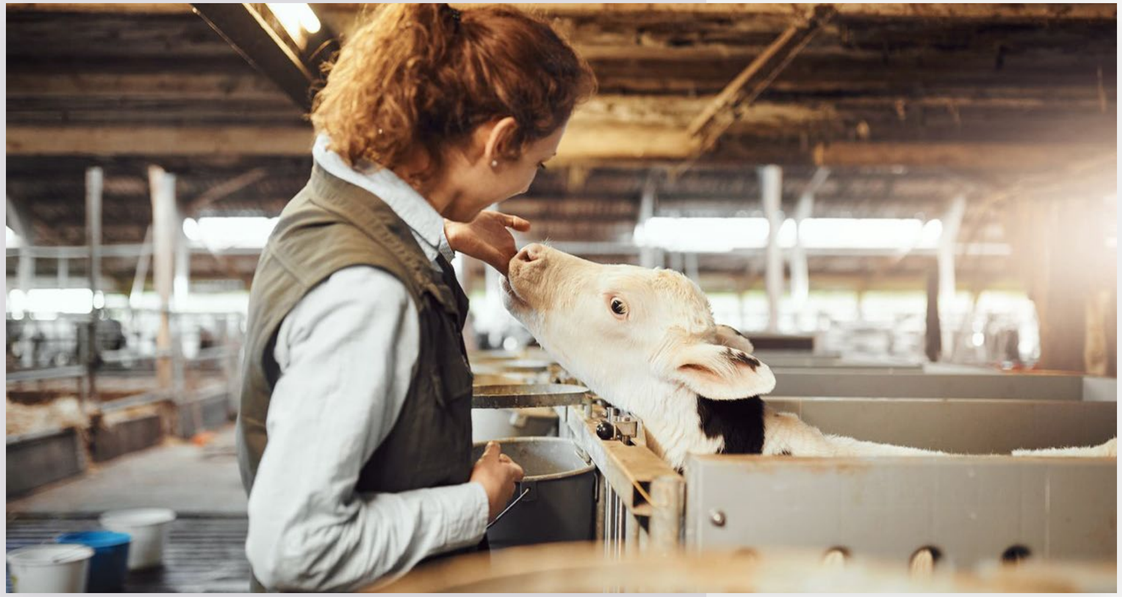


From Artificial Insemination to Precision Breeding and Farming

Mastering Semen Sexing Technology to Secure EU Farmers' resilience, EU autonomy and sustainability

Eric Schmitt (Univers 2020)

Sustainable Model

By avoiding the birth of low-value male calves, we create a dual-purpose herd:

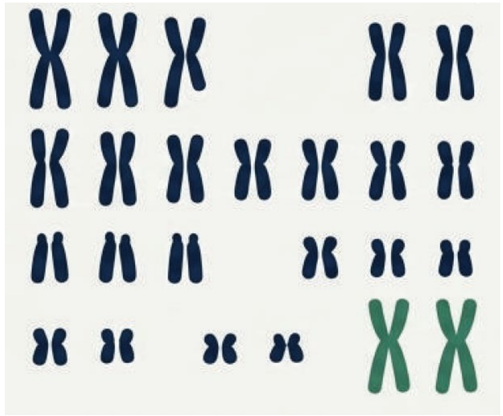
- *elite genetics for milk,*
- *and high-quality beef for food security.*

Surplus Male Dairy Calf	Low Value
Beef x Dairy Cross	**Medium Value (Beef)**
Sexed Female Elite	**High Value (Genetics)**

The Evolution of knowledge and technology

We are witnessing a paradigm shift from simple reproduction to **precision reproduction.**

♀



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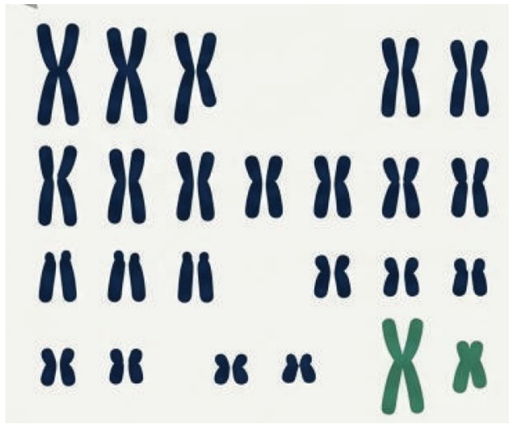
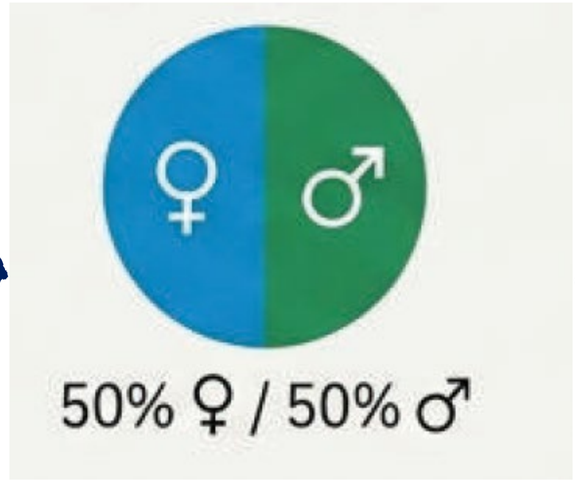
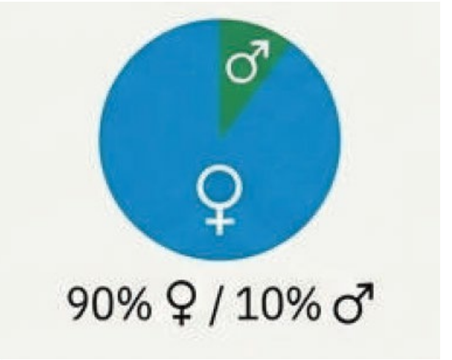




3,8% more DNA
in females

Precision Farming: the result of Semen Sexing in Dairy



Result A: The Elite Replacement

Produced via Sexed Semen (90°/o Female)

Result B: The Beef Resource

Produced via Beef Semen (High Value Meat)

Take home messages

Semen sexing is an additional tool for farmers to be more sustainable and competitive

Reduced Emissions: Fewer replacement animals needed means a lower total carbon footprint.

Food security: a self-sufficient animal production system for Europe, reducing the need for imports.

Resource Efficiency: Less feed and water use in raising animals that have low value for farmers

Take home messages

Semen sexing is an additional tool for farmers to be more sustainable and competitive

This needs :

- EU Investment, engagement and support to public and private EU R&I actors
- easy access to the market and farmers of applied science and technology

This will:

- foster the competitiveness of breeders, farmers and overall EU
- Improve sustainability and food autonomy
- Improve animal welfare