the 12 months and spraying of considerable acreages of inbye and of hill ground have been practised, but still the problem remains with us.

This coming year further extensive pasture spraying with cobalt sulphate will be carried out and all ewes will be given an additional cobalt drench in late May, but it may well be that we shall have to make recourse to the use of cobalt bullets for all the stock. This November half out of a total of 267 ewe and wether hoggs have been given a cobalt bullet and their performance will be compared to that of the untreated hoggs.

#### Disposal of Lambs

The bulk of the lamb crop was sold through the store market, with Cheviot lambs making £0.180 to £0.193 per lb liveweight, and Blackface lambs £0.140 to £0.158 per lb liveweight. A total of 497 North Country Cheviot lambs (+ NCC x SCC) averaged £10.18 per head, 486 South Country Cheviot lambs averaged £10.04 per head and 464 Blackface lambs averaged £8.79 to give an overall average for 1,447 lambs sold of £9.69 (£6.97 in 1972).



Details of the disposal of the 1973 lamb crop are as follows:-

Ewe lambs retained as stock replacements	526
Wether lambs retained as wether stock replacements	30
Tup lambs retained for breeding	11
Lambs sold store	1,447
Lambs remaining to be sold	7
	<hr/>
Total	2,021
	<hr/>

Cheviot draft ewes sold to a top of £10.20 and an average price of £9.50, whilst Blackface draft ewes sold to a top of £9.00 and an average price of £8.50.

#### Death Rate.

The overall death rate of the sheep stock in the 12 month period covered by this report was 3.5 per cent, with the percentage death rate of ewes, gimmers and hoggs being 4.1, 3.3 and 2.2 respectively. The overall death rate for the previous 12 month period was 2.9 per cent.

#### Sheep Stock Autumn 1973.

The condition of the ewe stock prior to tupping in November 1973, with the exception of the Rigg and Gairs hefts, gives no cause for satisfaction for it will be seen from Table 3 that pre-tupping bodyweights of the ewes on recorded hefts other than Rigg and Gairs are, on average, 4.4 kg (9.7 lb) lighter than pre-tupping 1972. It is to be anticipated that lamb weaning percentages in the ensuing year will reflect this fall-off in autumn body condition of the ewe.

As early as the end of August it was obvious from inspection of the ewe stock that ewe bodyweight recovery was not proceeding apace and at that time all ewes were cobalt dosed and faecal samples taken for fluke and worm egg counts. Only four hefts, as noted earlier in the report, were fluke and worm drenched and even these showed minimal egg counts. Nor have subsequent faecal egg counts taken at the pre-tupping gathers, shown any evidence of a build-up in fluke and worm burdens.

The build-up in stock numbers required by the Development Programme has continued and a total of 2,896 sheep will be overwintered this year at Sourhope.

### CATTLE

#### Cattle Stocks.

Forty-eight suckler cows were wintered at an estimated cost of £27.33 per head, each cow receiving on average 3.1 tons silage, 3 cwt hay, 2 $\frac{1}{4}$  cwt of feeding straw and 411 lbs magnesium fortified hill cow cobs. Calving started on 25th January and proved straightforward although calf losses were higher than usual. One calf was born dead, two others died before they were ten days old, the first being trampled upon by another cow and the second having an abnormal heart condition (hole in heart). At 6 months of age another calf died of suspected hypomagnesaemia.

One cow was eild and a second, which had been kept 'free of calf' because of very severe udder mastitis in her previous lactation was sold fat.

The management of the nursing cows from April to the end of the year was again dictated by their use as grazing tools, with creep-feeding being offered to the calves over the last 46 days to weaning. Each calf consumed on average 117 lbs of creep feed at a feed-cost of £4.14. That weight gain of the calves was satisfactory, notwithstanding the management of the cows, is indicated by

the figure for the overall average daily liveweight gain of all calves from birth to weaning which was 1.98 lbs per day. Some data is presented in the following table.

Calf Performance 1973

Calf Breed	Sex	Nos.	Average birth Weight lb	Average Weight at 17.10.73 lb	Av. Liveweight Gain Birth-17.10.73 lb	Av. Daily Liveweight Gain lb
Hereford X	Bullock	21	80.3	586.6	506.3	2.05
Hereford X	Heifer	17	75.4	550.1	474.6	1.86
Angus X	Bullock	2	83.0	624.0	541.0	2.24
Angus X	Heifer	1	58.0	525.0	467.0	1.82
Shorthorn X	Bullock	1	75.0	552.0	477.0	2.11
All Calves		42	77.8	571.3	493.5	1.98

Additional data is available for 21 calves which shows the advent of creep feeding to have had a measurable impact on daily liveweight gain. Overall average daily liveweight gain of these 21 calves from birth to the introduction of creep feed was 1.89 lbs per day, and over the 46-day creep feed period this increased to 2.35 lbs per day. Assuming that access to creep feed has given a net increase in daily liveweight gain of 0.46 lb per day only during the period of creep feeding, and it must be emphasised that this is an assumption, then over the 46 day period each calf would have put on 21.2 lbs extra bodyweight which, with the calves subsequently selling at £20.34/cwt, would mean an extra £3.85 per head for a feed outlay of £4.14.

All 42 calves were sold at weaning in the October sales to average £102.45 with the Hereford X bullocks making £22.38 per cwt and the Hereford X heifers £18.26 per cwt.

With a third Development Project now under way at Sourhope additional cattle numbers were required, and 25 accredited Hereford X Friesian bulling heifers were purchased in early winter at £150 per head. These were over-wintered at an average cost of £23 per head, each heifer receiving on average 17 cwt hay, 2½ cwt sugar beet pulp cubes and 2¾ cwt of lucerne-maize pellets. One heifer died as a result of lead poisoning, this animal having developed a habit (which had passed largely unnoticed) of leaning over a fence and licking the lead strips used by the Forestry Commission to identify fence posts within a small Forestry Commission plot.

The Hereford X Shorthorn cows were again put to the Hereford bull with the Hereford X Friesian heifers being put to the Aberdeen Angus bull. A young polled Hereford bull was purchased in the October sales at Edinburgh.

Muirburn

No burning was carried out in the spring of 1973.

Cropping

Forty-one acres of grass were conserved as silage and eleven acres as hay.

Reference was made in last year's report to the oversowing with 12 lbs per acre of grass and clover seed of a 16 acre block within the Schilgreen which had been previously lined and slagged but in which no preliminary treatment of the sward had been made. Clover establishment this year has been

most encouraging particularly on those steeper parts of the block where the existing sward was more open in character. No treatment has been attempted as yet in the adjacent 13 acre block.

The two bottom enclosures of Park Law - P1 and P2 - each of eleven acres were top dressed with 3 tons Ground Magnesium Limestone and 10 cwt of low grade slag at the end of August.

The 8 acre reseed (A2) sown in 1972 as part of Project III was sprayed with  $2\frac{1}{2}$  lbs cobalt sulphate per acre in early June.

#### Bracken Spraying

Test spraying of 2 acres of heavily bracken-infested acid grassland with Asulox in early August 1972 in the enclosure at the foot of Schil proved to have been very effective indeed and thus on 8th August 1973 a further  $6\frac{1}{2}$  acres in the same enclosure was sprayed with 8 pints of Asulox per acre (spray volume 23 galls/acre) by a contractor at a cost of £10.50 per acre.

#### Buildings

A Hydran pump has been installed at the Alderhope burn and is now working satisfactorily. The pump delivers 1,080 galls of water each 24 hours, along 2,700 ft of delivery pipe which rises 300 ft to a storage tank on the top of Fasset hill. From this tank a water reticulation system has been installed to all the new reseeds on the top of Fasset hill.

A start has been made to the exterior repainting programme for the station, with the covered sheep yards, bottom hay shed and implement shed being repainted this year.

#### Development Work

Good progress has again been maintained in all the Development Projects.

In connection with Project III a further  $15\frac{1}{2}$  acre area (A3) which had been lined and slagged in 1971 was fenced in the spring of the year and within this area approximately 13 acres has been directly reseeded using those methods described in detail in last year's report for reseeded A2. The grass seed was not sown until the 8th August and there is little doubt that this was some 2 to 3 weeks too late, particularly considering the dry weather experienced after the seed was sown. The ideal time at Sourhope for sowing the grass seed in this hill reclamation work would appear to be around July 20th.

#### Open Day

The first open day to be organised by the Hill Farming Research Organisation was held at Sourhope on June 7th when some 720 visitors were shown the work of this hill research station. The enthusiastic involvement of all members of the Organisation both from Headquarters and the Station itself, and their determination to make the day a success, coupled with excellent weather, contributed greatly to what appeared to be a successful day.

D. HOUSE O' MUIRWeather

The weather this year has been rather unusual and in many ways similar to the previous year. It was a mild open and comparatively dry winter, broken by periods of frost. The only snowfall of note being a week of complete cover during the third week of February. By lambing time it was cold, frosty and rather wet and windy, with May having above average rainfall, being the wettest month of the year.

The much needed good weather came with a warm, dry June but was followed by a dull, wet July. A particularly bright day was noted on the 10th although no sunshine was officially recorded. The remaining summer months were again dry, and as last year, gave rise to drought conditions which could not be remedied by the rains of a normal autumn. This has been the second year running to have less than three-quarters of the average annual rainfall.

SHEEP

The ewes on two of the three hefts were suffering from a pneumonia infection and, coupled with the fact that some ewes were returned from an experiment in lean condition, they did not go to mating in as good a condition as would have been liked. The third heft became infected in mid February and lambing time was approached with some trepidation.

Hay feeding started with the snow cover in mid February and concentrate feeding in the third week of March. On average the ewes were fed 18 lbs of hay and  $12\frac{1}{2}$  lbs of concentrate.

By two to four weeks of age virtually all lambs contracted pneumonia and were treated with antibiotics. With a 5% ewe loss between mating and lambing and 7% of the ewes barren, a lamb marking of only 107% was attained. The improved weather after marking helped in weaning 104%

During the summer months the ewe stock appeared to gradually recover from their infection and with a fairly strict cull, a slightly reduced number approach the new sheep year in reasonable condition.

A larger than usual number of hoggs were off-wintered in fields as usual. With 45 lbs of hay each, and a rolled barley oats mixture including some ewe nuts added during the last few weeks of feeding to a total of 22 lbs each, the hoggs were returned to the hill at the beginning of April in good condition.

Disposal of Stock : Lambs

From 464 lambs weaned, and after careful selection including clinical examination, only 95 ewe lambs were kept for stock.

It was decided not to sell the remainder in the normal way through the store market, but to fatten them on rape. All surplus lambs went at weaning time in mid August, to a very good field of rape in East Lothian and were stocked at 18 to the acre. The first draw of fat lambs was sold after six weeks and by the end of the rape after 12 weeks of grazing, 97% of the lambs had been sold fat. Ten poor lambs were finally sent to ADRA Moredun for detailed post mortems in relation to the original pneumonia infection.

The price received per lamb ranged between a top lot at £12.65 to the last small lot at £8.34 to an average of £11.08. When the cost of rape, routine veterinary treatment, transport and travelling and supervision charges had been allowed for a final income of approximately £8.85 per lamb was realised (£7.35 in 1972). Considering the rise in price of store lambs compared with the previous year, it is suggested that the rape fattening of the lambs did not result in any extra income, but averted a possible loss.

Ewes

Draft ewes and overage draft ewes were sold in three lots at £11.80, £8.00 and £7.24 to average £9.65.

Wool

An increase in the return from wool sales is partly due to an increase in the price per lb, and also to an improvement in quality generally, as shown on the grading results, which is very pleasing.

Fencing

The farm boundary on the west side of the hill was a dyke that had become so beyond repair that this year a section of 925 yds was replaced by a rylock net fence. A further section of the boundary dyke to the S.W. was made stockproof by the addition of 1,470 yds of breast wires. Between these two stretches there remains over half a mile of dyke to be renovated.

Muirburn

Advantage was taken of a suitable spell of dry weather in mid March to burn approximately 25 acres of heather on the back heft.

## A. GLENSAUGH

Table 1

Reconciliation of Ewe Numbers 1972-1973

Heft	Ewes & Gimmers 1972	Draft & Cast Ewes	Transfers		Deaths	Gimmers brought in	Purchases	Ewes & Gimmers Nov. 1973
			Out	In				
<u>Finella</u>								
(a) East Finella	146	39	--	--	4	48	-	151
(b) Mid Finella	147) Now to- 123) gether	55			9	89	-	295
(c) West Finella								
<u>Big Hill</u>								
(a) Cairn	231	71			19	46	-	187
(b) Birnie	218	58	--	--	15	57	-	202
<u>Greyface Flock</u>	96	5	--	--	4	-	142	229
TOTALS	961	228			51	240	142	1064

Table 2

Weaning Percentages and Lamb Weights

Heft	Ewes to Ram Nov. 1972	Lambs Weaned			Weaning Weights	
		Number	%1972	%1973	kg	lb
<u>Finella</u>						
(a) East Finella	146	196	125	134.2	28.6	62.9
(b) Mid Finella	147	174	109.5	118.3	28.8	63.4
(c) West Finella	123	124	116.7	100.8	30.6	67.4
<u>Big Hill</u>						
(a) Cairn	231	213		92.2	22.1	48.6
(b) Birnie	218	207	103.6	94.7	24.1	53.0
<u>Greyface Flock</u>	96	142	-	147.9	X. Dorset 37.9	83.4
					X. Suffolk 36.2	79.7
TOTALS	961	1056	110.0	109.9	-	-

The figures given for Mid and West Finella in the foregoing table do not give an indication of the true potential of this ground as the best ewes were again removed for research requirements in the sheep shed and outside pens.

Table 3  
Weights of Ewes and Gimmers (kg)

Heft.	Ewes		Gimmers	
	Nov. 1972	Nov. 1973	Nov. 1972	Nov. 1973
<u>Finella</u>				
(a) East Finella	68.5	70.7	65.4	65.5
(b) Mid Finella	-	63.5	56.3	57.9
(c) West Finella BF	-	65.0	53.1	59.5
BFxTex	-	-	-	60.9
<u>Big Hill</u>				
(a) Cairn	54.7	53.1	43.2	48.0
(b) Birnie	51.6	51.4		46.1
<u>Greyface Flock</u>	73.9	74.5	67.8	64.4

B. LEPHINMORE

Table 1

Reconciliation of Ewe Numbers 1972/73

Hirsel	Ewes and Gimmers Nov. 1972	Draft and Cast Ewes	Deaths*	Gimmers brought in	Ewes and gimmers Nov. 1973
Barnacarry	185	23	10 (4)	47	199
Midhill	422	83	19 (7)	113	433
Low-End C	166	24 )**	14 (9)	48	176
T	160	25 )**	5 (1)	44	174

\* inclusive of black loss noted in brackets  
 \*\* includes 9 and 6 - 6½ year old ewes,  
 remainder retained.

Table 2

Weaning Percentages 1972/73

Hirsel	Ewes Mated	Lambs weaned		Weaning weights		
		Total	Percentage 1973 1972		Singles kg	Twins kg
Barnacarry	185	157	84.9	77	25.8	22.3
Midhill	422	436	103.3	103.6	23.7	22.9
Low End C	166	154	92.8	103.5	25.5	20.3
T	160	164	102.5	97.1	24.6	20.4

Table 3

Weights of ewes, gimmers and hoggs (kg) 1972/73

Hirsel	Ewes		Gimmers		Hoggs	
	Nov. 1972	Nov. 1973	Nov. 1972	Nov. 1973	Nov. 1972	Apr. 1973
Barnacarry	46.2	46.8	-	43.4	-	33.7
Midhill	51.7	50.2	44.7	43.2	26.5	27.3
Low End C	49.0	45.8	45.5	36.9	24.8	27.7
T	50.8	48.8	47.6	39.1	27.0	29.4

C = CONTROL

T = TREATMENT



C. SOURHOPE

Table 1

Reconciliation of Ewe Numbers 1972-73

Heft.	Ewes & Gimmers Nov. '72	Draft & Cast Ewes	Deaths	Transfers		Gimmers brought in	Purchases Ewe Hoggs.	Hoggs Nov. '73	Ewes & Gimmers Nov. '73
				Out	In				
<u>S.C.C.</u> Fasset Rigs Gairs	228 278 260	50 62 41	8 10 12			45 73 72	- - -	54 68 71	215 279 279
Total S.C.C.	766	153	30	-	-	190	-	193	773
<u>S.C.C. x N.C.C.</u> Auchope	273	43	11			86	-	77	305
<u>N.C.C.</u> Hairney Law Park Law	300 158	74 24	11 5			80 43	- -	70 36	295 172
Total N.C.C.	458	98	16	-	-	123	-	106	467
<u>Blackface</u> Alderthope Banks	217 341	39 67	13 17			57 85	- -	65 85	222 342
B.F. Total	558	106	30	-	-	142	-	150	564
Flock Total	2055	400	87			541	-	526	2109

SOURHOPETable 2Weaning % and Lamb Weights 1973

Heft.	Ewes to Tup	Lambs Weaned			Weaning Wts.	
		Total No.	Percentage		Singles (kg)	Twins (kg)
			1973	1972		
Rigg S.C.C.	278	244	87.8	101	21.5	23.6
Gairs S.C.C.	260	237	91.2	91	23.5	23.3
Total	538	481	89.4	96	22.4	23.4
Fasset S.C.C.	228	213	93.4	93		
Auchope S.C.C. x N.C.C.	273	292	107.0	109	24.8	26.7
Hairney Law N.C.C.	300	278	92.7	100	23.9	26.1
Total	573	570	99.5	105	24.4	26.4
Park Law N.C.C.	158	147	93.0	100	23.1	25.1
Alderhope B.F.	217	246	113.4	101	28.3	25.9
Banks B.F.	341	371	108.8	105		
Total	558	617	110.6	103		
S.C.C. Total	766	694	90.6	95		
N.C.C. (+ N.C.C. x S.C.C.) Total	731	717	98.1	104		
B.F. Total	558	617	110.6	103		
Farm Total	2055	2028	98.7	100		

SOURHOPE

Table 3

Weights of Ewes, Gimmers and Hoggs (kg)

Heft	Ewes		Gimmers		Hoggs	
	Nov'72	Nov'73	Nov'72	Nov'73	Nov'72	Apr'73
Rigg S.C.C.	53.2	53.0	46.4	43.9	30.7	30.8
Gairs S.C.C.	55.7	55.5	47.6	45.0	31.5	30.5
Auchope S.C.C. X N.C.C.	60.1	55.2	53.2	46.8	36.6	31.4
Hairney Law N.C.C.	62.3	57.9	54.7	46.5	35.4	30.8
Park Law N.C.C.	62.9	56.9	55.8	45.2	35.2	31.3
Alderhope B.F.	55.7	53.3	50.5	47.8	34.6	29.9

Table 4

Wether Stock at November 1973

Year of birth:	1968	1969	1970	1971	1972	1973
<u>Breed</u>						
S.C.C.			29	33	35	30
S.C.C. X N.C.C.	21	23				

D. HOUSE O' MUIR

Table 1

Reconciliation of Ewe Numbers 1972-73

Ewes and Gimmers Nov. 1972	Cast Ewes	Deaths	Gimmers brought in	Hoggs Nov. 1973	Ewes and Gimmers Nov. 1973
448	109	46	117	94	410

Table 2

Weaning Percentage

Ewes to tup	Lanbs Weaned		
	Number	Percentage 1973	Percentage 1972
448	464	104	124

Table 3

B.F. Wether Stock November 1973

Adults	Hoggs
55	76