

Langrietylei Hero's  
Jinx and calf

# Future goals for the **Guernsey**

*From the Secretary's Desk of the World Guernsey Cattle Federation*

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**When times are tough, everything becomes just a bit more difficult.**

**If predictions are correct, climate change will have a serious effect on the ability of world agriculture to feed a growing population. In 1950, the world human population was 2,5 billion and in 2050 it is predicted at 9,3 billion.**

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Will we be growing different crops to feed to a different kind of Guernsey cow?

The loss of farm animal genetic resources that might help us to face the changing world of agriculture has been quite frightening. We need to ensure that the breeds we have left are properly managed so that they will have economic relevance in this changing landscape.

But, what must the focus be in the Guernsey? Ideally, she should be a healthy, fertile cow that will calve regularly and produce milk economically in a range of environments without too much involuntary veterinary intervention.

There is good evidence that selection for increased production has negative effects on the health and reproduction of dairy cows. Conversely, the selection for functional traits such as fertility, somatic cell count and other health traits has a negative correlation with production, but increases efficiency by reducing the cost of production.

The complex nature and low heritability of functional traits are often cited as a reason to exclude them from breeding indices. However, geneticists have shown that the considerable amount of genetic variation that exists for

functional traits justifies their inclusion in breeding objectives. Breeding for large cows of extreme dairy character has almost certainly been a cause of an increase of health and reproductive problems for the Guernsey.

If we continue to ignore functional traits by failing to give them sufficient weight in our selection procedures, we will reduce the efficiency of our cows by increasing disease incidence, reproductive failures and involuntary culling.

If we ignore the downward trend in female fertility it will continue to decline. Breeders often cite improved management as the key to improved herd health, but this is only part of the story.

Management plays a large part in improved production, but not many farmers would select bulls with negative production proofs for use in their herds.

**A sustainable breeding programme**

The Guernsey is a minor, small population breed. To survive in a competitive world, there must be a globally sustainable breeding programme.

A sustainable dairy cattle breeding programme should be characterised by:

- A continuous genetic improvement of productivity to keep the population commercially competitive in relevant areas for production.
- The generation of products, which have such value that they are marketable at a profitable farm-gate price.
- A broad definition of breeding objectives to take into account is a selection for all major economically important traits with a special restriction that fundamental characteristics of fertility, health and survival do not decline.
- Management of inbreeding at such a level that no depression of important traits resulting from increased inbreeding occurs. The effective population size should be monitored and selection practised to keep it above levels at which the breed is considered to be at risk of endangerment.

One problem is that the Guernsey breed has been declining in numbers for some time. The World Guernsey Cattle Federation has taken the initiative to launch a global breeding programme based on sound scientific principles, whereby the genetic diversity is considered in combination with selection for a continuously broader breeding objective.

At the 13th World Guernsey Conference between 13 and 16 July in Canada next year, relevant issues to address breeding goals will be discussed.

Two of the most pressing issues facing the breed are an integrated total merit index and female fertility and to develop a sustainable global breeding programme of the Guernsey breed.

**The benefits of beta case in A2**

Coupled with improved genetics, Guernsey farmers need to put a lot more effort into developing value-added Guernsey products. The traditional qualities of Guernsey milk and milk products are perhaps the best-kept secret of the breed. Guernsey milk has its own special taste, colour and mouth-feel and it has unique compositional qualities.

Among these unique qualities is the presence of the protein Beta-Casein A2 in the milk of approximately 96% of Guernseys. Most other European breeds carry a predominance of Beta-Casein A1. Guernsey cows can test A1/A1 or A1/A2 but the vast majority are A2/A2 cows.

Currently, the largest volume of A2 milk sales is in Australia where over 10 million litres were sold in the last reported year of trading by the A2 company. Other countries have small internal markets for A2 milk and some Guernsey herds are benefiting from specific sales.

It may be many years before sufficient evidence of an acceptable scientific standard is available to confirm or discredit the A1/A2 hypothesis and the proposed benefits of A2 milk.

In the mean time consumers have a choice, they can switch to A2 milk if they find that it helps. Guernsey breeders too have a choice. If they think that A2 could be important to their future profitability they can switch to using only A2/A2 bulls.



Gay van Hasselt and nephew Hugh with a newborn calf

## Focus on a **Guernsey** girl

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Gay van Hasselt grew up on a farm in the Winterberg region but never thought that she would one day be a successful dairy farmer, a pioneer in the Guernsey milking industry and operating a highly successful Angora goat stud.

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Today, she is milking between 30 and 40 Guernsey cows on their farm near Prince Albert in the Karoo, marketing her own fresh milk and manufacturing award-winning cheeses. The core genetics of Langrietvlei, Fountain Head and Ridgeland Guernseys, have afforded her the opportunity to win a list of prizes and trophies over the years.

Having learned about all the ups and downs of farming, and losing her husband and business partner, Clive, to leukaemia last year, this former teacher has many inspiring stories to tell on the subject she is most passionate about: farming.

### **Early beginnings**

In 1990, Gay started milking three Guernsey cows in a stone kraal on their farm near Prince Albert.

"The three Guernsey cows were on loan from Monty Markus from Oudtshoorn to clear up the parasites behind our ostrich chicks, and I began selling warm milk from my kitchen," she says.

Soon the demand for nutritious, fresh milk urged her to expand the Guernsey herd.

"Having grown up as close family friends of Buster Brotherton and his family who owned the Fountain Head Guernsey stud, sentiment played a

major role in this decision." Gay did, however, try to use other dairy breeds, but found they were just not able to cope with the Karoo's harsh conditions and temperatures.

"My Guernsey followers and dry cows are all put out to pasture in the Karoo veld, without any supplements. They always return healthy, robust and in a good condition with well-trimmed hooves. The Guernsey can handle extreme temperatures and these docile and fertile animals are well adapted to both the heat of the Karoo and the icy weather of Land's End," says Gay.

### **From backyard to business**

Once she had obtained a licence to sell milk, Gay began supplying to local schools and the hotel. The surplus milk during the school holidays led to her making yoghurt.

"I hadn't bargained on the fact that the locals regarded yoghurt as 'vrot melk' – I couldn't even get anyone to taste it! I then started offering to donate yoghurt for dessert at local functions and people came back for more," says Gay.

The yoghurt soon became a new favourite in town, but she still had excess products during the holidays. Gay took up a two-day cheese-making course at Elsenburg and began making cheese on a small scale. Her first feta experiment started out in a 20-litre cooler box.

"I started making hard cheese, using an old redundant 400 l milk tank, plastic buckets with holes drilled into them as moulds and plastic buckets of water with bricks on top as a press."

Her persistence was highlighted by winning national and international prizes for what they've called Prince Albert Royal and Prince Albert Regal cheeses.

### **A2 protein can change lives**

Many lactose intolerant people have found that they are able to use Gay's Guernsey products, without any side effects. Gay puts this down to the fact that 96% of Guernsey's have the A2 protein in their milk – the same protein found in goat's milk.

Val Knoche, a consumer who has seen the practical benefits of Guernsey milk, gives her personal account of how the A2 protein factor changed her life:

"About 15 years ago, I developed what we now know as an allergy to casein, one of the proteins found in milk. At the time, it was medically diagnosed as chronic bronchitis and chronic asthma, but the medication eventually led to osteoporosis.

"Early last year, a diagnostic allergy blood test showed the casein allergy. I have not been able to take milk or milk products for years and I had not found a calcium product without casein either.

“**The Guernsey can handle extreme temperatures and these docile and fertile animals are well adapted to both the heat of the Karoo and the icy weather of Land's End**”

"This was until we attended the Olive Festival in Prince Albert and visited Gay's Dairy to sample her cheeses. I happened to read her 'brag board' while waiting to be served and I thought that I would just try her type A2 protein in unpasteurised milk. I took one tiny mouthful and nothing happened – no throat closure or gasping for air!

"I have been using the milk and yoghurt regularly ever since and have found that when I eat something with casein and feel my throat closing up, I drink some of Gay's milk and it clears my airways."

### **Guernsey's stamp of approval**

Gay accredits her achievements to the top quality, flavoursome, well-balanced butterfat and protein ratio of Guernsey milk.

"In my business, where I add value to my product by making yoghurt and particularly cheese, it is important to have good milk solids in order to get a higher conversion rate. On average, I use 8 to 8,6 l of milk to make 1 kg of cheese.

"I guarantee that my milk contains no anti-biotics, hormones, additives or preservatives. In order to guarantee the above, I only use milk from my own cows; even if I cannot keep up with the demand, I will never take the risk of compromising

quality by buying in milk." Gay's advice to fellow dairy farmers is to create a niche market for their product. "Do this by adding value to your own product. Then you will not be subjected to the whims and fancies of huge dairy corporations."

# SA Guernsey Breeders' Society



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# Local Guernseys impress

Langrietvlei Justins Mix



There are some high-quality Guernsey herds in South Africa. Guernseys adapt well to the varying climatic conditions and farming systems.

Whether your herd is on irrigated pastures, or on what many would describe as near desert conditions, Guernseys thrive and produce well.

One of the prime examples of this impressive dairy breed is Langrietvlei Justins Mix from the sire Langrietvlei Velour's Justin owned and bred by Reuben Kotze of the Langrietvlei Guernsey stud near Hopefield.

## Breeding values

The South African breeding value for this animal is +40 *l* milk +19,2 fat +17,3 protein +0,01% fat +0,06% protein. **TDM**