



Farming goats for fibre

This information sheet outlines best practice for managing fibre goats. It is based on data gathered in the Goat Monitoring Project.

Research shows that fibre goats typically require more parasite and mineral inputs than meat goats but can return more per stock unit. Fibre goats are less suited to grazing weed-covered hard country than meat breed goats. However, having part of their diet made up of weeds or poorer quality pasture makes them cheaper to feed. In the project, having around 8% of total stock units in fibre goats reduced weed control costs on sheep and beef farms by almost 50% (\$7/ha).

(1) Fibre goat breeds

The term 'fibre goat' refers to a variety of crosses. Goats in this category are primarily Angora, with some Cashmere and Cashgora.

The fibre from Angora is known as mohair. Cashmere is the under-hair or down found extracted from the coats of many breeds.

(2) Fibre goats in Monitoring Project can out-do sheep

From 2004 to 2007, the National Goat Monitoring Project collected information on goat production and profitability on 16 farms. Analysis of accounts show that during 2004 to 2006 fibre goats grossed \$53.43/goat stock unit as an average over all the survey farms. Some farms produced much higher than this. In two out of three years fibre goats grossed more than sheep and cattle per stock unit.

At \$13.50/kg for doe fibre (average for the Goat Monitoring Project) a doe could gross around \$70/head/year. This is with two shearings. With 80% kidding, the doe could add another \$28 of meat returns if her progeny was killed as a yearling. On a per stock unit basis this outstrips returns from sheep (who eat more and return around \$70 of lamb and \$10 of wool).

Case study: Southland farmers Bill and Irene Campbell were part of the Goat Monitoring Project. They ran 1000 goats, dairy grazers and trading cattle on their 156ha property.

In 2006 they grossed \$110-\$120/head from each adult doe, buck and wether for the year. This was at an average price of \$12/kg of fibre, with all goats shorn twice.

Surplus goats were sold for slaughter. Adult goats ranged from 10kg to 20kg carcass weight. The 2008 average fibre price has lifted to \$13.60/kg. This is because super fine mohair from kids has lifted from \$26/kg to \$34/kg.



Photo courtesy of Country-Wide Publications.

(3) Fibre income

Farmers in the Monitoring Project often stored fibre until prices were deemed satisfactory or volumes were reached. For this reason data on kg of fibre/head was not available from some farms.

Table A: Clip weight, price/kg and gross fibre return/head, Goat Monitoring Project, 2004-2006 averages.

	DOES	YEARLINGS	KIDS	WETHERS	OTHER
KG/HEAD	2.6	2.36	1.17	2.24	3.71
\$/KG	13.50	22.90	28.30	18.	12.30
\$/HEAD GROSS*	35.	54.50	33.10	42.10	45.60

*note: returns for six months of fibre growth.

(4) Carcass income

Table B: Average carcass weight (kg) and return of each goat class, Goat Monitoring Project, 2004-2006.

	AVERAGE WEIGHT		\$/KG	
	(KG CW)			
		\$3.00	\$3.30	\$3.50
Kids and Yearlings	10.8	32.40	35.64	37.80
Does	13.8	41.40	45.54	48.30
Wethers	12.8	38.40	42.24	44.80
Bucks	17.1	51.30	56.43	59.85

(5) Other benefits

Fibre goats are not as suited for weed control as meat goats. To avoid contamination of fleeces, it is best not to graze goats on weeds with small seedheads like thistles in the six weeks prior to shearing. This is especially true for goats producing mohair.

However, farms that ran fibre goats still spent half the amount on 'weeds and pests' than traditional sheep/beef farms did. It is important to note that in Table C, when some goat farmers spent money on 'Weed and Pest', it was largely on possum control.

Table C: Average Weed and Pest spend, 2004-06

	FIBRE GOAT FARMERS	MEAT & WOOL SURVEY CLASSES
\$ Per Hectare	6.67	14.33

The added benefit of having goats provided a saving of \$6.67/ha.

Case study: Boyle's mohair income \$86/goat in 06/07

Goat Monitor Farmers Ann and Gary Boyle run 1500 goats in the Hawkes Bay (about 13% of total stock units). They grossed \$43/goat in 2004/05, \$69 in 2005/06 and \$86 in 2006/07. 2006/07 was a cracker year, with their South African angora goats grossing \$1200/ha. This is with 14 goats/hectare with each goat worth 0.7 stock units.

Mohair prices have since slipped back from the 2006 high. The average 2008 price is now around \$14 to \$16/kg.

The Boyle's best kid mohair lines can make \$30/kg. Each kid would clip around 1.2kg/head, producing \$36/head at six months of age.

At the next shearing (six months later) the mohair is not as fine so worth less.

"However, what it lacks in price, is made up by clipping more," says Gary.

The Boyle's cut five to six kilograms from each mixed age goat. They shear twice a year (pre-kidding and in April).

They have moved away from Australasian to South African genetics as they clip more and the mohair is better quality. It is low in kemp (hard fibre) and medullation (hollow fibre), which cause problems with dyeing.

Goats are run with cattle, to reduce parasite problems. Young kids are drenched monthly.

"Graze them on high covers to reduce parasite problems."

Poor feet have been bred-out over time and prevented through constant use of foot baths.

Despite being farmed for fibre the goats are still used to control weeds – mostly thistles and fathen.

Does kid around 90%.

"Goats are a fabulous addition to our farming system."

(6) How to integrate goats with sheep and cattle

Consider introducing goats into your current system so they make up 25% of stock units. This requires some substitution of existing stock classes.

In the Goat Monitoring Project, farms typically had 10% of stock units made up of fibre goats. Fibre goats suit a property of easier contour, with some weeds.

Table D: Example farm with 25% of stock units in goats
(Based on information from the Goat Monitoring Project).

TOTAL FARM SIZE (ha)	351	
EFFECTIVE AREA (ha)	314	
TOPOGRAPHY:	Steep	12%
	Rolling	52%
	Flat	36%
STOCK UNITS:	SR/Total	12 SU/ha
% SHEEP	26%	992 SSU
% CATTLE	49%	1870 BSU
% GOATS	25%	954 GSU

Although this case study is with sheep and beef, fibre goats can be integrated with deer and dairy.

There is a slight increase in animal health expenditure, but this is offset against the cost of weed and pest control giving a net benefit of \$1565.72 for the whole case study farm.

Table E: Gross Margin of example farm with 25% stock units in fibre goats

GOAT INCOME \$	50,972
LESS ANIMAL HEALTH \$	- 2,423
PLUS WEED CONTROL BENEFIT \$	2,405
GROSS MARGIN \$	50,954
GROSS MARGIN PER GOAT STOCK UNIT \$	53.41

(7) Managing fibre goats

FOR GENERAL INFORMATION ON FENCING, FEEDING AND GOAT ANIMAL HEALTH, SEE GOAT INFORMATION SHEET 1.

(A) LABOUR

On average the farmers estimated they spent one hour and seven minutes per fibre goat stock unit, per annum, doing the following tasks:

Table F: Estimated time spent on fibre goats, Goat Monitoring Project.

TASK	% ESTIMATED TIME
Checking Stock	22%
Shearing	21%
Kidding	20%
Feeding	17%
Drenching	5%
Feet	4%
Fencing	4%
Weighing and sorting animals	2%
Docking, tagging and marking	2%
Animal Health	2%

Some tasks such as checking stock and feeding were integrated with other livestock classes, so time allocated directly to goats was not clearly identified. The level of feeding out required is dependent on winter covers and feed supply. Fibre goats on average tended to be shepherded over kidding.

(B) FEEDING

Fibre goats need better quality feed than meat goats, but can handle poorer feed than that traditionally fed to breeding ewes

Fibre goats in the Monitoring Project tended to be run on easier country than meat goats (but not exclusively). This is because fibre goats (like Angora or Cashmere) should not be grazed among weeds with small seedheads in the six weeks prior to shearing. Blackberry should also be avoided as it can snare long fleeces. This means goats need to be grazed on pasture for at least 12 weeks of the year (six weeks each time prior to the two shearings).

Goats naturally eat from the top first i.e. the seed head. This provides better pasture quality for other classes of stock. It is important to give goats a variety of feed and some level of roughage is always required.

For more on return of fibre goats per kilogram of dry matter consumed, see Goat Information Sheet 1.

(C) MATING AND KIDDING

Kidding percentages achieved by farmers ranged from 50% to 115%, with many targeting a mid-September kidding. This varied due to location.

Best practice at mating-

- Adjust mating and kidding dates to fit with feed supply and weather conditions. Exposure causes the most deaths in kids.
- Remove any animals with poor fertility from the flock. They can be utilized for their fibre, but avoid breeding from them.
- Does should be about 35 to 40 kg liveweight at mating. Maiden does should be 30kg.
- A buck to doe ratio of 1:50 is recommended, although closely-stocked blocks may be okay with fewer bucks.
- Choose a buck based on fibre production, temperament, feet, brucellosis-free status, growth rates and overall ability to perform.
- The selection of replacements and culling of does is important. Whilst selecting for fibre production is a main breeding objective, avoiding animals with feet problems, assisted kidding, poor udders, bad mouths and other faults.

Best practice at kidding -

- Does are more susceptible to parasites and other ill-thrift when under stress and kidding is one of these times. Drenching of the poorer animals may be required.
- Make sure sufficient minerals and roughage (hay) is provided. Iodine should be considered.

- It is important that does are fed well in late pregnancy, but avoid pastures high in oestrogen i.e. red clover or lucerne.
- A pre-kidding 5-in-1 is recommended.
- The gestation length of a goat is 147 days (approximately five months). At kidding provide shelter whether it be man-made or natural. Examples are tree plantations (roots provide good nooks), rushes, drums with floors in them or cut in half lengthways (kids will fit in but does won't), tractor tyres or sheds.

In the Goat Monitoring Project, weaning occurred on average in mid February, when kids were 15 kg plus. Weaning ranged from early January to mid March. The average weaning percentage was 78% (meat goats averaged 96%).

The average loss from birth to weaning was 12% for fibre goats. Not all goat farmers pregnancy scanned does however. Sheep losses range from 12% to 25% typically.

(D) GOAT HEALTH

Farms in the Meat and Wool Survey Classes were compared to fibre goat farmers in the Goat Monitoring Project. Farms with goats spent more on animal health (\$839.52/year on average or \$3.55 per stock unit). This was calculated using actual anthelmintics at a standard price.

Table G: Difference in animal health spending

	FIBRE GOAT FARMERS	MEAT & WOOL SURVEY CLASSES
\$ Per Stock Unit	3.55	3.33
\$ Per Goat Stock Unit	2.54	
\$ Total Stock Units	13,546.80	12,707.28

The main animal health spend for goats were:

- Minerals (44%)
- Parasites (39%)
- Feet (6%)
- 5 in 1 (5%)
- Vaccines (4%)
- Lice (2%). Note: lice are not a major problem in goats. However, to avoid residual issues, consult with your vet before any treatment.

Approaches taken by Goat Monitor Farmers to ensure mineral requirements were met -

- Consult your vet and develop an animal health plan, to incorporate all systems on the property.
- Test (either soil or goats) to establish mineral deficiencies and provide supplements. Mineral levels were dependant on farm location.
- Fibre goats tend to require more minerals than meat goats, especially at high stress times such as kidding and shearing.
- Use mineral blocks in conjunction with administered supplements such as B12 and Iodine.

PARASITES

The internal parasites that infect goats are the same for sheep. However, there were properties within the project that were successfully running goats with sheep, with no drench resistance or draw backs on the production and performance of their sheep.

The fibre farmers in the programme tended to run their systems with a higher component of cattle, which may reflect the reduced usage of parasite control.

Approaches taken by Goat Monitor Farmers to ensure internal parasite management requirements were met -

- Pre-tup drench.
- FEC and drench if required.
- Drench at 1.5 times the sheep rate, in consultation with your vet.
- Look at the big picture and manage larval ingestion from pasture.

FOOTROT

Feet are a problem on some properties but most farmers are actively culling these animals from their herds. A proactive prevention programme, rather than a cure, is the approach taken by most farmers. Strategically footbathing the ones that need it, several times a year is an approach used by many. They use either Formalin or Zinc Sulphate.

Acknowledgements & more information

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Other Information Sheets from Meat & Wool New Zealand cover information on why consider farming goats, intensively and extensively farmed meat goats and feral goats.

For copies phone Meat & Wool New Zealand on 0800 696 328 or visit www.meatandwoolnz.com

For more information on goats see –

- Final Report (Goat Monitoring Project) 2008
- Goat Pack
- Goat Cashmere Book, Mohair 2005, Cashmere 2005

These are both available from Meat & Wool New Zealand.

CONTACT:

Sally Lee
AgFirst Waikato
(07) 834 6824
sally.lee@agfirst.co.nz

Phyllis Mangin
Meat & Wool New Zealand
(04) 474 0693
Phyllis.Mangin@meatandwoolnz.com