

THE WOOL-MEAT BALANCE – GETTING IT RIGHT

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There is growing evidence that a dual purpose enterprise offers more flexibility and potential gain than a self-replacing dual-purpose sheep flock (van der Werf 2006; Warne *et al.* 2006; Sackett 2006). Wool still contributes more than 60% to the income from most Australian sheep enterprises (Sackett and Francis 2006) and it is very important to focus on genetics and management for quality wool production in the Merino ewe flock. The Sheep CRC has developed a process to help set up a Merino flock for a dual-purpose wool-meat enterprise. The aim of this paper is to summarise the procedures and provide internet addresses for the appropriate tools.

Setting up an appropriate flock structure and making decisions about which ewes to mate to terminal sires depends on objective measurement of wool and meat parameters. The minimum data required to use the processes are: fibre diameter, fleece weight and body weight on individual animals.

1. **OFFM Calculator** (Atkins and Semple <http://www.sheepcrc.org.au/articles.php3?rc=309>). The calculator estimates potential benefits from knowing the fibre diameter of individual animals in the flock. Irrespective of whether fibre diameter is determined off-farm using mid-side samples or on-farm through OFDA or FleeceScan, the calculator helps determine how to derive benefits from the new information. In the context of setting up an appropriate flock structure, the OFFM calculator helps assess the selection response advantages of running selected wethers and will also help to assess how ewes should be selected to give the most profitable result in terms of wool production.
2. **Wether Calculator** (Richards and Atkins <http://www.sheepcrc.org.au/articles.php3?rc=308>). Based on average micron for the flock and anticipated meat value, the calculator shows the optimal number of wethers for the enterprise. This proportion does not take account of the potential role of mature wethers in helping to manage parasite problems. If parasite management is a major issue, it may be advisable to increase the number of wethers.
3. **Merino v Terminal Sire Model** (Swan and Kelly <http://www.sheepcrc.org.au/flockstructure.php#model>). Based on the number of ewes, reproductive performance and mortality rates, the calculator helps determine the percentage of ewes that can be mated to terminal sires while still retaining sufficient Merino hogget ewes for a stable self-replacing Merino flock.
4. **Simultaneous Assortment** (Richards and Atkins <http://www.sheepcrc.org.au/articles.php3?rc=309>). The next step is to select the ewes and determine which animals are mated to Merino rams and which ones are joined to terminal sires. The Simultaneous Assortment program uses data on fibre diameter, fleece weight and body weight for each animal to determine whether the best financial outcome is to mate the ewe to a Merino or terminal sire. The resulting selection list allows final drafting of the 2 mating groups to optimize the return from both wool and meat across the flock.
5. **Ram Selection**. Rams for the self-replacing Merino flock should be selected primarily on wool characteristics whereas terminal sires should be selected for muscling and growth. A further addition to the decision support programs available on the Sheep CRC website will be a Ram Value Calculator to help rank rams in terms of their long-term value for a particular flock. Further information on objective selection of rams can be obtained from Sheep Genetics Australia (SGA, <http://www.sheepgenetics.org.au/>).

The process described above for determining an appropriate flock structure using tools currently available on the internet is relatively straight-forward to use and should be of value to any producer faced with a decision on structuring their flock to get the best long-term returns from both wool and meat.

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VAN DER WERF, J.H.J. (2006). *Proc. 2006 Australian Sheep Industry CRC Conf.* (eds P.B. Cronje and D. Maxwell) p 30.

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