

# WHY SHOULD WE SELECT IMPROVER TERMINAL RAMS?!?

## Scenario:

- Want to purchase a terminal ram
- Flock of 50 commercial ewes
- 1.3 lambings per year
- 2 lambs weaned per litter
- Expect to use the ram for 5 years
- Total: 650 commercial lambs/ram
- All the lambs are sold as heavy lambs

## Terminal breeds:

- Select on genetic index **GAIN or CARC**
- Maximizes economic gains on several traits
- Example based on only one trait (gain 50-100 days\*) to simplify the calculation and to have more reliable economic references.

*The data presented here are real data of terminal rams.*

## Economic references

- Maintenance costs for lambs in the growth period: **\$1.30/day**  
(Calculation based on CECPA - Costs of production for sheep – 2021 personal communication, 2022)
- Average ADG (at the end of the growth period) : **400 g/day**  
(Project Repeat Measures, CEPOQ, 2015)

## RAM A

**EPD gain 50-100d = 2.35 kg (90%)\*\***

### Economic return:

- **5.88 days less** for growth period  
(2.35 kg / 0.400 kg/d)
- 1 lamb = **\$7.64 of saving**  
(5.88 days X \$1.30/d)
- 1 litter = **\$15.28 of saving**  
(\$7.64/lambing X 2 lambs)
- 1 year = **\$993.20**  
(\$15.28 X 50 ewes x 1.3 lambings/year)
- For 5 years = **\$4,966.00** (\$993.20/year X 5 years)

**Total: \$4,966.00 for 5 years**

## RAM B

**EPD gain 50-100d = 0.245 kg (25%)\*\***

### Economic return:

- **0.61 day less** for growth period  
(0.245 kg / 0.400 kg/d)
- 1 lamb = **\$0.79 of saving**  
(0.61 day X \$1.30/d)
- 1 litter = **\$1.58 of saving**  
(\$0.79/lambing X 2 lambs)
- 1 year = **\$102.70**  
(\$1.58 X 50 ewes x 1.3 lambings/year)
- For 5 years = **\$513.00** (\$102.70/year X 5 years)

**Total: \$513.50 for 5 years**

**Economic return difference between a TOP RAM and a ram BELOW THE AVERAGE OF THE BREED on EPD gain 50-100 day is: **\$4,452.50****

**If you buy a ram not evaluated (without any genetic evaluation), then you will only know its true value according to the performance of its offspring.**

**To maximize your investment, buy evaluated rams.**



\* Economic return calculated on all the traits of a genetic selection index will give essentially the same value.

\*\*A genetic value indicates the potential performance of an animal. Animals must be in good breeding condition to express their entire potential.

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Economic return related to the genetic values of the ram on EPD Gain 50-100 day

EPD Gain 50-100 day	Percentile	Economic Return on 5 years*
0.245 kg	25%	\$513.50
0.785 kg	50%	\$1,657.50
1.545 kg	75%	\$3,263.00
2.350 kg	90%	\$4,966.00

*\*Additional income as a result of the faster growth of his offspring.*

## Economic return:

- Better genetic value = higher economic return related to this trait
- An improver ram on **CARCASS INDEX** will improve lambs':
  - Growth rate
  - Muscularity
  - Fat deposition (leaner)
- An improver ram on **MATERNAL INDEX** will improve descendants':
  - Growth rate
  - Milk production
- An improver ram on **MATERNAL HIGHER PROLIFICACY INDEX** will improve descendants':
  - Prolificacy
  - Growth rate
  - Milk production

## Tips for terminal ram selection

- High growth rate
- Ultrasound for loin and fat depth
- Muscular
- Good conformation
- Improver for the breed

**CARCASS INDEX (CARC)**

## Tips for maternal ram selection

(to produce replacement)

- High growth rate
  - High prolificacy
  - Good conformation
  - Improver for the breed
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- To get heavier lambs at weaning while maintaining prolificacy.

**MATERNAL INDEX (MAT)**

- To increase ewe prolificacy while also improving the lambs' growth rate

**MATERNAL HIGHER PROLIFICACY INDEX (MAT-HP)**

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