

Israeli design forms basis for modern

The most southern province of the country of South Africa is called Western Cape. This is the region with the largest dairy operations in the country, as well as the most registered Holsteins. 'Because the area is not suitable for the production of high quality forage, they are very focussed on performing as well as possible in all aspects,' says dairy consultant Chris Fourie. A perfect example of this is the farm of the Loubser brothers – here is their story.

It is a sunny Saturday morning in January. We find ourselves in the province of Western Cape in South Africa, south of the equator and so it's warm on this January day. The exact location lies north of Capetown; the dairy farm owned by the Loubser family close to Durbanville. There are five brothers in the family and together they manage a dairy operation and their own dairy processing plant. Johannes and Viljee are the two brothers that manage the dairy farm and Johannes provides us with commentary. As we walk with him into the spacious office – where large rooms are available to accommodate tours – we go past a large window with a direct view of the parlour. There our eyes land on a special cow. 'That's right, she is indeed an extraordinary cow, Emory A1100. Likely she's the best in our entire herd. Until now, in 5 lactations she has produced 95,173 kg. Yes, really!' Johannes is direct in his approach and thus he immediately heads to his computer. In the wink of an eye, he displays the outstanding

lactations of this Emory daughter: 11,500 kg as a heifer, and then 20,676, 22,900 and 26,170 kg. And now at 222 days, she has produced 13,882 kg in her 5th lactation. 'Unfortunately we only have 1 daughter. That's why we are planning to flush her, for as long as it's possible, to get as many embryos from her as we can. Because her only daughter, from the South African bull Mark 3, also produced 20,570 kg in 480 days. That's the kind of cow that we want to milk,' says Johannes. Yes, Emory A1100 and her daughter are well above the herd average in the Loubser barn, which is already at a respectable level: more than 13,500 kg with 3.8% fat and 3.2% protein with 3x milking. And that from 1200 milking cows!

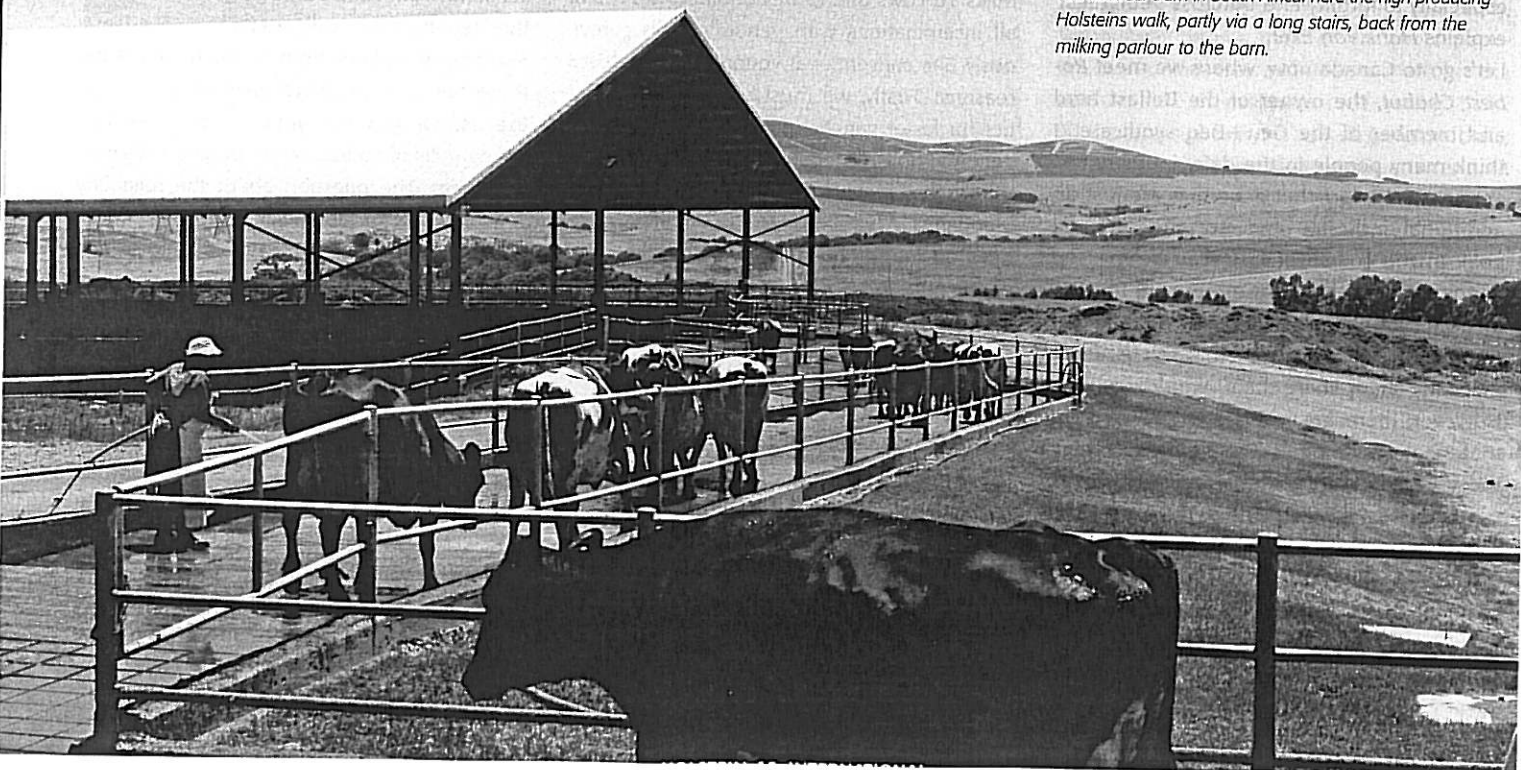
ISRAELI EXAMPLE

Johannes explains the background of their farm. 'My grandfather bought the farm beside us in 1945. Later on, my dad bought 50 cows from him and started to farm here in 1955. In

2003, we realized that the facilities were entirely unsuitable for Holsteins with their unbelievable potential to produce milk, so we started researching. Thorough research. We wanted to do it right the first time, everything 100%. So I travelled to Israel and the US. The Israeli system seemed the most suitable for our farm. Then we decided to hire an Israeli engineer to lay out the perfect farm for us. He was here for 2 weeks and after that we got to work. The construction began in 2004 and we started milking in August 2005. We are still extremely satisfied with how it turned out. That was one of the best decisions that we ever made, to ask him,' says Johannes enthusiastically. 'If I could do it all over again, then I wouldn't change a single thing,' chuckles Loubser. 'You know, now it's enjoyable for everyone. Everyone who works here comes and does the work with satisfaction. That is really important.'

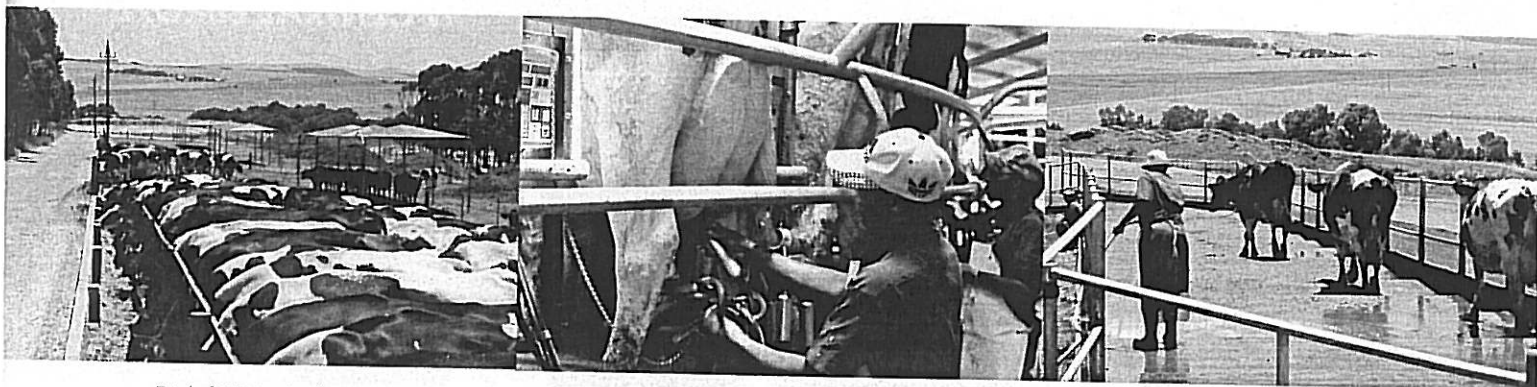
Currently 1200 cows are being milked. In total there are 2500 animals, including young stock

The Loubser barn in South Africa: here the high-producing Holsteins walk, partly via a long stairs, back from the milking parlour to the barn.



South African farm

Reproduction



Total of 2500 animals ...

...including 1200 milking cows ...

... with high longevity as the breeding goal.

and dry cows. All of the work is done by 30 people. However, there are already new plans in the works. Johannes: 'We are going to expand to 1800 milking cows. Our rotary parlour now runs 10 hours a day, and we want to increase that to 16 hours. Then we better utilize our investment. In addition, the entire farm and team are ready for an expansion like that.'

MILK AND YOGURT

All of the milk from the farm, about 45,000 kg per day, goes to the Loubser's dairy processing plant. In total, 110,000 kg of milk is processed there each day, the rest coming from other dairy farmers. On location, the milk is processed for fluid consumption and yogurt, under the brand name 'Fair Cape'. Does owning their own processing plant result in a better milk price for the Loubser's? 'Oh no. My brothers manage the plant and want optimal profit. So they certainly don't pay us much more than the market-determined price. And they're right, that's how the economy works,' says Johannes realistically. He shares that the recent milk price was 3.25 Rand. (That is €0.33 and US\$0.45, on 15-4-2010.) This price is

Table -
TMR for the milking cows

KG	FEED
10.5	oat silage
9.5	corn silage
4	concentrate
4	alfalfa
3.5	soya
1.8	wheat straw
1.5	apple peels
1.4	cotton-seed
1	molasses

based on minimum components of 3.5% fat and 3.0% protein; if the components are lower, then the price is reduced. The same is true for somatic cell score.

TOO MUCH MILK?

Loubser is clear about sire selection: 'Longevity. The ability to produce is there. We want our cows to last for a long time. So I need a functional dairy cow with sound feet & legs, strong

udder attachments, and good fertility. All of these traits are encompassed in 1 trait: longevity. That's enough. Because as was already mentioned, the ability to produce is there. Stronger yet, at times I am a bit concerned that cows will give too much milk for their own good. Cows like this can "break-down" and then we have nothing. If we're not careful, we'll lose our way. And so we need one thing: longevity.'

Asked about the calving interval, Johannes is very clear. 'I'm not interested in that at all. Plain and simple. Of course, I know what it is: 438 days. But that's really not what we're interested in. We even try to increase that somewhat. That's why we never breed before 115 days. You know what our biggest problem is? Putting cows dry when they still give 35 kg milk! Then it is clear that you would rather continue milking them. So don't ever ask me about an average lactation; I would much rather tell you about our average daily production.' Johannes heads to his computer again and after a number of clicks, a screen appears. 'Look, in the near future, I need to put 31 cows dry that produce an average of 28 kg milk. I really don't want to put milking cows like that dry, it's really stressful, but they are just 67 days away from calving. I have to,' explains Loubser, who puts them dry by dropping from 3x to 2x milking and by giving them a sober ration.

HEAT DETECTION

Loubser is satisfied with the reproductive performance. 'The average number of inseminations per cow is 2.3, with the heifers it is 1.4 to 1.5. All animals are checked at 42 days after insemination - if there was no sign of an earlier heat. This system works well. But the most important aspect in the barn is heat detection. With more than 1000 cows, human resources are limited and so we make use of technology: the Israeli Afikim system. Each cow has an activity meter that measures the number of steps per hour. If a cow is in heat, then that number

increases by 300 to 400%. This system runs 24 hours per day and works perfectly for us.'

The cows are fed twice a day; in between the feed is pushed up several times. 'We don't want more than 3 or 4% feed left over,' says Johannes, who explains that of the total TMR (see table) only a portion is home grown. 'Only oat silage and wheat straw grow on our own land, the rest is purchased,' continues Loubser.



Johannes Loubser: 'The modern Holstein cow shouldn't be put dry too quickly.'

The farm has 2500 ha where oats and wheat are primarily grown.

FEMALE LINE

Now back to sire selection. Which bulls have performed the best in the last number of years in the barn? 'Oh, there's a whole group of them. Especially December, Wallace, Win 395, Mattison, Deann, Die-Hard, Dolman, Boss Iron and Olympic have provided us with sound dairy cows. But now we want to work harder on the maternal line as well. With the computer, I can very accurately identify the most profitable cows: Like the Emory. We want to work with them more intensively via ET because genes like that shouldn't be lost. Those are the cows that have proven that they can perform well under our conditions. And thus they provide a good foundation for our future,' concludes Loubser. ●