Goat monitoring project

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MEAT & WOOL NEW ZEALAND

Farming goats for meat

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

While the gross income from meat breed goats is lower than fibre goats or sheep, they can often be farmed in addition to existing stock numbers. This is because they eat poor quality feed and weeds and have low labour inputs. Meat goats needed only about 1/3 of the labour inputs of that for fibre goats. They also are much cheaper to feed (around $10/head/year of pasture if their diet is about 70% weeds).

Other benefits from including meat breed goats into a farm system are cheaper weed control and better quality pasture for other stock.

(1) Meat goat breeds

The term ‘meat goat’ refers to a variety of crosses.

Some examples of types of goats that fall into this category are:

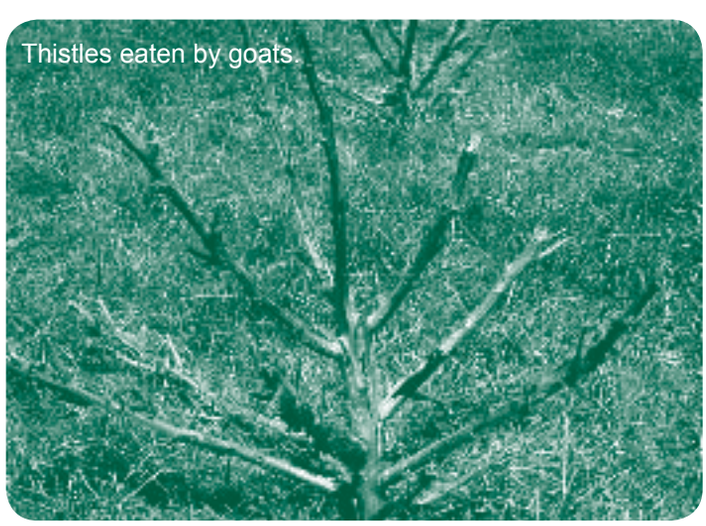
- Boer X Sannan
- Boer X Cashmere
- Boer X Feral
- Boer X Kiko
- Boer X Cashgora/Cashmere
- Feral X
- Kiko

While feral (or wild) goats supply a large proportion of the goat meat slaughtered in New Zealand, this information sheet is focused on farming goats for meat. 2007 statistics show there are 112,000 farmed goats in New Zealand.

The demand for goat meat internationally and locally is increasing. New Zealand currently kills around 135,000 goats per annum. Supplying a regular volume is an issue for the industry. The USA and Reunion Islands are the biggest export markets for New Zealand.

(2) Monitoring shows running goats helps boost other stock

Results from the project (2004-2006) showed that meat goats are useful for three key reasons. They bring in an income from meat (average gross return of around $15/goat stock unit). This is despite eating a diet of weeds and poor quality pasture. Secondly, they improve pasture quality for other stock, particularly sheep. Thirdly, they save around $5/hectare in weed control costs.



Thistles eaten by goats.

Case study: Goats responsible for better ewe flock performance

Paddy and Carol Nesdale farm 600 Boer-cross goats in central Hawke's Bay. They believe that farming goats has boosted their ewe returns, even though goats are only around 15% of total stock units.

For example, goats condition paddocks, meaning ewes don't have to get pushed and 'tightened up' to do the job. The ewes stay on the higher quality pasture. Having better condition ewes at tupping and through to lambing has seen lambing percentage lift 15%.

Goats are mob-stocked in November and start their 'topping job', nipping the top off emerging seed head and thistles. They do this job until August, even during joining with the buck in April.

The Nesdale's yearling kids kill out at around 13kg CW in April (around $45 on a $3.50/kg schedule). Kiko genetics are being used to help overcome footrot issues.

Paddy and Seath Nesdale, Hawke's Bay.

Photo courtesy of Country-Wide Publications.

(3) Carcass income

Goat meat farmers in the Goat Monitoring Project received $14.24/goat stock unit on average between 2004 to 2006. An adult meat goat is worth 0.8 stock units (yearling is 0.5).

Table A: 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	9.3	27.90	30.69	32.55
Yearlings	10.4	31.20	34.32	36.40
Does	12.8	38.40	42.24	44.80
Wethers	13.4	40.20	44.22	46.90
Bucks	12.8	38.40	42.24	44.80

Most goats are slaughtered when the carcass is between 9kg and 18kg. Kids grazed on high quality feed yield 14 to 18kg CW by eight months. It is not appropriate to expect this for goats farmed principally for weed control.

(4) Better pasture quality

The monitoring project shows that running goats encourages increased clover percentage in the long term.

Running goats on pasture before lambs also grooms the pasture, setting up better quality pasture and allowing better growth rates in lambs.

One advantage over cattle as a 'pasture control tool' is that goats are easier on heavy soils (e.g. less pugging).

(5) Cheaper weed control

One of the roles of 'meat' goats is the control of weeds such as blackberry, gorse, broom and thistles.

Farms that ran meat goats spent $5/ha less on weed and pest control than similar Meat & Wool Survey Farms without goats. It is important to note that when some goat farmers spent money on 'Weed and Pest', it was largely on possum control.

Table B: Average annual Weed and Pest spend, 2004-06

	MEAT GOAT FARMERS	MWNZ CLASS FARMS
$ Per Hectare	7.08	12.13

(6) How to integrate goats with sheep and cattle

Meat goats are ideally suited to steep weedy country. Consider introducing goats into your current system so they make up 10% to13% of stock units.

Based on information derived from the Goat Monitoring Project, a base farm case study has been developed to illustrate key factors about farming 'meat' goats in an integrated system.

Table C: Example farm with 13% of stock units in goats (Based on information from the Goat Monitoring Project).

TOTAL FARM SIZE (ha)		451	
EFFECTIVE AREA (ha)		406	
TOPOGRAPHY:	Steep	47%	212 ha
	Rolling	46%	207 ha
	Flat	7%	32 ha
STOCK UNITS:	SR/Total	10 SU/ha	4060 SU
% SHEEP		55%	2233 SSU
% CATTLE		32%	1299 BSU
% GOATS		**13%**	**528 GSU**

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

POTENTIAL TO ADD GOATS WITHOUT DROPPING TOTAL STOCK NUMBERS

As meat goats are browsers and eat feed other stock won't touch, other stock numbers may not have to be reduced to make way for meat goats.

For example, goats grazed on rank pasture and weeds are unlikely to compete with ewes.

(7) Summary of benefits

Table D: Gross Margin of case study farm with 13% stock units in meat goats (528su).

GOAT MEAT INCOME $	7,519
LESS EXTRA ANIMAL HEALTH $	- 871
PLUS WEED CONTROL BENEFIT $	2,030
GROSS MARGIN $	8,678
GROSS MARGIN PER GOAT STOCK UNIT $	16

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 $16/GSU for the case farm.

The project also compared returns from Meat & Wool NZ Farm Classes to the monitor goat farms. Over the same years and comparative land class, the monitor goat farms earned $60.70/total stock unit of Gross Farm Income, and the Meat & Wool farms $65.97/total stock unit.

(8) Managing meat goats

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

(A) LABOUR

On average the Goat Monitor farmers spent 23 minutes per meat goat stock unit, per annum, doing the following tasks: (This is about 1/3 of that needed for fibre goats.)

Table E: Average estimated time spent on meat goat tasks, Goat Monitoring Project.

TASK	% TIME
Checking Stock	18%
Weighing and sorting animals	14%
Docking, tagging and marking	14%
Kidding	13%
Animal Health	12%
Drenching	10%
Feeding	10%
Feet	8%
Fencing	1%

Some tasks such as checking stock and feeding were integrated with other livestock classes therefore time allocated directly to goats was not clearly identified.

One farm in the analysis was undertaking some development work and had significantly more time allocated to fencing. This was removed from this analysis.

(B) FEEDING

Meat goats can handle poorer feed than that traditionally fed to breeding ewes or fibre goats. If a goat eats about 70% weed and 30% pasture, it costs around $10/year to feed. This is on an allocation of 1.2kg DM/day for a 40kg doe.

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.

Goats prefer to graze pasture above 10cm. Avoid grazing below this. Goats will control Californian thistle in the same way as chemical topping. They remove the green, reducing root reserves over time. Gorse can be 25% of a goat's diet.

Pre and post grazing by goats. Twenty year gap between photos

(C) MATING AND KIDDING

Kidding percentages achieved by farmers ranged from 50% to 136%. With good management, 100% kidding should be achievable.

Best practice at mating-

- Adjust mating and kidding dates to fit with feed supply and weather conditions. Exposure causes the most deaths in kids, therefore ensure natural or man-made shelter is available.
- Remove any animals with poor fertility from the flock.
- Does should be about 40 kg liveweight at mating, but will vary between breeds.

- 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 carcass production, temperament, feet, brucellosis-free status, growth rates and overall ability to perform.
- The selection of replacements and culling of does is important. Avoid animals with foot problems, assisted kidding, poor udders and bad mouths.

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 February/March, when kids are ideally 15 kg plus. The average weaning percentage was 96% (fibre goats was 78%).

The average loss from birth to weaning was 15% for meat goats. However, not all lost kids would have been identified in the monitoring project. Not many goat farmers pregnancy scanned does. Sheep losses range from 12% to 25% typically.

(D) GOAT HEALTH

Farms in the Meat & Wool Survey Classes were compared to meat goat farmers in the Goat Monitoring Project. Farms with meat goats spent more on animal health ($445/year on average or $3.44 per stock unit). This was calculated using actual anthelmintics at a standard price.

Table F: Difference in animal health spending

	MEAT GOAT FARMERS	MEAT & WOOL SURVEY CLASSES
$ Per Stock Unit	3.44	3.33
$ Per Goat Stock Unit	1.65	
$ Total stock units	13,966.40	13,519.80

The main animal health spend for meat goats were:

- Parasites (65%)
- Minerals (13%)
- Feet (7%)
- Vaccines (7%)

Meat goats need less minerals than fibre goats, but more than sheep.

PARASITES

The internal parasites that infect goats are the same as 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.

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

Currently foot problems are an issue 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 Sulphate.

Acknowledgements & more information

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Other Information Sheets from Meat & Wool New Zealand cover information on returns from farming goats, fibre goats, extensively farmed 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
- Weed Control, 2005. Detailed information on using goats to control weeds.
- Meat production, 2005.

These are all available from Meat & Wool New Zealand and on the website.

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