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THE POTENTIAL IMPACT OF FLEECE-SHEDDING MEAT SHEEP ON PASTORAL SHEEP PRODUCTION IN WESTERN NSW

T.L. Atkinson^{1,3} and G.L. Junk²

¹NSW Department of Primary Industries, PO Box 789, Broken Hill, NSW 2880

²NSW Department of Primary Industries, PO Box 531, Bourke, NSW 2840

³Corresponding author. Email: trudie.atkinson@dpi.nsw.gov.au

ABSTRACT

This paper examines the impact of incorporating fleece-shedding meat sheep into sheep enterprises in western NSW, and the associated shift in enterprise focus from wool to meat production. Sheep breeds such as the Dorper and Damara are enabling producers in western NSW to operate a carcass-based production system using low maintenance sheep that appear well suited to low rainfall pastoral areas.

INTRODUCTION

A noticeable change to traditional sheep production (Merinos for wool and meat production) in western NSW has occurred in the last five years, with the introduction of fleece-shedding meat sheep breeds. This has been prompted by continued low wool returns, persisting drought conditions, and the increasing demand for lamb and sheep meat. These breeds are being used as either terminal sires joined to Merino ewes or to 'upgrade' to a pure bred flock from a Merino base, with ewes retained for subsequent crosses.

METHOD

The SWOT (strengths, weaknesses, opportunities and threats) analysis method is used. To complete the analysis the authors conducted a literature review, collected anecdotal reports from producers in western NSW and incorporated their own experience.

RESULTS

Strengths

The Dorper and Damara shed their fleece (wool component) during the year. Purebred Dorsers and Damaras, and cross-bred animals (once enough generational crosses have been reached) require no mulesing, crutching or shearing. The minimisation of these activities may be beneficial to pastoral producers. These activities are time-consuming and costly, and the associated input costs have been increasing. In addition, sourcing labour and managing OH&S issues is becoming increasingly difficult. There is also growing animal welfare pressure and some producers are faced with substantial costs of maintaining or replacing an older, less functional wool shed.

Dorsers and Damaras have an apparent tolerance to lice infestation and blowfly strike. South African literature suggests that although Dorsers may be infested by various louse species these do not seem to reach large numbers or cause production loss, and that blowfly strike caused by *Lucilia cuprina* in Dorper sheep is very rare (Fourie, L.J. and Horak, I.G., 2000). This tolerance to ectoparasites is a distinct advantage in an organic system and on the extensive rangeland properties where parasite management is time consuming, costly and difficult.

The Dorper and Damara have both been reported to survive and produce lambs under harsh environmental conditions. Producers running Dorper and Damara cross ewes in western NSW have reported lamb-marking rates of up to 130 percent and ewes lambing three times in two years. This has been achieved during drought. Cloete et al. (2000) in a review of Dorper reproductive performance in South Africa found that ewe fertility was consistently around 0.90 (range from 0.75 to 0.97). Further, the number of Dorper lambs weaned per ewe mated reported in a number of studies varied between 0.99-1.40. Dorper ewes can maintain this level of production on poor quality pastures and under harsh environmental conditions (Cloete et al. 2000). If a reasonable lambing can be achieved even in dry years in western NSW, this will have implications for the retention of a reasonable flock structure, increased genetic improvement through an ability to apply a greater selection intensity and, importantly, improved cash flow and gross margins compared with traditional wool-based enterprises.

The demand for lamb and sheep meat is increasing, and market outlooks (particularly for the continued development of export markets) are positive. Dorsers and Damaras appear to be able to achieve good growth rates and producers are optimistic that they will be able to finish lambs to specification in the majority of years. Anecdotal evidence from western NSW suggests Dorper and Damara crosses are capable of producing a marketable trade weight carcass and/or live trade liveweight (35-45kg) by six to seven months of age.

The carcass characteristics of the Dorper have been well accepted into the traditional prime lamb carcass trade in Australia. Informal feedback from processors that have handled Dorper cross carcasses produced in western NSW has been positive. The Dorper carcass has well-fleshed hindquarters and high muscle yield without excessive fat deposition (Duddy pers. comm. 2005).

The Damara is highly suitable for the live export trade to the Middle East where fat tailed breeds are preferred (Scott, 2002) over traditionally exported Merino wethers. However, the Damara does not produce a traditional prime lamb carcass.

Weaknesses

Currently there is a limited knowledge of the production characteristics and management requirements of these breeds in Australia, particularly with regards to their grazing behaviour and impact on rangeland landscapes.

Pigmented and medullated fibres (White Dorsers only have medullated fibres) pose a clip contamination risk, when these breeds are run with Merinos. Careful management is required to avoid contamination.

The current price of flock Dorper rams is high mainly due to limited supply, for example flock Dorper rams at a Dubbo sale in 2005 averaged \$1800 with a top price paid of \$2500 (The Land, 22 September 2005). This adds to the cost of production, and can mean a large initial investment for a complete enterprise change.

The uncertainty and variability of the live export market is a concern to some Damara producers. This has prompted some producers to join Dorper rams to Damara ewes, with an aim to improve the carcass characteristics of the progeny.

The seasonal variability in western NSW will mean that the time taken to finish lambs to specification will vary depending on season and in some years may not be achievable. This will make it difficult for producers to supply lambs at specific times of the year or to guarantee a supply to processors.

Opportunities

Dorpers and Damaras are well suited to organic management in pastoral areas. A small number of organic certified Damara and Dorper cross lamb producers in western NSW, have consistently received significant premiums compared to traditional Merino and/or terminal sire crossbred lamb market returns and, importantly, positive product feedback. Returns for organic Dorper lambs were significantly higher (25-50 percent premium) than traditional sale yard prices in 2004/05 (Duddy and Neeson, 2005). The organic lamb market in Australia has been growing at an estimated 30 percent annually and this trend is expected to continue (Thatcher, 2005). There are opportunities to develop export markets. The challenge for organic producers is to improve consistency of supply and increase volume to meet demand. The development of grower alliances could assist in ensuring a constant year round supply that consistently meets specification.

The reported reproductive performance and growth rates will allow the development of sustainable breeder/finisher alliances. These may be established in poor seasons when producers are unable to finish stock to specification, or producers may choose not to finish lambs regardless of seasonal conditions, instead preferring to turn them off at a particular weight to be finished elsewhere.

Anecdotal evidence from western NSW suggests that accelerated lambing programs (ie. lambing three times in two years) may suit both Dorper and Damara enterprises. Accelerated lambing systems are discussed widely in South African literature. For example, Cloete et al. (2000) reported Dorpers producing 1.48 lambs weaned per ewe mated per annum in accelerated lambing systems. However, some studies could not prove conclusively that ewes run on natural pasture under an accelerated joining program improved reproductive performance above that of annual joining. Further work to look at accelerated joining in pastoral areas using these breeds needs to be conducted. A successful accelerated lambing program has the potential to increase gross margins substantially and improve the seasonal supply of lambs.

It has been suggested that Dorpers and Damaras are less selective grazers compared to Merinos. A South African study reported that Dorpers are less-selective grazers compared to Merino sheep (Brand, 2000). However, other studies have found no difference in the selective grazing behaviour of Dorpers and Merinos (de Waal and Combrinck, 2000). The feed utilisation and diet selection of Damara and Dorper sheep needs to be investigated further in Australia, as there is potential to manage these animals using tactical grazing management principles for environmental gains.

There is also a possibility of establishing by-product markets. For example, Damaras and Dorpers are recognised internationally for their skin quality attributes (Terblanche, 1979 cited in Cloete, 2000; Scott, 2002). This has the potential to increase returns for Damaras and Dorpers as purebred numbers increase provided numbers are available for large scale value adding (Duddy pers comm. 2005).

Threats

There is a risk associated with operating a single commodity enterprise. Traditional western NSW sheep production systems have produced both wool and meat. A shift to a single commodity enterprise (meat only) means that the enterprise is more vulnerable to market fluctuations.

There is also the possibility of land degradation and overgrazing as a result of their 'hardiness' and ability to produce even in poor seasonal conditions. This could become a problem in instances where managers may delay the decision to de-stock, based on the condition of the animals rather than the condition of pastures.

A wider industry concern is the number of Merino ewes in western NSW being joined to sires other than Merinos, possibly eroding the Merino ewe base. This would impact significantly on traditional prime lamb production. Traditional prime lamb producers in eastern NSW prefer to source large framed 'western' ewes for breeding first cross ewes.

CONCLUSION

Fleece shedding meat sheep are providing pastoral producers with an opportunity to change the focus of their sheep production system to meat production. The extent to which the adoption of these breeds expands in pastoral areas will depend upon the comparative profitability of wool and meat production, and the performance of these breeds over time in pastoral areas.

This analysis recognises our limited knowledge of the production characteristics and management requirements of these breeds in Australia and highlights areas requiring investigation, such as the grazing and foraging behaviour of these animals.

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