Appropriate Genetics for Sustainable Dairy in Africa



David Hambrook

Head of International Dairy for Development, RJA&HS

An apt analogy?



OR



If I could bring you one thing today, what would it be?

Jerseys for Africa? Why?





The Jersey Opportunities

For Jerseys and Holstein-Friesians to produce the same amount (weight) of protein, milk-fat and other solids, it is reported that:

1. **A Jersey cow needs: 32% less water,**
2. **Requires 11% less land and**
3. **Uses substantially less fossil fuels, with a 20% reduction in total carbon footprint**

Why Jersey? 1 - Heat Tolerant



Jerseys are the most heat-tolerant of the European 'pure' dairy cattle breeds. Fact – Jerseys start to reduce milk production at a Temperature-Humidity Index (THI) of 75, whilst Holsteins begin to decline at a THI of 68

Paper references: Bryant et al, 2007

Why Jersey? 2 – Tick Resistance



Of the European ‘pure’ dairy cattle breeds the Jersey is recorded as having a greater degree of tick-resistance

Why Jersey? 3 – Better Feed Conversion



Because of its smaller size, a Jersey cow requires less total feed to produce every litre of milk than a larger cow. Important in a smallholder & SME Dairy environment

Why Jersey? 4 – Higher Components



Jerseys can produce large volumes of milk, with high butterfat (6%+) and protein (4%+) content*, making it suitable for processing into a wide variety of nutritious food stuffs

Reference: Viking Genetics website: www.Vikinggenetics.com

Why Jersey? 5 – Cheese Density



In comparison to other milk, Jersey milk is more cheese dense. In terms of the amount of Jersey milk required to produce 500 metric tonnes of cheese, the reduction of the carbon footprint is equivalent to taking 443 large cars off the road annually

Paper references: Capper & Cady, 2013

Why Jersey? 6 - More fertile



Jerseys mature quicker, reach reproductive age and come into milk production sooner than other breeds, reducing rearing costs

Why Jersey? 7 – Less Vet input



Jerseys have good fertility and are less prone to calving issues. Fewer calving problems reduces worry, labour and veterinary costs

Paper references: Animal Improvement Program Laboratory, USA – Jerseys 1%, Holsteins 8%

The ‘Exotic’ Challenges



1. **The Internet!!!!**
2. **Disease resistance - A synthetic breed?**
3. **Management does not match genetic potential**
4. **Lack of suitably trained technical personnel**

Two Cultural Challenges



Many traditional African farmers see themselves first and foremost as Cattle Keepers and, large cows as culturally important. Both factors need to change for progress to be made

Opportunities for Farmers



Cattle Keepers need to embrace change and come down on just one side of the fence. Be either a:

a. professional Dairy Farmer

b. professional Beef Farmer

Opportunities for Processors



Stop hauling water huge distances on this vast continent. Over other breeds, Jersey milk bought for processing reduces freight costs by 30%, whether 1, 100 or 1,000 miles

Opportunities for Development Partners (*a Rwandan example*)



Ongera Amata (Increase Milk!)

1. **Do more than just deliver cows, change the landscape, change the genetics, stay and farm**
2. **Help to build sustainable change, step by step, hoof by hoof**
3. **Think longer term, commit and then stay committed**

The African Jersey Forum



AJF is partnering with the World Jersey Cattle Bureau (WJCB) in late Aug, early Sept '26

1. **WJCB - RSA**
2. **AJF – Zambia**

Consider joining us to learn more

www.africanjerseyforum.com

JOA
JERSEY OVERSEAS AID

The Jersey Opportunities

If you take nothing else home this week, just remember, for Jerseys and Holstein-Friesians to produce the same amount (weight) of protein, milk-fat and other solids, the more efficient Jersey:

1. **Needs: 32% less water,**
2. **Requires 11% less land and**
3. **Uses substantially less fossil fuels, with a 20% reduction in total carbon footprint**

Thank you for listening