Topic	Topic
Technical efficiency	Economic resilience

Provide farmers with a bull selector tool to identify available sires that are consistent with their breeding goal

Background

This tool helps to identify the most complementary match between the chosen sires and females in the herd to maximize the chance of producing high genetic merit offspring, but also a more consistent herd. Both genetic and genomic selection are important and provide complementary information.

How does the strategy work?

The breeder must decide which characteristics of the herd that they wish to improve. Limit these characteristics to a maximum of 5. Each characteristic is weighted to obtain an overall score per bull. Also consider the characteristics of individual females and their pedigree. Progeny must be checked for further selection before assigning sires to females.

Choose sires
Pick herd characteristics to improve (max 5)

Evaluate females in herd

↓

Reasoning about mating

↓

Assess characteristics of descendants

Characteristics for selection include;

Characteristics for selection

Production	Morphological	Functional
Milk yield (kg)	Development	Somatic cell count (good udder health)
Fat (kg and/or %)	Pelvis, feet and legs	Longevity
Protein (kg and/or %)	Udder conformation	Fertility
	General score	Easy calving

Positive features

- Heritability of dairy characteristics is 40%
- Genetic selection (based on progeny) and genomic selection (based on DNA analysis) provide complementary information
- Generational accumulation of selection effects
- Easier sire selection
- Numerous parameters
- Inter-connectivity between countries and organizations (Interbull, etc.)

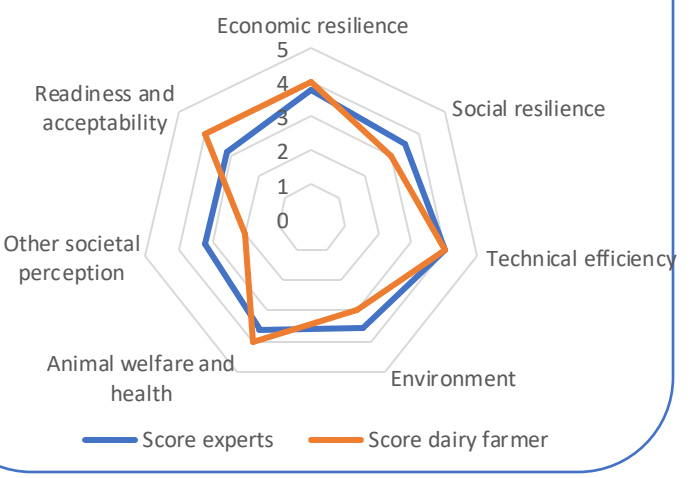
Be careful, especially on these points

- No guarantee of inheriting good genes
- Importance of environmental factors
- Inbreeding: can reinforce positive traits, but also defects
- Indexes are calculated differently in different countries, depending on their specificity

Specific advises

- Know your herd
- Define your selection criteria
- Take your time
- Ask your technician or vet for advice

Assessment of method



Equipment involved? Investment?

- Coding and selection time
- Cost of semen
- Cost of genomic test

Quote of the farmer:

"You can't be too hasty. There comes a time when genetics really expresses itself."

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