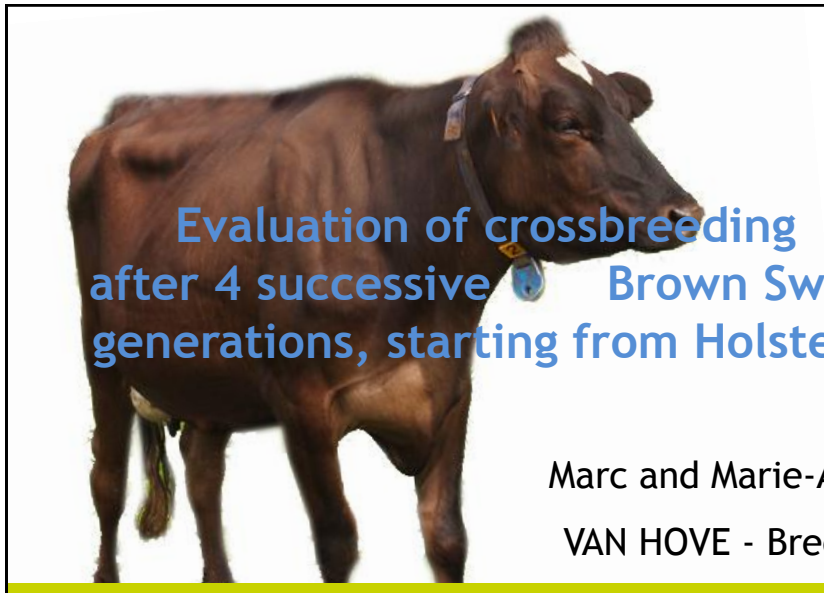


Evaluation of crossbreeding after 4 successive Brown Swiss generations, starting from Holstein

Marc and Marie-Agnès

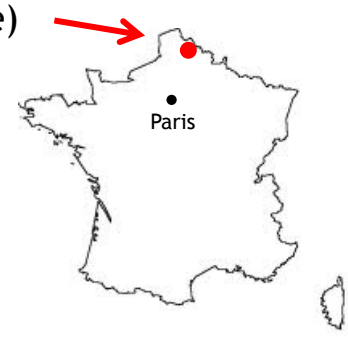
VAN HOVE - Breeder

Introduction

- Marc and Marie-Agnès VANHOVE
- Settled on their farm in 1991
- Holstein herd 10 000 kg
- Member of economic group

Farm structure

- Near Lille (North of France)
- Eco-intensive farming
- 45 ha with 500 000 Liters
- 65 cows at 7823 kg
- main forage : corn silage

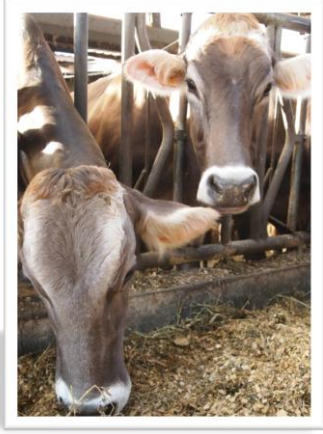


Farm structure

Heifer barn Cow barn House

A « low cost » diet for cows

- Corn silage 15.0 kg DM
- Chicory roots 2.7 kg DM
- Rapeseed meal 3.5 kg
- Urea 150 g
- Minerals



Why I chose Brown Swiss

- Improve health traits
  - ✓ Fertility
  - ✓ Cell counts
  - ✓ Feet and legs
- Improve components
- Maintain production level

Introduction of Brown Swiss

- 2002 : Start of crossbreeding BS on Holstein

  10 units resulted in 5 heifers F1

- 2005 : Purchase of 9 purebred BS cows
- 2007 : Purchase of 7 purebred BS heifers

➡ **Gain in confidence to expand « pure cross »**

Crossbreeding with Brown Swiss

- Used on good longevity Holstein cows
- BS sires selected for their complete package
- Used at each generation
- First heifer with 5 gen. BS : Gipsie (born 07/2011)

5th	96,875%	Juleng (Jublend)
4th	93,75%	x Sagittaire (Hussli)
3rd	87,5%	x Prince (Zoldo)
2nd	75%	x Ortega (Patcho)
1st	50%	x Mosaique (Videv)

Main sires used

- Paradis (Denmark)
- Mosaique (Videv)
- Prince (Zoldo)
- Richelieu (Playboy)
- Sagittaire (Hussli)
- Thibault (Dominate)
- Traction (President)

Introduction of Brown Swiss

DESIREE : 75% BS

2nd generation

Richelieu x Mosaique

Introduction of Brown Swiss

#3613 : 75% BS

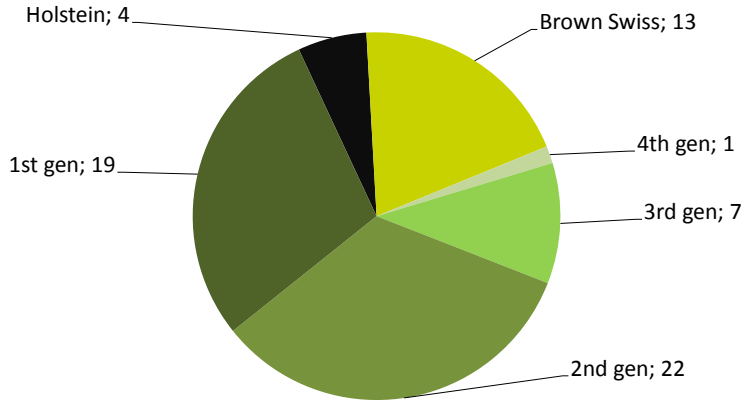
2nd generation

Paradis x Mosaique

Introduction of Brown Swiss

View of the herd

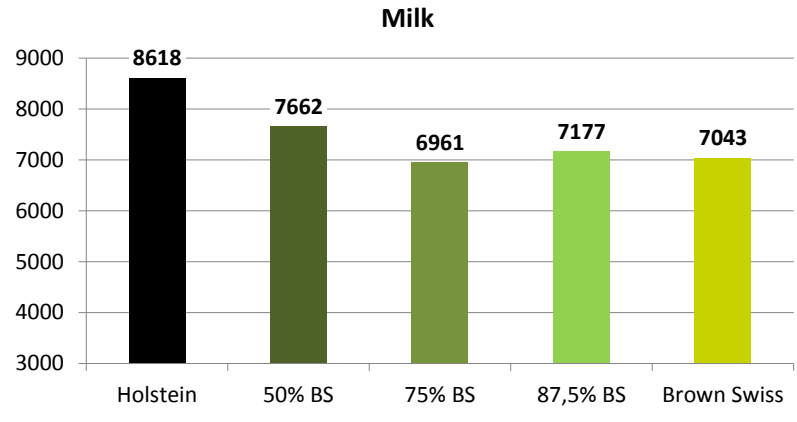
Today's herd



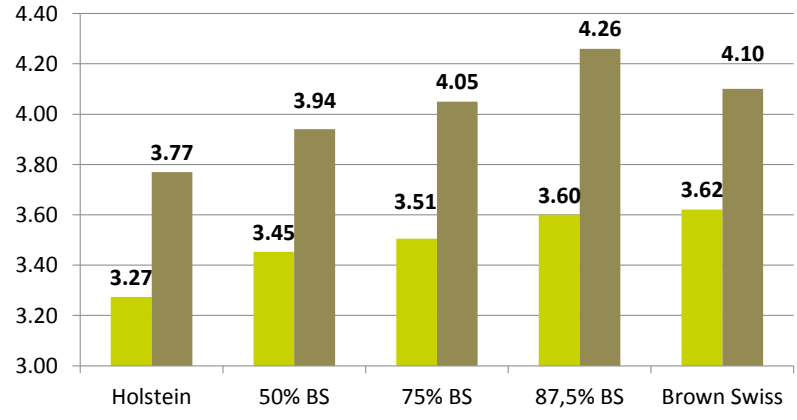
Health traits results

	2001 100% Holstein	2012 60% Crossbred 32% Brown Swiss 8% Holstein	Difference
Calving Interval	405 days	394 days	-11 days
AI/pregnancy	1,91	1,66	-0,25 unit
Cell counts	214 000	134 000	- 80 000

Production results



%P and %F results



« pure cross » technical results

- Production of 75% and 87,5% is not lower than BS
- Milk potential is lower in 1st lactation, like BS
- Components raise to BS level gradually
- Fertility and udder health are improved

« pure cross » technical results

- WRONG idea : 2nd generations are bad
- Gradient move from Holstein to Brown Swiss
- More variance of type with intermediate crosses

Economical results

- Member of Comparison group :
  - ✓ 80 dairy farms
  - ✓ Similar feeding systems
  - ✓ Mainly Holstein breed
- Before crossbreeding, Gross Margin in the average
- After crossbreeding, best of the group !

Economical results

	2001	2011	*Group average*
Milk / cow	**7244**	**7823**	*8720*
Milk price - cts/L (€)	**34,1**	**36,2**	*34,7*
Feeding costs - cts/L (€)	**9,1**	**7,1**	*11,2*
Breeding costs - cts/L (€)	**2,4**	**3,2**	*4,0*
Gross Margin - cts/L (€)	**24,8**	**29,6**	*22,1*

Economical results

- Gain with Brow Swiss introduction :
  - ✓+1,5 cts/L on milk price
  - ✓-2,0 cts/L on feeding costs
  - ✓-0,6 cts/L on veterinary costs
  - ✓+2,0 cts/L on Gross Margin due to breed change

Overall opinion

- Main goal is to maximize Gross Margin
- Feeding system based on reduced inputs
- Brown Swiss and crosses adapt better than Holstein
  - ✓ flat lactation curve
  - ✓ better fertility
  - ✓ less health problems
  - ✓ better use of diet

Overall opinion on « pure cross »

−	+
✓ Lower production of 75% BS	✓ Better INCOME !
✓ Lower production of 1st Lact.	✓ Rapid change on F1
✓ Some variance on type results	✓ Improved Fertility
	✓ Better udder health
	✓ Higher components
	✓ Gradual change

Conclusion

- Successfull introduction of BS on the farm
- BS Well adapted to their « simple » system
- Crossbreeding can lead to higher Gross Margin !