1 - Introduction

There are both advantages and disadvantages to dairy farming in the tropics:

Advantages:
- Located where the milk is required
- Labour is cheap
- No volatility in the market so the milk price is stable
- Good deals on most products

Disadvantages:
- Forage quality
- Staff experience
- Heat and humidity
- Genetics
- Governments
- Lack of after sales support

Forage quality

Forage quality is the number one problem. We often rely on middle men to supply our maize and it has been almost impossible to get good quality. Very often the maize is mixed, so that some contains cobs and the rest is just the stalk – losing three litres per day? Cutting it at the wrong stage, lack of starch – losing two litres per day? With all the maize seed available in Indonesia being sweetcorn, we have yet to find a variety with a D-value of over 64 (74 D-value in many other parts of the world). This means our cows are not utilising 10% of their feed – losing three litres per day? We can produce it a lot cheaper if we do everything ourselves, including paying back the cost of the land.

Staff experience

This is no longer a problem. Initially, I thought we had trained our staff in the class room well, but we had not! Going from 0-300 cows was terrible, from 300-700 went well and from 700-1700 it went like a breeze!

Heat and humidity

If you are located 1500m up a mountain the temperature is <25°C in the dairy sheds in the day and as low as 15°C in the evenings without cooling. The US project managers of a new 14,000 cow dairy are building a trial farm at sea level. This will be a brutal temperature for cows, but they are going to use all the latest technology from the US. I wish them well!

Genetics

If we get our forage correct then genetics will be our biggest challenge. In general the cows imported from Australia are not good enough, there is so much pressure coming from exports to China that there is quite simply not enough good ones to go around. Long term this will sort itself out. When home bred heifers come through a real difference is seen.

After sales

Too many companies in Asia are just interested in sales, they do not care about servicing or taking care of us after the sale. There are operations that have half a million dollars worth of spare parts in their stores.

Governments

For me it is amazing that the economies out here are growing as fast as they are, and a lot of the time it is despite the government trying to stop you! For example, importing anything into Indonesia is very difficult – import permits are required for almost everything and its very hard to know what tax you will have to pay.

In future issues of International Dairy Topics I will be looking at some of the specific challenges facing dairy farmers in the tropics.

2 - Fertility

Ultra Jaya Farms, Indonesia
1,800 cows in lactation (milking)
14,000 cows in lactation (currently building)
8,000 cows in lactation (in the planning stage)

There are currently 1,450 cows going through the parlour, with 350 dry and a further 1300 young stock. The farm is in the tropics, however it is 1430m up a mountain with temperatures in the daytime reaching 30° in the sun and down to 15° in the evenings. Temperatures in the buildings in the daytime never reach over 25°.

Presently the farm is doing well and has been for more than nine months. What are we doing and why are we doing it? I am not so interested in conception rates, services per conception and to a certain extent pregnancy rate (although the latter has been running at more than 22% for the last six months), I am interested in the number of cows pregnant per day.

Rations

We try not to change rations. We know our forage is holding us back, maybe to the extent of six litres/day. All maize in Indonesia is sweet corn, not forage maize and we do not grow it ourselves. We are currently changing this and I would expect us to be growing all of our maize requirements in house over the next year. We did change a few things in our ration some 18-24 months ago, with the main ones being the addition of Selplex, vitamin A, D and E.

Insemination techniques

We used to have activity meters on all cows but I have now sold them. Some two years ago we put in a breeding rail and started chalking the cows as well. We ran the two in tandem for six months and, on average, we inseminated double the amount of cows using the chalk rather than the activity meters. It takes us around seven hours to milk all our cows once, so on exiting the parlour they go through a sort gate (we still use this for pregnancy checking, picking out cows for foot trimming etc) and then enter a herringbone style rail that can hold 30 cows. They line up very easily and are inspected for chalk disturbance. We had some great help from Bob Fox from WWS when starting this and I have to say some of the things he taught me were great. We will be inseminating cows now that, in the past, we never would have, for example metritic cows! All my fertility staff are in one area, so it is good for cows and staff and the results are proving this.

Full synchronisation program

A full synchronisation program means that every cow will have been inseminated by 100 days. This is a very simple routine for staff to follow and they follow it very well. There is nothing special about this routine. It will be the same at all farms around the world.

Points to take from this:

- Make sure your minerals and vitamin levels are correct.
- Make sure the way you inseminate your cows is correct for your cows first and then your staff.
- Make sure all cows are in a simple program for getting them pregnant, if you do not put it in (semen) how can you win?
- Fertility is everything. It is not usually the cow that will not get pregnant, it is management failing to give her the chance to get pregnant.

You must remember that you are better off having a program that is followed 100% by your staff, rather than having the 100% perfect program on paper, that your staff only follow 50% of the time!

3 - Feeding

Ingredients

Always buy the best quality feeds at the lowest price, never the cheapest at the lowest quality. The main ones for us are DDGS maize, soya bean meal, copra caustic wheat, biscuit, molasses, maize silage, king grass and wheat straw. Or, as I call it, 3 forage, 3 protein and 3 energy.

Rationing

I do all the feed rations myself. I would never trust anyone to feed my cows. When balanced, it will give you milk and fertility, so a good ration program is essential. Ultra Mix is the one I use. It seems very complicated, but when you have learnt it, it is easy. We use Trioliet Mixers fitted with digi-star's Wifi system. This is a great system. It tells my staff what to feed the cows and tells me if they do not! I feed all lactation cows 5% over what we think they will eat and any feed that is left in the morning is weighed and fed back to young stock. The ration is then adjusted up or down accordingly. We call this 'cows up or down', meaning the whole ration is up/down NOT just the forage. With everything at UPBS we try to keep it simple. We have nine different rations, with six of them (90% of animals) being fed from two concentrate premixes – the first for maintenance +34 litres, and the second for maintenance +27 litres, with different class of animals getting different percentages.

Forages

- King grass. Around 12kg fed to lactation cows per day. It must be cut at no higher than 1.2m. This is chopped and fed green, only 12%DM. We can never make it into silage as it is impossible to get it dry enough. It is not the best forage in the world, but fantastic at turning dirty water back into forage.

- Wheat straw, imported from Australia, is an essential part of keeping the fermentation vats healthy. Only 0.2kg for lactation animals, but dry cows could be eating 5kg.

- Maize silage bought from suppliers can be a big problem as we have no control over variety, quality and dry matter. We have plans to purchase all the land required for feeding 10,000 lactation cows, plus 10,000 young stock. We will need 1000Ha to achieve this. We can grow three crops of maize per year (nothing is better for kg DM/Ha) and by doing this it will give us a very significant increase in milk per cow per day.