

## My Opinion

There is a lot of discussion in the industry at the moment about the fact that fat and wool production are inversely correlated and how this means that there is a maximum value fat can be taken to without impacting on wool production. It is true these two traits are correlated, that is why 200 years of selection for wool has made the animal leaner and less able to cope with nutritional stress. This argument needs to be turned on its head. There is a maximum wool production that an animal can be taken to without negatively impacting on the animal's ability to maintain their wellbeing and their reproduction.

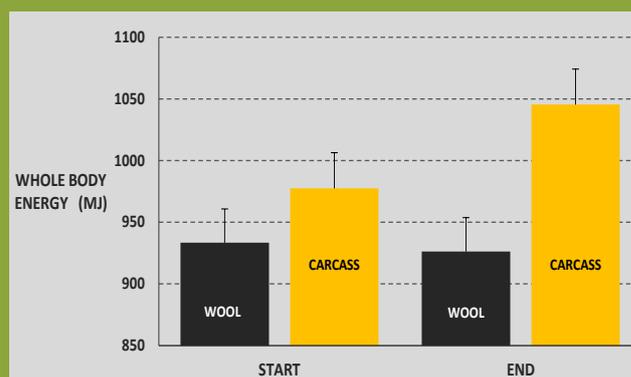
To my mind the industry are interchanging three words in production, productivity and profits and often use them out of context. At these historical high wool prices its quiet easy to make the conclusion that higher wool cut per head will lead to higher productivity and profits. The reality is there are many components that make up a sheep enterprise Gross Margin. Lower costs and higher fertility leading to more surplus sales along with the final value of those surplus sales are of equal importance to wool cut. The word "balanced" is thrown around a lot when breeding sheep whether it be the judge talking over his champion ram or a stud principle talking about their breeding program. This is a discussion that needs to occur when using the term balanced with regards to breeding sheep. Some very interesting work in this area is just coming to hand and is discussed further in the article by Mark Ferguson to follow ▼

If wool is \$20/kg, and you can breed a sheep to cut an extra 1kg of wool, that's \$20 more profitable you can make every sheep on the place. Is the equation really that simple? In reality, it is not. The reason that it is not that simple is all to do with the energetic burden of growing wool on the sheep. It is assumed in the indexes that are commonly used in industry that wool grows for free, that all of the increases in wool



cut are achieved through increasing the efficiency of wool growth. However, there is a lot of evidence that this isn't the case. The late Dr Norm Adams and Jan Briegel spent many years trying to understand the energetic cost of growing wool and have published several papers on the subject. John Young has recently completed some economic modelling on some of the findings of Norm and Jan and has predicted that the value of wool is being significantly over estimated. This is because of the impacts on whole body energy of the sheep from being selected for higher fleece weight. Put simply this means that as a result of selecting sheep for higher fleeceweight, they need to be run at a lower stocking rate or with more supplementary feeding to maintain condition score at the same level as lighter cutting ewes.

Earlier this year Sarah Blumer and Dr Andrew Thompson undertook a preliminary study to evaluate a couple of different merino genotypes. They took a merino genotype that had been bred for increasing fat, muscle and growth with moderate fleece weight and another one that had been bred with a greater focus on wool production. They put these two different ewe types under exactly the same conditions and with the same availability to feed. At the start and at the end of the experiment they scanned the live animals to measure whole body energy – a measure of the fat and muscle reserves a ewe has to survive a period of poor nutrition. The results were extremely clear cut, refer Graph 1 below. The carcass genotyped was storing fat and muscle and increasing its whole body energy – re-fueling its fuel tank for future high demand periods like lambing. The wool genotype didn't store any extra energy in the body, rather it put all of its energy into wool growth.



Graph 1

"It is truly fantastic to see wool producers being rewarded with the current market conditions. However, it is important to not lose sight of the fact that for an animal to be productive you still need to maintain a balance between wool production and animal robustness. This year is a stark reminder of the need to breed animals that are genetically able to maintain body condition under nutritional stress and require less supplementary feeding to maintain themselves in farmable condition. This is a good basic definition of productivity gains in "obtaining more production from fewer inputs".

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