



**EVOLUTION**

Les éleveurs de vie

# Impact of genomic selection on the Evolution breeding program

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# A new context

- ❖ Reorganisation of AI breeding companies
- ❖ Market: No expansion in France, but opportunities to increase export
- ❖ Emergence of new technologies : sexed semen, reproductive and health monitoring...
- ❖ Different strategies in breeding programs

 **More intensive competition!**

- ❖ A better knowledge of the bovine genome
- ❖ New tools for selection: genomic breeding values

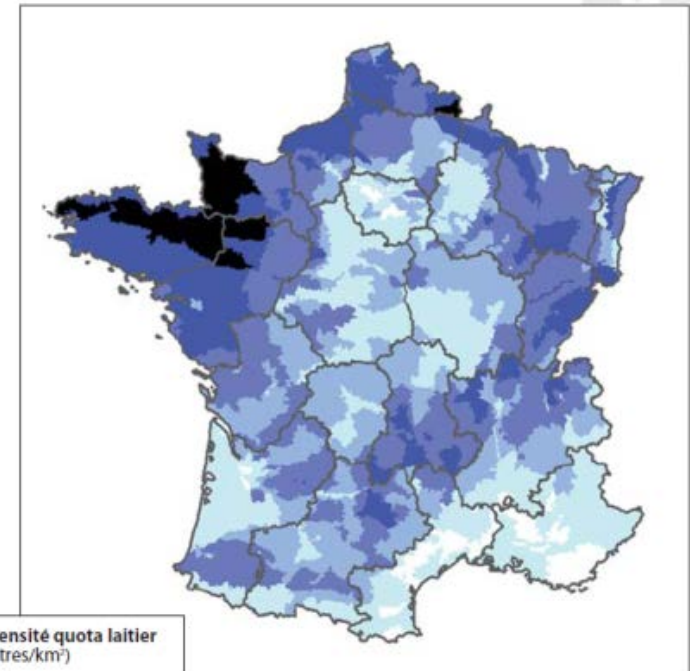
 **Genomic Revolution!**

# Evolution, a combination of 3 large cooperatives



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## Our area



# The Evolution breeding program



**Holstein**

**Pie Rouge**

**Normande**

- ❖ 2.8 million AI
- ❖ 40% of selection and AI activities in France
- ❖ About 5 million straws sold (France & abroad)

# The Holstein breeding program

## ❖ A new breeding program

### ■ Males :

End of the progeny test

Use of young bulls

### ■ Females :

Better precision → More intense selection (ET, OPU), especially on heifers

# The Holstein breeding program

❖ A new relationship between:

Bulls and Calves  
Procurement



Products Selection  
Marketing

Genetic Decision Guideline

TMI (ISU) + Commercial market segments

# A new partnership with our farmers



# CREATION



# In practice: the Holstein breeding program

3,200 females financed by the program +  
25,000 females financed by farmers

720 females collected (80% heifers) => 1,500  
ET and 600 OPU

**PRODUCTION OF 8 500 EMBRYOS**

8,500 embryos transferred

300 embryos  
from abroad &  
France

3,000 males genotyped

15,000 AI

220 males in stud  
100 marketed + 50 exported

In 2008, 350  
progeny tested  
bulls

# Holstein marketing trends

## Distinct market products

- ❖ Profitability (ISU = national French TMI)
- ❖ Durability (fertility, udder health, other health traits)
- ❖ Productivity (Production, yield)
- ❖ Type
- ❖ International Market (Net Merit, TPI)
- ❖ Polled
- ❖ Red

# Use of young bulls in Evolution area

**A rapid adoption of the use of young bulls!**

	<b>Holstein</b>
2010/2011	35%
2011/2012	60%
2012/2013	70-75%

# Service to help the Management of female resources

An innovative approach:

- ❖ Two stations for donor cows in Brittany and Pays De Loire

- ❖ A structured network of recipients for the multiplication of elite cows with the possibility for the breeder to keep financial rights on male calves and the best females born outside

Objective for the breeding program: to produce and transfer 8,500 embryos per year.



# Use of young bulls as sires of sons

2012	Total number of sire of sons	Number of progeny tested sires	Number of young sire of sons	% of young sire of sons
HO	129	12	117	91%

**A very high level of use, each genomic bull has the same maximum number of AI and embryos to produce !**

**A better management of the genetic variability !**

# Conclusion : consequence of the genomic revolution

- ❖ A larger union of cooperatives, with reorganisation of the company
  - ❖ A completely new breeding program
    - with heavy use of genomic breeding values
    - with heavy use of reproductive biotechnologies
  - ❖ A new partnership with farmers
  - ❖ XY CREATION : one of the most important Holstein breeding program in the world
  - ❖ A more diversified portfolio of products
- Consequences: a larger genetic gain  
a fast adoption of the new tools by the farmers

# Thank you!

