

# Which ram's best? — do the maths

**What is a better ram worth?**  
The value a ram delivers to your farm depends on a number of things.

How many lambs do you wean per ewe?

How many years do you use your ram and how many lamblings do you get on average from your ewes?

Do you mate a proportion of your ewes to terminal sires, meaning a greater proportion of female lambs are retained from each maternal ram used?

## ★ Doing the sums

Ram A — NZTW 1524\* — Top 20% terminal ram.

Ram B — NZTW 1220\* — Top 50% terminal ram.

Ram C — NZMW 2349\* — Top 20% maternal ram.

Ram D — NZMW 1763\* — Top 50% maternal ram.

\* Values from percentile bands/sil.co.nz (Sept. 30, 2017).

## ★ Terminal sire

Assuming 140% lambs present at docking/tailing compared with ewes mated, and rams are used for four seasons, Ram A provides \$811 more value than Ram B. How much more does Ram A cost than Ram B? Probably considerably less than \$811 difference.

## ★ Maternal sire (dual purpose)

Assuming 140% lambs present at docking/tailing compared with ewes mated, and rams are used for four seasons, Ram C provides \$1116 more value than Ram D. If 35% of ewes are mated to terminal rams, Ram C now provides \$1717 more value than Ram D, as more of his progeny will be selected as replacements. How much more does Ram C cost than Ram D? Can you afford not to buy Ram C?



**What's he worth?** Beef + Lamb New Zealand cautions against making false economies when buying rams.

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If you consider a team of rams, this additional value is amplified: 3000-ewe farm with 30 rams of average merit, versus top 20%.

1. Using top 20% terminal sires: \$811 x 30 = \$24,330.
2. Using top 20% maternal sire: \$1116 x 30 = \$33,480.
3. Using top 20% maternal sires for replacements only: \$1717 x 30 = \$51,510.

Cheap rams are costly. The opportunity cost of buying average or unrecorded rams can be tens of thousands of dollars. Introduction to measures of genetic merit: estimated breeding values (EBVs) and indexes

An EBV is an estimate of the breeding value of an animal as a parent for a particular characteristic or trait. The maths (Best Linear Unbiased Prediction (BLUP) used to calculate the EBV adjusts for known non-genetic effects and how heritable the trait is. This means the EBV represents the worth the animal can actually pass on to its progeny.

EBVs are displayed in the units they are measured in, e.g. kilograms for weight, number of worm eggs in faeces. Generally, a more positive EBV is more favourable but there are some exceptions (e.g. fewer worm eggs are more favourable).

Indexes have been created with the commercial farmer in mind. An index is an economic value applied to a grouping of EBVs. A more positive economic value is always more favourable.

It takes two parents to create progeny, therefore each parent contributes only half of the genetic merit of the progeny.

However, more than 80% of your flock's merit is determined by the rams you bring in. This is because a ram has many more progeny in a given year than an individual ewe. Key message: the rams you choose have a big impact on your bottom line.

**What about structure and soundness?**

It is expected that rams put up for sale have already been robustly checked for soundness and ability to mate. However, everyone has different ideas of characteristics they are looking for and what they are prepared to accept. Sheep Improvement Ltd (SIL) recommends you focus on things that will either make or cost money when selecting structure.

More than 80% of the flock's genetics are contributed by the ram — that's an exciting opportunity to improve your flock's performance. Copy: Beef + Lamb New Zealand