

returned to the farm in bottles. "We are heavily protocol driven due to the size of the facility," explains Mr Mosley.

"Calves are first tubed with colostrum within the first two hours and then receive a second bottle, and possibly a third, before moving onto pasteurised milk. The colostrum each calf receives is also monitored for quality to ensure calves are receiving the best possible."

Cows and calves receive vitamin A and E and selenium injections and cows are given IV fluids as needed, with calves leaving the unit within 24 hours of birth.

"All female calves are also weighed and records sent to the heifer calf manager so he can track daily live-weight gain," says Mr Mosley.

Recording is essential for the smooth operation of the unit, he stresses. "We record heifer number, time calved, time given first and second colostrum, weight and member of staff responsible on individual farm sheets."

**DRY COW MANAGEMENT**

- \* Cows are dry for 52 days and housed on open lots
- \* Stock move towards central pens as they come close to calving
- \* Close-up cows are positioned around a central aisle leading to a calving barn so they can be easily pulled out for calving
- \* Cows are in the close-up pens for 21 days prior to calving
- \* Animals are low-stocked in groups of 125 close to calving and



**DOUBLE A DAIRY KEY FACTS**

- \* 13,000 cows, averaging 31kg a cow a day
- \* SCC: 120,000 cells/ml
- \* 140 full-time employees
- \* Separate transition, parlour, manure and feed managers
- \* Cows housed mostly in cubicles with 3000 in open lots
- \* Each barn 0.25 miles (400m) in length
- \* Heifers grouped separately until second lactation
- \* Three-times-a-day milking
- \* Four 50:50 rapid-exit parallel parlours
- \* Presynch/Ovsynch programme (see fertility box, right)

about 250 before this

\* Close-up cows have shade and soaker lines to keep cool and maintain intakes during summer

\* Soaker lines are on automatic sensors and run for varying times depending on temperature

\* Close-up cows are fed DCAB minerals and urine pH is taken once a week

\* Heifers are in separate groups and remain in fresh, breeding and first lactation pens until they are mixed when pregnant for a second time

Fresh cows remain at the facility for 5-12 hours post calving and then return to their home dairies to enter the fresh cow programme:

**Double A Dairy fresh cow management**

Cows and heifers are split into different pens in the fresh cow building where they remain for 2-3 weeks, says Brandon Andersen of Double A Dairy.

"Getting close-up cow management right makes managing fresh cows so much easier. And having high cow numbers means having basic protocols is essential."

Consequently, the fresh cow unit runs a regimental system assessing and treating cows. "Stock are locked in yokes and checked daily - we have a team of staff walking in front of cows assessing intakes and general appearance and a guy walking behind taking temperatures."

Cows are marked on the rump with coloured paint depending on health at assessment.

"Animals marked green are OK, those marked blue have not eaten and those red have a high temperature." This means a cow's health can be assessed simply by looking at rump markings.

The first team of assessors is followed by a treatment crew who give set medication according to the problem. "When a cow's temperature is above 40C a red clip is put on her yoke so treatment staff know to administer an antibiotic shot, aspirin once a day for three days and glycol to stimulate intakes."

**Getting close-up management right makes managing the fresh cow so much easier, says Brandon Andersen.**



**How to achieve top-notch fertility**

**FEEDING**

\* Feeding a consistent diet is fundamental to achieving good body-condition and high fertility in heifers.

At East Valley Cattle, Malta, Idaho, 40,000 heifers are reared in open lots from about five months up until 18 months, says unit owner Bill Millenkamp.

"Our feed has got to be well mixed and uniform to achieve results." And on such a large scale, TMR mixing has to be carried out using a feed mill and side tipping trucks (pictured).

The unit feeds a forage-based diet, including whole-crop silage, haylage, alfalfa and sugar beet, with 100 loads going out a day. "It takes 4.5 mins to make each load and 24 secs to load each tipping truck from the mill."

The feeding here is exceptional, with feed in front of animals 24/7, says Luke Wood, RMS technician.

"But you do see a marked drop in fertility when the diet is switched

from second- to third-cut silage."

It's all about sourcing quality feed, explains Genus's John Cook. "Body condition has a huge influence on fertility - when too much starch is included in the diet, heifers will put on too much condition, stimulating liver blood flow and metabolising fertility hormones."

**CULLING**

\* Culling out poor heifers is all part of maintaining high fertility, explains Mr Millenkamp.

"I assess all breeding heifers and

**\* How you manage the fresh cow dictates her future reproductive health**

Phil Salkeld, ABS

**Consistent feeding and providing for extreme temperatures help maintain fertility on large USA units.**



pick out which to use for breeding and which to go for beef - the dairies may lose \$100-\$200 (£69-£138) an animal, but it is good practice to stop these poor animals entering the main milking herd."

**OVSYNCH/PRESYNCH PROGRAMMES**

\* Most large scale dairy units visited in Idaho were implementing strict ovsynch/presynch mating programmes to give cows the best chance of getting in calf.

Large herds need to be proactive when it comes to fertility, says Mr Cook.

"By using hormone treatments you are essentially creating 'pregnancy traps'."

At Double A Dairy, the presynch programme involves three prostaglandin injections, 14 days apart, with the third prostaglandin administered on day 58 post-calving, explains John Andersen, Double A

waiting period, explains Mr Cook.

"Cycling cows will then express natural heats, so farm staff will aggressively heat-detect."

The last presynch shot is given two days before the end of the voluntary waiting period and then staff heat-detect for 14 days.

"At the end of the 14 days, anything not expressing heat is probably not going to, so they are enrolled on the ovsynch programme."

On day zero of ovsynch, the first gonadotropin-releasing hormone (GnRH) injection is given and a progesterone CIDR is put in if the farm is following a CIDR synch/ovsynch programme.

At day seven a prostaglandin injection is given and the CIDR pulled out. Two days later another GnRH injection is given and, 24 hours later, these cows are served.

Before using a CIDR, conception rates were about 25%. Now they are 35%, says Mr Andersen.

"On ovsynch days we may have 120 cows to breed, so having two permanent ABS inseminators on site is essential," he says.

"ABS staff are part of the team; they walk, chalk and inseminate cows and are the reason we have such a successful breeding programme."

Double A is achieving an average 21% pregnancy rate, 38% conception rate and 65% heat detection.

**FRESH-CALVED COW**

\* The lifeblood of any dairy is the fresh calved cow, says Phil Salkeld of ABS UK and EU technical services. "How you manage the fresh cow dictates her reproductive health for the rest of her lactation."

"It is essential cows transition well to ensure fertility is right - follicles develop 60 days before ovulation so, when cows are not treated straight away, they will continuously produce a cycle of poor follicles."

**TEMPERATURE CHALLENGE**

\* In Idaho, temperatures can range from more than 40C to -12C.

This creates fertility challenges on both open-lot and housed systems, with most farms



experiencing drops in pregnancy rates during summer.

At Luis Bettencourt's Double B Dairy, Murtaugh, where 10,500 cattle are outside on open dirt lots, pregnancy rates have been known to drop from 24% in spring to less than 18% in summer, explains Kent Olmos, ABS Global.

"As a result, we advise using misters and coolers to keep pregnancy rates above 20%."

Shades are positioned north-to-south (pictured) at an angle of no more than 30° to maximise the shaded area. Straw is also moved under shades to act as a heat sink and encourage cows to lie. aly.balsom@rbi.co.uk

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**IDAHO VIDEOS** Find out what UK dairy farmers think we could learn from large-scale units in the USA, and their answer to the question "Do you think high cow numbers means low cow welfare?"

You can view our videos at [www.fwi.co.uk/idaho](http://www.fwi.co.uk/idaho) You can also read what consultants and US farmers thought.

