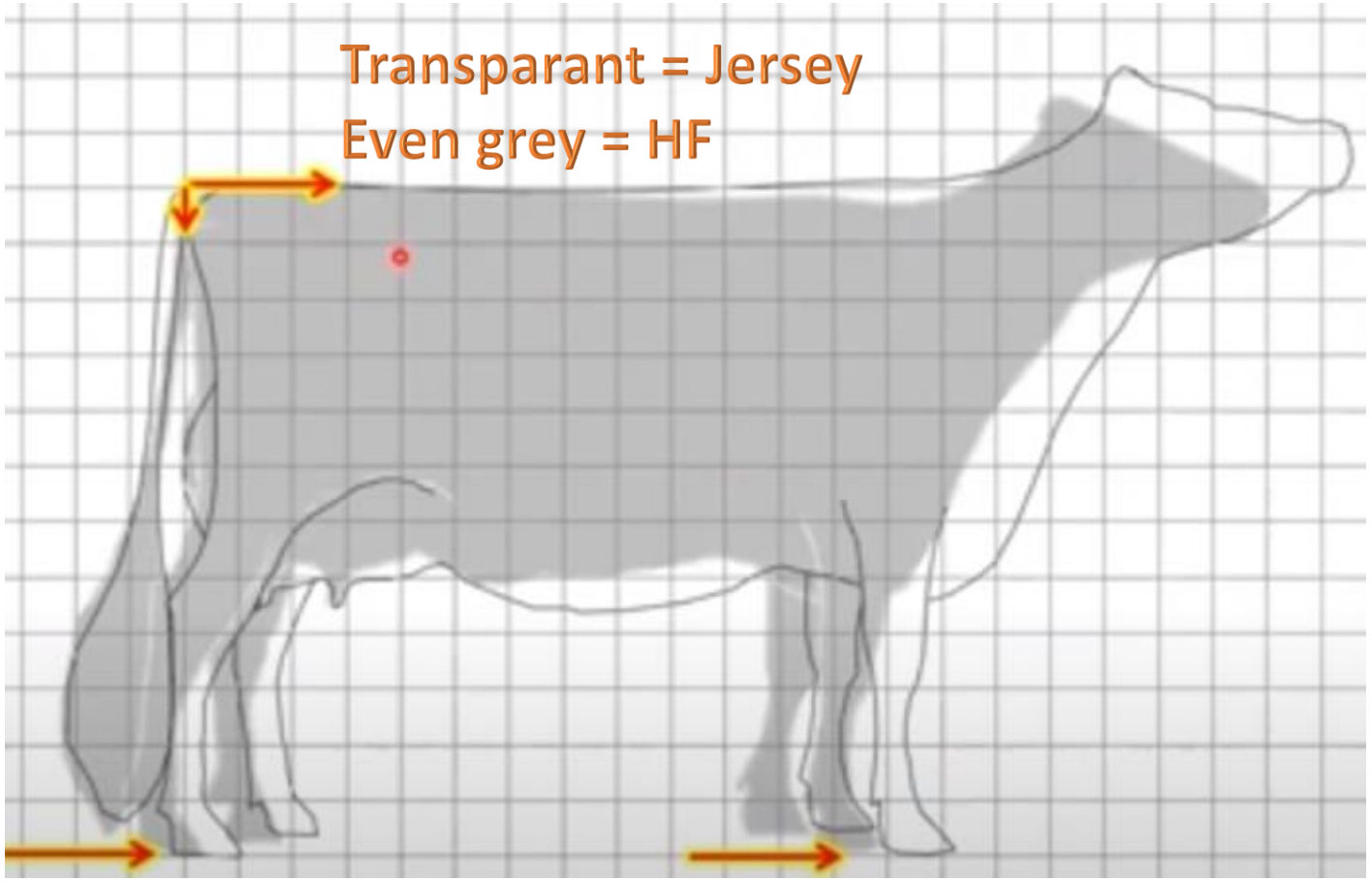
Do we use the right key figures/KPI's for Jerseys?

Maike Oegema

Who am I?

- Maike Oegema
- Jersey farmer in NL
- 125 Jerseys and 60 calves & heifers
- MSc in Animal Sciences (Wageningen University & Research)
- Ruminant nutritionist ‘18-’23, now fulltime farmer
- Member of “Koeien & Kansen” (cows & opportunities) → group of farms studying the (im)possibilities of potential national climate/fertilization/biodiversity legacy
- NJS & EJF board member

Why are Jerseys special?



- Jersey on size HF:
  - Bigger head/mouth
  - Wider
  - More space for rumen
  - More space for heart & lungs

Jersey in science

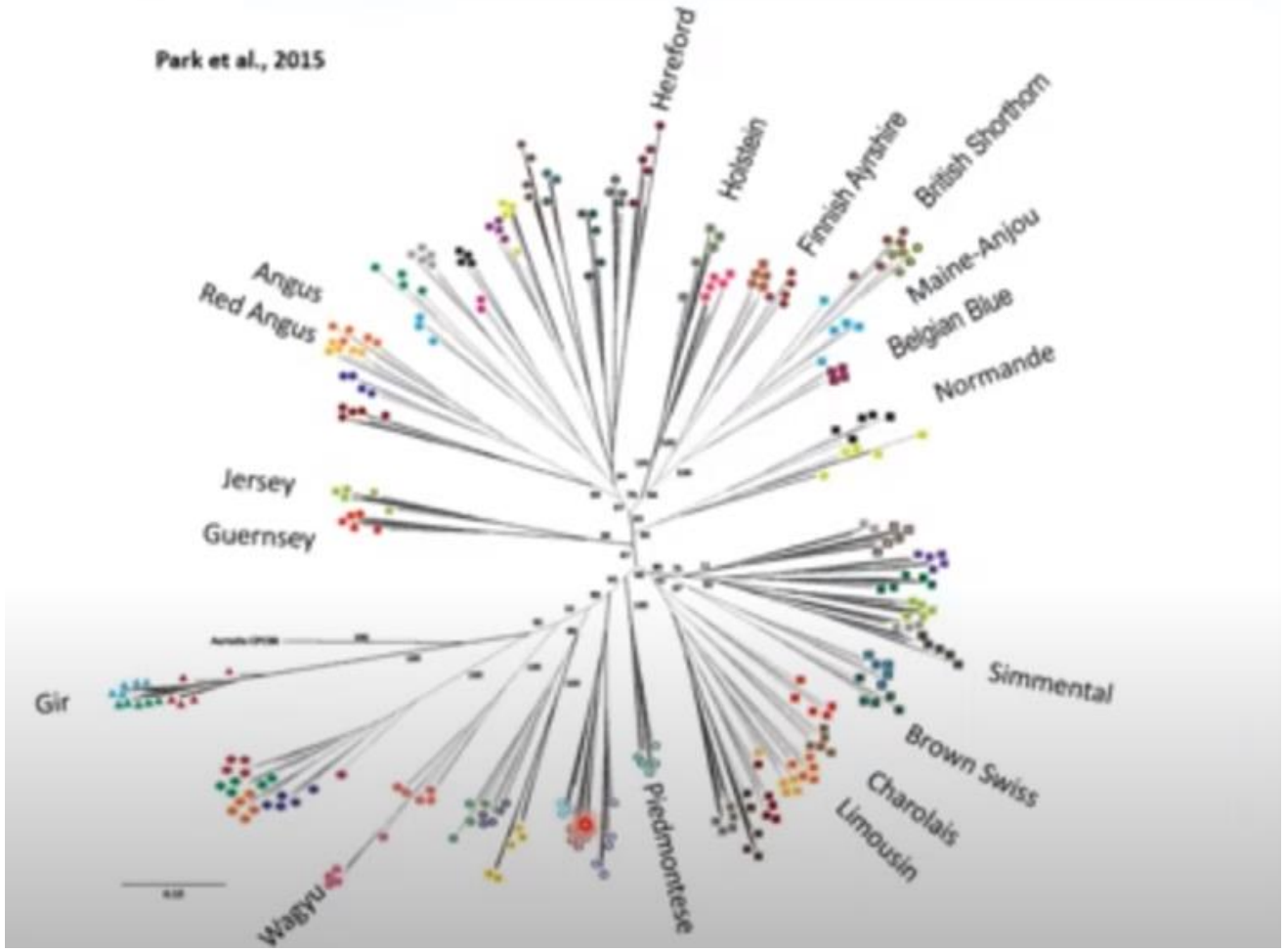
- 5% up to 20% more DM intake/kg live weight
- 8% up to 19% less energy demand than HF to produce the same kg fat & protein
- 9 up to 34% more solids/kg live weight
- 18 to 20% lower CFP (Carbon Foot Print)
- Higher NDF digestibility

Jersey in science

- Jerseys have a slightly different fat metabolism compared to HF
  - More SCFA and MCFA's (short and mid-chain fatty acids)
  - More de novo fat synthesis in early lactation
    - HF uses more fatty acids from the blood

- Jerseys spend the same time at the feed fence as HFs (but have a lower feed intake)
  - Lenght and number of feed intake moments are not different
  - So Jerseys spend more time on consuming and rumination of one unit of feed
  - Jerseys naturally spread the feed intake moments more equally over the day

Genetic background of Jerseys



Jerseys do have unique performances.

Do we have the right key figures/KPI's to monitor the performances of our Jerseys?

Is FPCM correct for Jerseys?

- **F**at and **P**rotein **C**orrected **M**ilk
  - Amount of milk production converted to milk with 4,00% fat and 3,33% protein

- NL:

FPCM (kg) = [0,337 + (0,116 * fat%) + (0,06 * protein%)] * kg milk

- International:

FPCM (kg) = [0,2534 + (0,1226 * fat%) + (0,0776 * protein%)] * kg milk

Is FPCM correct for Jerseys?

Starting situation (example)	Calculated kg f+p based on real production	Calculated FPCM	Calculated kg f+p from FPCM (Fat: FPCM * 0,04 Protein: FPCM * 0,0333)	Difference in kg f+p (real kg vs kg f+p calculated from FPCM)	"Corrected" FPCM
7000 kg milk **6,30% fat** **4,20% protein**	441 kg fat 294 kg protein 735 kg fat+protein	9238,6 kg FPCM milk	369,5 kg fat 307,6 kg protein 677,2 kg f+p	735 – 677,2 = 58,7 kg f+p **8%** of kg f+p not reflected in kg FPCM!	9238,6*1,08 = 9974 kg melk! In this example, **735 kg** of milk is not reflected in FPCM!

How do you compare the performances of your Jerseys to the performances of other herds in your countries?

Looking at key figures/KPI's

- FPCM is used more and more in key figures
  - For example in emission figures

- Usually, FPCM makes key figures a lot better for Jerseys than key figures based on kg of milk

- 2 examples
  - Feed efficiency
  - CO2 emission

Example feed efficiency

Starting situation (example)	Calculated kg f+p based on real production	Feed efficiency based on kg of milk	Kg FPCM & feed efficiency based on kg of FPCM	Kg "corrected" FPCM & feed efficiency based on kg of FPCM
22 kg milk **6,30% fat** **4,20% protein** **18 kg DMI**	1,4 kg fat 0,9 kg protein 2,3 kg f+p	1,22 kg milk/kg DM	29 kg FPCM 1,61 kg FPCM/kg DM	32 kg "corrected" FPCM **1,78 kg corrected FPCM/kg DM**

Example GHG emissions

GHG emissions
(gr CO2-eq per **kg FPCM**):
937
When using "corrected FPCM" it becomes 868g CO2-eq per kg of "corrected FPCM"!

We deliver our milk to FrieslandCampina (large Dutch dairy coop). Dropping the GHG emissions from 937 to 868 g CO2-eq per kg FPCM would provide us from 0,10 to 0,20 euro extra per 100 kg of milk.

Influence on milk price

- Our standard milk price is based on solids.
- However, milk premiums for climate/grazing/animal health/animal welfare are often paid per kg of milk. Which is NOT fair for Jerseys.
- Example: you get 2,5 cent per kg milk extra for e.g. climate, and your herd produces 1.000.000 kg melk, 4,20% eiwit en 6,30% vet annually
- You would receive **2,817 euro** more per year if the extra money would have been based on **FPCM**
- This would be **10,812 euro** more when using **“corrected” FPCM**

How does your milk factory pay you for the milk of your Jerseys? How are milk premiums paid?

Summary

- Jerseys are very special and behave smartly ;-)
- Kg f+p are underestimated when using FPCM
  - However, FPCM is often already way better for our Jerseys in comparisons
- Jersey farmers could receive more money for the milk by:
  - Improving key figures by using “kg f+p” instead of “kg milk” or “kg FPCM”
  - Paying premiums per kg f+p and not per kg milk

Questions?

- maikeoegema@gmail.com

- Thank you for your attention! ☺