

BENCHMARKS OF VICTORIAN COMMERCIAL GOAT MEAT ENTERPRISES

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SUMMARY

The Australian goat meat industry has mostly processed feral goats for export. As goat meat markets mature there will be an increased demand for farmed goats to meet supply, especially into niche markets. Production benchmarking showed that Victorian commercial goat meat producers are located generally in areas with <500 mm rainfall, usually in conjunction with other livestock and cropping enterprises. On average, 67% of farm area, equal to 701 ha (range 55 – 4400 ha) was allocated to the goat enterprise. Commercial producers used Boer bucks, at an average mating rate of 2.2%, over Boer X or feral X does. Weaning rates averaged 99% (range 51 - 165%). There was a large range in husbandry (\$0 - \$3.07) and supplementary feeding (\$6.75 - \$9.60) expenditure. Fifty percent of producers indicated that they carried out regular faecal egg counts to assess worm burdens. Seasonal supply patterns showed that producers were supplying Christmas and Easter markets with a live weight range of 12 - 40 kg and an overall average live weight of 26 kg. The issues of concern identified by commercial growers were: internal parasitism, doe fertility, kid predation, kid growth rates, Johnes disease, and fencing security. This study indicated that there is considerable scope to improve the productivity of the Victorian commercial goat meat industry. Most producers supply smaller carcasses on a strong seasonal basis. This supply pattern inhibits industry development.

Keywords: goat, goat meat, production benchmarks

INTRODUCTION

Meat produced by the Australian goat industry is directed primarily to export markets with an average volume of 11,489 tonnes between 1997 and 2000 (Table 1). The main supply of goats to processors has traditionally been from feral (or bush) goat. A greater reliance on supply from farmed goats will result as the numbers of feral goats decrease.

Table 1: Australian and Victorian goat meat exports (tonnes) 1997-2001

	1997	1998	1999	2000	2001*
Australian	11,900	10,924	10,594	12,538	9,271 (9,669)
Victorian	1,300	850	1,902	2,892	NA
Victorian share (%)	16%	8%	18%	23%	NA

* 2001 figures to October 2001. Figures in parentheses are for the same period in 2000; NA not available.

Source: AFFA History of exports of red meat

Victorian exports increased from an average of 14% of Australian exports between 1997 and 1999 to 23% in 2000. During the three financial years from 1997/98 to 1999/2000 the average number of goats slaughtered at domestic abattoirs in Victoria was 12,426 (Anon 2001). This increasing share may relate to the increasing availability of farmed goats in southern Australia.

Given current consumption trends and product characteristics of goat meat, two distinct market groups can be identified. One is the 'cultural consumer' located primarily in Asia and the Middle East. This market is relatively traditional and uses mainly commodity goat; however the food service industries sector is emerging which supplies large hotels and speciality supermarkets. The second consumer group is in non-Asian countries where goat meat is not regularly consumed but is becoming an attractive addition to their diets. In both market groups, the food service industry requires product that is suited to efficient processing and portion control. Goats have been traditionally supplied from non-farmed (low management inputs) systems leading to a wide range in the quality of carcasses delivered to processors. Farmed goat production provides opportunity to produce more consistent lines for processing. As the food service industry demands for goat meat increase it is anticipated that 16kg carcasses will be preferred by processors. This demand will lead to improved processing efficiencies and increasing product quality.

Like other meat industries, the Victorian goat meat industry needs continuous improvements in farm productivity and profitability to remain competitive in both international and domestic markets. Economic analyses by Davies and Murray (1997) and Trapnell (2000) showed that meat production from goats was more economic than wool and beef production. To be competitive, it is essential that the Victorian goat meat industry manage production costs and product quality. To better understand the characteristics of current goat meat producers in southern Australia a benchmarking study of key farm production indicators has been carried out on commercial properties

MATERIALS AND METHODS

Fifteen commercial goat meat producers with more than 300 breeding does each were identified from goat meat producer forums which were run as part of Natural Resources and Environment's *Naturally Victorian* Premium Goat Meat to Asia project activities (Kearns *et al.* 2002). Fifty additional producers supplied figures on their seasonal goat turn-off numbers and goat live weights.

The benchmarking questionnaire was structured around the following broad areas: land used for goat production, stocking rate, fertiliser use; producer 'history', enterprise type, age, marketing and trading practices, goat management practices; health, husbandry, parasite control, breeding practices; kids marked, kids weaned, inputs to the goat enterprise and casual labour.

Producers completed the questionnaire through a 'one-to-one' interview process with NRE staff. Completed responses were received from ten enterprises. Data collected through the survey was collated and analysed. Average, minimum and maximum measures of appropriate benchmark indicators were determined.

RESULTS

Grower age and years in industry

Commercial goat enterprises were usually run with two operators (range 1 - 4), most often as a husband and wife team. The average age of producers was 53 years with a range of 35 to 65 years of age. Operators had been in the industry for an average of 10 years (range 1 year - 30 years).

Enterprise type, size and mix

Commercial goat production was mixed with beef production (30%), sheep production (20%), solely cropping (10%) or in conjunction with mixed livestock (beef and sheep), bees or cropping enterprises. Fifty percent of producers set-stocked, 40% rotationally grazed and ten percent of respondents did not reply to this question. Sixty percent of producers utilised dryland perennial pasture. Twenty percent of operators in this study produced goats on annual or 'unimproved' pastures. For commercial production, farm topography was predominantly flat (40%), undulating (20%) or hilly (20%). Twenty percent of operators indicated a combination of hills with flats or stony rises. On average, 66.8% of farm area was allocated to goat production. Average total farm area was 1050 ha (range 85 - 4400 ha) with an average of 701 ha allocated to the goat enterprise component (range 55 - 4400 ha). Ten percent of commercial growers leased extra land for goat production; this land comprised less than 5% of their total land for goat production.

Enterprise production system

Commercial producers farmed in areas with an average rainfall of 480 mm (range 240 - 990 mm). Thirty percent of growers were in rainfall zones of >490 mm. The remaining 70% of growers were in rainfall zones of <490 mm. Fifty seven percent of growers in the lower rainfall zones used an average 159 ML of irrigation water as part of their production system. Commercial producers in this survey ran an average of 500 breeding does (range 150 - 1500 does). Average stocking rates as measured by number of breeding does/ha was 2.0 (range 0.2 - 4.2 does per ha). Commercial producers used a buck mating rate of 2.2% (range 0.7 - 4.7%). Boer bucks were used over Boer X or feral X does in all commercial enterprises. Weaning rates averaged 99% (range 51 - 165%).

Enterprise health and husbandry practices and issues

The majority (80%) of producers drenched for internal parasites twice per year (overall average 1.7 times per year). Ten percent of producers did not drench while another ten percent drenched once per year. For internal parasite control producers listed a range of products used including: Virbac®,

Panacur®, Cydectin®, “White”, “Clear” and “Combination”, Ivomec®, Levamisole, Fasinex®, Albendazole. Fifty percent of producers indicated that they carried out regular faecal egg counts on a 6 month or 12 month basis to assess worm burdens. Twenty percent of producers had tested for drench resistance with ten percent of producers recording drench resistance to Albendazole. Sixty percent of producers treated animals for external parasites once per year and ten percent treated twice per year using Ivomec®, Zapp®, Nucido®, Spot-On® or Clout-S®. All producers thought the products to be effective. On average, \$1.78 per doe per year was spent on animal health inputs (range \$0 - \$3.07 per doe per year).

The three main animal health issues identified by commercial growers were: internal parasitism, doe fertility and Johnes disease. The three main animal husbandry issues identified were: kid predation, fencing security and kid growth rates.

Seasonal supplementation and other inputs

Seventy percent of commercial producers indicated that they provided supplementary feed; predominantly in the form of hay. Pasture hay, oaten hay, oaten hay/vetch were the types of hay recorded. One producer supplied oats and chaff as a feed supplement. No commercial producers purchased commercial feed pellets or pre-mixed rations.

Thirty percent of respondents provided supplementary feed (pasture hay or oaten hay and vetch) from March to July and thirty percent provided supplementary feed from May to August. Supplementary feed costs were provided by two producers and ranged from \$6.75 to \$9.60 per doe per year. Other respondents (40%) did not indicate provision of any supplementary feed.

Seasonal turn-off pattern

Figure 1 shows the seasonal turn off (number and live weight) of goats from 50 commercial producers. Average live weight at turn-off was 26.0 kg with a minimum average of 22 kg in March and a maximum average of 29.5 in October. Individual producers indicated delivering goats that ranged from 12 kg to 40 kg live weight. Goat numbers supplied for slaughter increased from approximately 1,000 in August and September to 1,852 in October, and to 3,295 in December. Supply then decreased to approximately 500 per month in January through to March. The minimum numbers of goats were turned off in April, May and June.

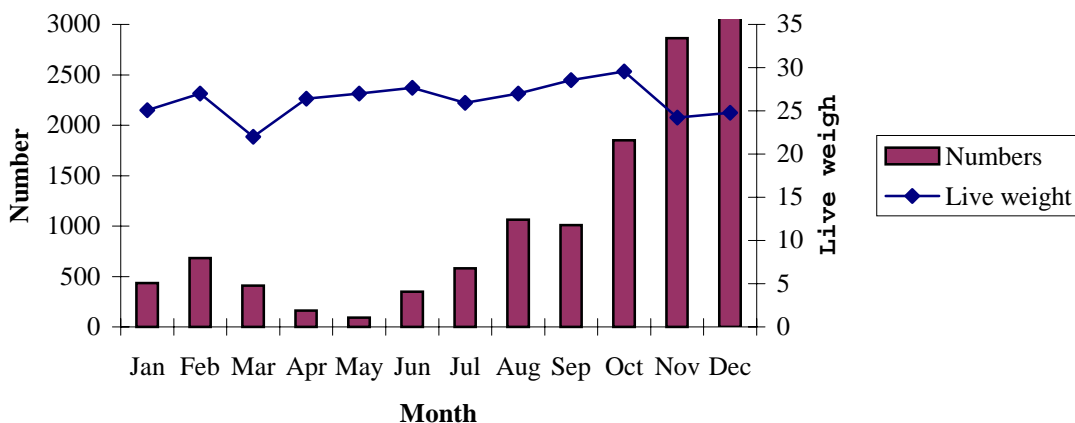


Figure 1: Monthly numbers and live weights of goats turned off by 50 commercial producers (data: Supply capability survey *Naturally Victorian Supply Chain Management Project 2001*)

DISCUSSION

Production benchmarking of the Victorian commercial goat meat industry showed that most operations are run by two people with an average age of 53 years of age. This age is similar to the average age of prime lamb producers (Connell *et al.* 2000). Commercial operators had been in the industry for an average of 10 years and usually combine the goat enterprise with other enterprises such as crop or beef production. This average age of individuals is likely to be indicative of the generation in control of the farm and who would make most of the commercial decisions.

Goats, when grazed with sheep and cattle, have been seen to have a beneficial influence on pasture management. McGregor (1985), Casey and Van Niekirk (1988) and Glimp (1995) explained that this occurred because goats have different foraging preferences to sheep and cattle. Goats may utilise the more digestible parts of the available plant material, or plant material at different heights or plant materials not normally eaten by sheep or cattle.

Assuming breeding does equate to 2.2 DSE (McGregor 1990), the average stocking rate of 4.4 DSE/ha is quite low and suggests that producers are underestimating their stocking rates, especially when mixed with other enterprises. The average weaning rate and large range in weaning rate indicate that there are significant losses prior to weaning, possibly from sub-optimal mating management, sub-optimal nutrition of breeding and lactating does or high levels of kid mortality, that have a large impact on the commercial industry's productivity. Significantly, producers indicated that doe fertility, kid losses through predation and poor kid growth rates were important husbandry issues. This information indicates there are substantial gains to be made in the Victorian meat goat industry through improving the management of breeding flocks and kid survival and growth rates.

The majority of commercial goat meat production was carried out in rainfall zones of <500 mm. Given that most commercial producers drenched their for internal parasites less than twice per year, this relatively low rainfall zone may offer advantages for parasite management in commercial goat operations. Internal parasites however, remained a high animal health concern to commercial producers.

Current seasonal supply patterns indicate that producers are delivering to the Easter and Christmas markets. Live weights delivered averaged 26 kg, however the 40 kg maximum and the 12 kg minimum suggest that producers are using a range of market options. The supply pattern also indicates that the vast majority of meat goats are mated during autumn.

This benchmarking study indicates that there is considerable scope to improve the productivity of the Victorian commercial goat meat industry. Currently, most producers supply smaller carcasses on a strong seasonal basis. This supply pattern and capability inhibits strong industry development into the short-term future.

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