INSIDE THIS ISSUE

• Building on our strengths for the future
• Focus on summer grazing
• Beating heat stress
• Fertility focus to boost margins
Earlier this year, NWF National Business Development Director Richard Hughes visited the Keenan headquarters in Ireland to hear more about the PACE system. Here he gives his feedback from the visit.

PACE has been developed to enable consistent physical ration preparation, to track performance and generate global performance and feed input data. Keenan scientists, field nutritionists and engineers are working with the largest feed efficiency database in the world.

Keenan’s sophisticated mech-fibre PACE control unit combines feed information, production requirements and processing control to produce and monitor optimum rations that consistently deliver performance to agreed production targets. All this is based around the forage on farm and what the production targets are. Feed intake is monitored daily, as well as costs and feed efficiency.

Using PACE, from 2013 – 2014, cows produced 46kg more solids per annum, and feed efficiency improved from 1.19 to 1.29. Data showed that 3,160 farms in 14 countries using the system produced more milk per cow after 12 months.

Visit www.keenansystem.com

New NWF Agriculture MD: ‘Building on our strengths for the future’

New Managing Director of NWF Agriculture Andrew Downie says he will be using the business’s wealth of experience and ‘world class sales team’ to take it forward into a bright future. Mr Downie, who joined NWF from The Silverspoon Company where he had been Head of Sugar Operations, said he had been hugely impressed by the passion and commitment shown by all staff during his first couple of months in the role.

“I’m thrilled and excited to be given the opportunity to take NWF Agriculture forward. It’s a business more than capable of dealing with the challenges facing the marketplace; the company values of customer focus, open and honest communications, looking ahead to being better and better and the ‘one team’ mentality will reinforce our core strengths as we move forwards,” said Mr Downie.

He added that while recent changes NWF had experienced in staffing were potentially unsettling in any business, such change also opened up great opportunities too.

“Of course the dynamic changes, but as an outsider joining the company it has been clear to me just what an excellent team we have at NWF. Already, I have seen younger managers stepping forward to take up the challenge of driving the business forward and that is excellent for the future.

“NWF is a significant player in the UK market and has the advantage of sufficient scale to allow it to grow and maximise its asset base. At the same time as we continually target growth, I believe the company is responsive and nimble enough to take advantage of opportunities as they arise that a larger business, with multiple stakeholders, would struggle to do.

“I am looking for us to continually respond to a marketplace which offers the moving targets of a changing customer base, shifting industry patterns and turbulent milk price. We will be looking to optimise what we do today, think about what we offer tomorrow and be ready to respond to acquisition opportunities as they arise,” said Mr Downie.

He praised the success of the Wistland Mill operation in Devon as a great example of establishing scale supply of quality feed to a region and said NWF would be using the ingredients of that success in developing the Dumfries business.

“At the moment we have a foothold into a huge market with the Dumfries plant; it is my intention to become a major player in that marketplace. But it won’t stop there – it is about constantly looking for the next opportunity,” said Mr Downie, who added that customer service and innovation in products and services would remain at the heart of everything NWF did.

CPD for NWF sales team

As part of NWF Agriculture’s commitment to excellence in customer service and feeding advice, all the NWF sales team are registered on the AIC Feed Advisor Register. The Feed Adviser Register (FAR), run by the Agricultural Industries Confederation (AIC), is a new register for feed advisers and is intended for people that provide advice on feeding livestock to farmers.

The register has been set up by AIC and the feed sector in response to Government, industry and customer demands predominately in the areas of Greenhouse Gas emission (GHG) reductions within the livestock sector. There are currently over 1,300 feed advisers in the UK on the register, monitored and audited by FAR, which provides a range of continuing professional development (CPD) measures to maintain advisers’ FAR status.

The NWF sales team carry FAR ID cards to use on farm demonstrate that they are fully compliant with the FAR. For customers, the FAR provides assurance of the standard of advice they receive from a registered feed adviser.

Further information on the scheme can be found on the FAR website at www.feedadviserregister.org.uk

“NWF is a significant player in the UK market and has the advantage of sufficient scale to allow it to grow and maximise its asset base. At the same time as we continually target growth, I believe the company is responsive and nimble enough to take advantage of opportunities as they arise that a larger business, with multiple stakeholders, would struggle to do.

“I am looking for us to continually respond to a marketplace which offers the moving targets of a changing customer base, shifting industry patterns and turbulent milk price. We will be looking to optimise what we do today, think about what we offer tomorrow and be ready to respond to acquisition opportunities as they arise,” said Mr Downie.

He praised the success of the Wistland Mill operation in Devon as a great example of establishing scale supply of quality feed to a region and said NWF would be using the ingredients of that success in developing the Dumfries business.

“At the moment we have a foothold into a huge market with the Dumfries plant; it is my intention to become a major player in that marketplace. But it won’t stop there – it is about constantly looking for the next opportunity,” said Mr Downie, who added that customer service and innovation in products and services would remain at the heart of everything NWF did.
With the majority of cows now out and warm, wet weather pushing grass growth on, ensuring dairy cows are making the most of summer grazing is a critical part of management. To do so, it’s worth recapping on some key points:

1. Leaf stage 3-3.5 is the best for grazing grass.
2. The ideal cover range for grazing is 3,300-1,400kg DM/ha. At first grazing aim to hit a residual of 1,400 kg DM as this will influence quality for the remainder of the season.
3. Average growth during season 60 kg/ha, with a range from 20 kg DM/day up to over 90 kg DM/ha/day on few occasions during optimum conditions in the season.
4. Average realistic milk yield from April to September in M+ is 7 to 10 litres.

Grass growth, or more specifically leaf appearance rate, is influenced predominantly by soil moisture and temperature. In the spring, a new leaf appears every six days (allowing for an 18-day grazing rotation) but, as summer progresses, this drops off to every seven to nine days (a 20-30-day grazing rotation).

As you would expect from the growth curve of grass over the growing season, early May to late June/early July is the peak milk from grass period. The research farm was able to extend this at both ends of the season by both close management of the sward (removing surplus and managing shortage) and identifying ‘quality’ grazing time.

The latter is based on SAC research which showed grazing activity over a 24-hour period was lowest between sunset and sunrise, but showed a peak post-afternoon milking during the period 7-9pm. Whilst not practical for all herds, for those looking to maximise milk from grass it can be worth offering fresh grazing in the evening with the option for cows to then return to housing or buffer feeding areas after sunset.

Know what you can expect
One of the issues around milk from grass is how much a cow can physically eat (both fresh and dry matter intake). Where grazing periods are curtailed (for example by accessibility, availability or ease of management) intake will be a limiting factor.

In a six-hour grazing period, DMI can vary from 7.2 kg to 10.8 kg; even with eight hours solid grazing, the highest DMI you might expect is 14.4 kg. On a sward with an ME of 12 MJ/kg DM, a cow needs 14 kg DMI to achieve M+ 17 litres.

Rightly, many dairy farmers look to maximise milk from grass; to do so, sward quality, cow management and accurate information on what you have available is essential. NWF offers technical advice and grass analysis via the NWF sales team and the Technical Team to ensure you make the most of grass this summer.
When it comes to fertility, getting the ration balanced for energy is critically the first step – however it’s still possible for copper levels to trip us up. Copper sulphate is the widest used supplemented copper element and is a common inclusion in dairy cake. It is normally supplied at a suitable level to not cause any toxicity concerns, yet will help bolster naturally occurring copper levels in slagers.

One of the biggest problems with using copper sulphate, however, is that if the diet naturally contains an increased level of antagonists such as molybdenum or iron, then the actual copper availability from copper sulphate in the rumen is greatly reduced. This means the copper available to meet the cow’s requirements is also reduced.

In the past, the diet has sometimes been deemed ‘low in copper’ and advice has been to ‘feed more copper’. This extra copper sulphate is no more available to the cow than the original supply, however it is still circulating in the body and is eventually stored in the liver. If the cow is then subject to stress (calving, for example) then the liver dumps a massive amount of this stored copper into the bloodstream in toxic and fatal amounts.

Fortunately, there are alternative sources of copper available for supplementing a diet with antagonist concerns.

There is also a chemically-engineered source of copper, the exterior of which is protected by a thin protein layer which allows it to pass through the rumen, avoiding all antagonist challenges, and into the blood stream via the small intestine. There is also a chemically-engineered source of copper, the exterior of which is protected by a thin protein layer which allows it to pass through the rumen, avoiding all antagonist challenges, and into the blood stream via the small intestine.

The ultimate key to copper concerns is based on gathering information:

Address your ration with your feed advisor; is it actually meeting the energy requirements of a peak yielding cow?

Complete a copper audit on farm with your feed advisor. Include silage mineral analysis, bone hole water analysis, current mineral feed rates, boluses, bucket licks etc. What is your total copper delivery?

Address any antagonist levels identified in your silage mineral analysis and water supply. Are these historically high? NWF can provide a bespoke mineral to be fed alongside concentrates for these situations, providing protected copper supplies to assist; however this must be done in conjunction with a copper audit to evaluate the total amount of copper being fed on farm.

If you have any queries, please contact your NWF Sales Specialist or call 0800 756 2787

Keeping cows cool during extended periods of summer heat and sunshine in our normally temperate climate can be challenging. Rob Harding, NWF northern team sales specialist, looks at beating heat stress.

Fresh calvers and high yielding cows are particularly susceptible to metabolic disturbances. Already under the metabolic stress caused by the demands of lactation, a drop in dry matter intake as often seen during hot weather only exacerbates the problem for dairy cows.

Heat stress effects rumen pH in two ways: firstly, DMI is decreased which results in less saliva overall, less salivary buffer flow to the rumen and therefore reduced rumen pH. Secondly, heat stress also brings on slobbering, which means less saliva reaching the rumen and consequently a reduction in rumen pH as buffer salts are lost.

While grazing cows struggling to cope with soaring temperatures outdoors is an obvious cause of heat stress, it shouldn’t be forgotten the problem can occur in housing too. Dutch dairy vet Joep Drissen and his VetVice team specialise in CowSignals training, barn design and dairy management; he says it’s easy to tell when cows are feeling the heat indoors.

“What do the cows tell you? If you see cows sticking their nose out of the door or window on a hot day, that’s their way of asking for more fresh air in the building to cool down, often they will eat less, because they cannot cool down.

“In these buildings, you also see cows eating at the ends of the building where there is more fresh air and light coming in. Cows can eat here and cool down at the same time by breathing in dry air,” says Mr Drissen.

When cows are given the option to eat from feed tables either inside or running down the outside of a barn (with or without roof coverings), they almost always eat more outside. This is because of the improved light and air; something to factor in when designing a new cow shed.

What you can do to combat heat stress

It should go without saying that plentiful, fresh water should be available at all times. Water intake helps cows cope with heat stress; bear in mind that, while cows can drink at 15 litres per minute, they only drink for about 30 minutes per day, most of it within 60 minutes after milking, so adequate trough numbers, capacity and flow rate are critical.

If cows are showing signs of heat stress indoors (multiple cows breathing 30-40 times per minute, for example), you need to bring more fresh and dry air from outside. This means fans – and other infections.

Keeping cows cool during extended periods of summer heat and sunshine in our normally temperate climate can be challenging. Rob Harding, NWF northern team sales specialist, looks at beating heat stress.

Fresh calvers and high yielding cows are particularly susceptible to metabolic disturbances. Already under the metabolic stress caused by the demands of lactation, a drop in dry matter intake as often seen during hot weather only exacerbates the problem for dairy cows.

Heat stress effects rumen pH in two ways: firstly, DMI is decreased which results in less saliva overall, less salivary buffer flow to the rumen and therefore reduced rumen pH. Secondly, heat stress also brings on slobbering, which means less saliva reaching the rumen and consequently a reduction in rumen pH as buffer salts are lost.

While grazing cows struggling to cope with soaring temperatures outdoors is an obvious cause of heat stress, it shouldn’t be forgotten the problem can occur in housing too. Dutch dairy vet Joep Drissen and his VetVice team specialise in CowSignals training, barn design and dairy management; he says it’s easy to tell when cows are feeling the heat indoors.

“What do the cows tell you? If you see cows sticking their nose out of the door or window on a hot day, that’s their way of asking for more fresh air in the building to cool down, often they will eat less, because they cannot cool down.

“In these buildings, you also see cows eating at the ends of the building where there is more fresh air and light coming in. Cows can eat here and cool down at the same time by breathing in dry air,” says Mr Drissen.

When cows are given the option to eat from feed tables either inside or running down the outside of a barn (with or without roof coverings), they almost always eat more outside. This is because of the improved light and air; something to factor in when designing a new cow shed.

What you can do to combat heat stress

It should go without saying that plentiful, fresh water should be available at all times. Water intake helps cows cope with heat stress; bear in mind that, while cows can drink at 15 litres per minute, they only drink for about 30 minutes per day, most of it within 60 minutes after milking, so adequate trough numbers, capacity and flow rate are critical.

If cows are showing signs of heat stress indoors (multiple cows breathing 30-40 times per minute, for example), you need to bring more fresh and dry air from outside. This means fans – and other infections.

NWF dairy diets include Cell Shield®, a powerful anti-oxidant designed to optimise production and cattle health. Cell Shield® supports and regenerates vitamin E within the cow’s system, helping improve immune response, which can help reduce somatic cell counts as well as the risk and severity of mastitis and other infections.

For information on the NWF range of summer dairy feeds and supplements, visit www.nwfgariculture.co.uk
We had been dairying here at Cwmnofydd up until 1998 but went out of the industry for family reasons and I scaled things back to just sheep for 15 years to focus on my children. When Thomas came back in 2012, it seemed the right time to go back in,” says Owen.

“The farm is right on the urban fringe of Caerphilly and only 15 minutes from Cardiff, and we have all the problems associated that: people wandering all over the place since the Right To Roam legislation came in, theft, gates left open and dogs worrying the sheep. We’d built up to 650 breeding ewes but those have now been reduced to 240 and we have 80 milkers plus 50 followers.”

Once the decision had been made, father and son started buying in pedigree Holstein heifers from dispersal sales and the Sedgemoor auction centre. Milking began in May 2013 on the 300-acre unit and the herd now has a rolling 305 day average of 9,250 litres at 3.95% butterfat, 3.2% protein.

“We made the decision to go with Holsteins as we wanted the production – modern breeding means there’s more focus on fertility and mobility and we are going for the ‘middle of the road’ type rather than show types. When we started milking the first time around, the cows were doing 6,000 litres; there’s no point going back to that,” says Owen.

The ration is based on what the Tamplins describe as a “very traditional and simple” grass and maize silage fed out in ring feeders.

“Obviously, in a system like ours, we are very reliant on forage quality; last spring was very challenging for making silage and we ended up with some wet, acidic material. In consultation with Luke Thompson, NWF Technical Sales Specialist, we added Acid Buff and YeaSacc to the ration from the start of autumn feeding and it has helped avoid digestive upsets and has improved performance.”

Calving is year round with an autumn bias; cows go out as soon as possible in the spring with buffer feed available for high yielders. Dry cows are fed NWF Dry Time pellets plus haylage in the summer, but everything is geared to keeping the system simple, says Owen.

“The sheep, which are Lleyn ewes put to the Charollais, fit in around the cows. They lamb in two blocks in January and early March then utilise the rougher ground no good for the cows in the summer, before tidying the cattle grazing in the autumn and winter.

“The lambs are finished and sold via Monmouthshire market. Having this second enterprise helps balance out milk price dips, and provide cashflow,” says Owen, who uses both NWF Classic Ewe nuts and Fast Lamb pellets.

While the current milk price is a concern, the plan at Cwmnofydd remains to push cow numbers up to 90 and then focus on driving up production.

“The system works well – the size of the unit means one of us can be away and the other can manage with the help of our college student, Megan, who comes in three days a week. We can’t do anything about the milk price, but we can keep focusing on getting the most from our cows,” says Owen.

When Owen Tamplin’s son, Thomas, returned from agricultural college full of ideas for the farm, it provided the catalyst for a move back into dairying.

“We had been dairying here at Cwmnofydd up until 1998 but went out of the industry for family reasons and I scaled things back to just sheep for 15 years to focus on my children. When Thomas came back in 2012, it seemed the right time to go back in,” says Owen.

“The farm is right on the urban fringe of Caerphilly and only 15 minutes from Cardiff, and we have all the problems associated that: people wandering all over the place since the Right To Roam legislation came in, theft, gates left open and dogs worrying the sheep. We’d built up to 650 breeding ewes but those have now been reduced to 240 and we have 80 milkers plus 50 followers.”

Once the decision had been made, father and son started buying in pedigree Holstein heifers from dispersal sales and the Sedgemoor auction centre. Milking began in May 2013 on the 300-acre unit and the herd now has a rolling 305 day average of 9,250 litres at 3.95% butterfat, 3.2% protein.

“We made the decision to go with Holsteins as we wanted the production – modern breeding means there’s more focus on fertility and mobility and we are going for the ‘middle of the road’ type rather than show types. When we started milking the first time around, the cows were doing 6,000 litres; there’s no point going back to that,” says Owen.

The ration is based on what the Tamplins describe as a “very traditional and simple” grass and maize silage system, with forage in ring feeders and NWF Pioneer 21 compound in the winter, moving to Milkline 17 in the summer via the parlour. High yielders get an extra allocation of compound at midday to top up.

“Obviously, in a system like ours, we are very reliant on forage quality; last spring was very challenging for making silage and we ended up with some wet, acidic material. In consultation with Luke Thompson, NWF Technical Sales Specialist, we added Acid Buff and YeaSacc to the ration from the start of autumn feeding and it has helped avoid digestive upsets and has improved performance.”

Calving is year round with an autumn bias; cows go out as soon as possible in the spring with buffer feed available for high yielders. Dry cows are fed NWF Dry Time pellets plus haylage in the summer, but everything is geared to keeping the system simple, says Owen.

“The sheep, which are Lleyn ewes put to the Charollais, fit in around the cows. They lamb in two blocks in January and early March then utilise the rougher ground no good for the cows in the summer, before tidying the cattle grazing in the autumn and winter.

“The lambs are finished and sold via Monmouthshire market. Having this second enterprise helps balance out milk price dips, and provide cashflow,” says Owen, who uses both NWF Classic Ewe nuts and Fast Lamb pellets.

While the current milk price is a concern, the plan at Cwmnofydd remains to push cow numbers up to 90 and then focus on driving up production.

“The system works well – the size of the unit means one of us can be away and the other can manage with the help of our college student, Megan, who comes in three days a week. We can’t do anything about the milk price, but we can keep focusing on getting the most from our cows,” says Owen.

When Owen Tamplin’s son, Thomas, returned from agricultural college full of ideas for the farm, it provided the catalyst for a move back into dairying.

“We had been dairying here at Cwmnofydd up until 1998 but went out of the industry for family reasons and I scaled things back to just sheep for 15 years to focus on my children. When Thomas came back in 2012, it seemed the right time to go back in,” says Owen.

“The farm is right on the urban fringe of Caerphilly and only 15 minutes from Cardiff, and we have all the problems associated that: people wandering all over the place since the Right To Roam legislation came in, theft, gates left open and dogs worrying the sheep. We’d built up to 650 breeding ewes but those have now been reduced to 240 and we have 80 milkers plus 50 followers.”

Once the decision had been made, father and son started buying in pedigree Holstein heifers from dispersal sales and the Sedgemoor auction centre. Milking began in May 2013 on the 300-acre unit and the herd now has a rolling 305 day average of 9,250 litres at 3.95% butterfat, 3.2% protein.

“We made the decision to go with Holsteins as we wanted the production – modern breeding means there’s more focus on fertility and mobility and we are going for the ‘middle of the road’ type rather than show types. When we started milking the first time around, the cows were doing 6,000 litres; there’s no point going back to that,” says Owen.

The ration is based on what the Tamplins describe as a “very traditional and simple” grass and maize silage system, with forage in ring feeders and NWF Pioneer 21 compound in the winter, moving to Milkline 17 in the summer via the parlour. High yielders get an extra allocation of compound at midday to top up.

“Obviously, in a system like ours, we are very reliant on forage quality; last spring was very challenging for making silage and we ended up with some wet, acidic material. In consultation with Luke Thompson, NWF Technical Sales Specialist, we added Acid Buff and YeaSacc to the ration from the start of autumn feeding and it has helped avoid digestive upsets and has improved performance.”

Calving is year round with an autumn bias; cows go out as soon as possible in the spring with buffer feed available for high yielders. Dry cows are fed NWF Dry Time pellets plus haylage in the summer, but everything is geared to keeping the system simple, says Owen.

“The sheep, which are Lleyn ewes put to the Charollais, fit in around the cows. They lamb in two blocks in January and early March then utilise the rougher ground no good for the cows in the summer, before tidying the cattle grazing in the autumn and winter.

“The lambs are finished and sold via Monmouthshire market. Having this second enterprise helps balance out milk price dips, and provide cashflow,” says Owen, who uses both NWF Classic Ewe nuts and Fast Lamb pellets.

While the current milk price is a concern, the plan at Cwmnofydd remains to push cow numbers up to 90 and then focus on driving up production.

“The system works well – the size of the unit means one of us can be away and the other can manage with the help of our college student, Megan, who comes in three days a week. We can’t do anything about the milk price, but we can keep focusing on getting the most from our cows,” says Owen.
Over 100 farmers, vets, nutritionists and students recently attended Reaseheath College’s annual dairy conference to learn about the rapid progress of robotic technologies in farm production systems. Rob Fuller, NWF Technical Sales Specialist, shares his insight from the key presentations.

The growth in popularity of robotic milking in the UK has been one you might reasonably describe as steady, but increasing numbers of farmers are considering them – and not just for cows. The Reaseheath conference gave the audience a good insight into both the gains and limitations of automated milking and feeding.

Speakers from across the dairy industry agreed that the use of robotics to standardise production processes had the potential to reduce variation and improve efficiency. This was dependent, however, on the approach of the individual and on the farming systems already in place.

The Dairy Group’s Nigel Hardie, a business consultant specialising in robotic milking systems, told the audience his research had shown milk yield, along with farm profitability, had increased once the cows had the choice to be milked automatically several times a day. He emphasised the importance of high quality stockmanship, including good observation skills as well as the ability to analyse software results for data gathered.

In terms of mastitis control, Mr Hardie said robotic milking allowed beneficial measurements such as milk conductivity and body temperature to be taken. The downside, however, was the lack of human interaction/observation during milking and the inability to treat cows immediately.

On this basis, Mr Hardie pointed out farmers needed to think about alternative holding systems for treating cattle on site. For speaker Anthony Andrews, Sales Manager for GEA Farm Equipment, however, the focus was automated feeding systems.

While robotic milking is usually associated with dairy cows, Phil Ormerod, a progressive commercial dairy goat farmer, described the benefits of the system for his 1,100-strong herd. In particular, robotic feeding has reduced waste and helped him run a more efficient and cost effective business.

A TMR of wholocrop and grass silage plus molasses and meal is fed to the goats, which have demonstrated improved feed efficiency on the more consistent ration, as well as reduced competition at the feed fence. The system also uses less energy, saves labour and reduces building cost on the new build site.

Mr Ormerod said these advantages had to be weighed against issues such as a bigger initial depreciation on the system than feeder wagon and the need for staff to be comfortable with the equipment and technology. He admitted that such a system would not suit all situations but said, for him, it had resulted in increased stockmanship, including good observation skills as well as the ability to analyse software results for data gathered.

Reaseheath College is currently looking at installing a robotic milking system and farm manager Mark Yearsley, a keen supporter, outlined the forecasted cost and return on investment should they choose to install a robot in addition to the current parlour for its high input herd.

Mr Yearsley said that he believed improved staff efficiency would be the most important outcome, as the herd managers would have more time to focus on attention to detail. He also felt there would be a positive effect on rumen health, as the cows would be able to feed little and often.

“I have no doubt that robotics are going to play a big part in next generation farming,” said Mr Yearsley, who believes improved staff efficiency would be the most important outcome.

The conference was chaired by George Fisher, manager of the Reaseheath Agricultural Development Academy, who concluded: “There was a lot of positive but balanced discussion. I hope everyone went away with a better understanding of the technology involved and its place in profitability. We also have to appreciate that whether you choose robotics depends very much on how you want to farm.”

Warning signs that impact on fertility
A drop in milk protein levels falling below 3% should ring alarm bells. Good levels of protein in milk are associated with:
- Good energy status
- Longevity
- Lower culling rate
- Less disease

Illness and disease, however, will cause a cow to retain any spare protein (normally put into milk) and a closer look at individual cows may be necessary to ascertain the cause. Another warning sign is a fall in dry matter intake (DMI). Ideally, cows should be eating 100% of the formulated ration.

When DMI drops off, so does the intake of energy, protein, vitamins and minerals – all key to good fertility. If intakes are reduced, check ration formulation and particle size and ensure rumen function is at optimum levels (products such as NWF Stable Rumen Pak are designed to help with this).

Heat detection
One of the simple but critical aspects of achieving better fertility in the herd is improved heat detection.

Research shows that three, 30-minute heat detection periods spaced evenly through the day is essential to achieve heat detection efficiency (HDE) of 70%-75%. This could be at 6am, 2pm and 10pm, for example; when no observations are carried out after 8pm, the HDE drops to 46%.

There is also an impact of milk yield on length of time in oestrus; roughly speaking, the high yielding the cow, the less time she spends in oestrus. For example, cows yielding 24-29 litres spend an average of 14.7 hours in oestrus; this falls to 4.8-2.8hr for those yielding from 44 litres and up.

What this means in effect is that herds where cows are observed for signs of heat every 6hr can identify up to 100% of cows in oestrus at yields of 24 litres, but the same observation schedule can see detection rates drop to 49% for cows yielding 48 litres.

This figure for 48-litre cows falls to 10% detection rate when observations are done only once every 24 hours. These figures are worth taking into consideration when grouping cows by yield.

Be aware, too, that lameness impacts on fertility as it discourages cows from displaying oestrus (see table below).

Get the full story on fertility, robot milking and more with a visit to www.nwfagriculture.co.uk.
Heifers at grass

As heifers approach service weight and age, getting grass intakes right is critical, says NWF Technical Sales Specialist Laura Young.

At 12 months old, very near service, have your heifers got 35kg of fresh grass in front of them per day? Figures from DairyCo (see table 1) show that a heifer around service weight will require 7.9kg of dry matter intake per day; using current Grass Watch DM figures, this is equivalent to eating 35kg of fresh weight grass.

Also, are your pre-service heifers following your cows around the grazing wedge, or are they receiving some of the best grass on the farm? Hopefully it is the latter: the most efficient, productive growth rates occur pre-service in the animals which are the future of your herd.

Heifer replacements should be grazing as good grass as your milking herd to take advantage of this growth opportunity. Heifers post service (once PD+) can afford to steady up growth rate; once the heifer is pregnant, however, she must then be stepped up in terms of energy just prior to bulling.

Research shows that increasing energy from two to three pre-service to around six weeks post-service improve conception rates; if the bull is good enough, use it,” says Jack.

Don’t underestimate the value of feeding concentrate to youngstock during the grazing season. Grazed grass can be variable in the level of minerals it provides (for example, magnesium, zinc, copper, iodine and selenium are often in short supply while potassium, iron and molybdenum are often present in high levels) and concentrates can be used to deliver those required.

Table 1: Heifer intakes of good quality grazing for target growth rates (Source: DairyCo)

<table>
<thead>
<tr>
<th>Rearing period</th>
<th>Calving at 500kg (DMI kg/d)</th>
<th>Calving at 600kg (DMI kg/d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 – 3 months</td>
<td>2.7</td>
<td>3.1</td>
</tr>
<tr>
<td>3 – 6 months</td>
<td>4.2</td>
<td>4.9</td>
</tr>
<tr>
<td>6 – 12 months</td>
<td>6.6</td>
<td>7.1</td>
</tr>
<tr>
<td>12 – 15 months (bulling)</td>
<td>7.9</td>
<td>8.6</td>
</tr>
<tr>
<td>15 – 23 months</td>
<td>9.9</td>
<td>10.5</td>
</tr>
<tr>
<td>23 - calving</td>
<td>10.7</td>
<td>11.5</td>
</tr>
</tbody>
</table>

Monitor your heifers

While weighing heifers at grass can be impractical, daily inspection and growth comparison whilst they are all stood together feeding gives a good guide to those which may be behind the desired growth curve. It also gives the opportunity to ensure animals are not getting fat – the aim is to grow frame (75-80% of which occurs before the animal is 12 months old).

Adding concentrate to the mix

“Cows are grazed in the summer, and winter feeding is based on grass and maize silage, with most grass silage being made at home, and maize and additional grass silage being bought in. The forage is fed out via ring feeders, with compound in the parlour. The herd is averaging 8,500 litres at the moment,” says Gareth.

Table 2: Heifer production and fertility performance at a range of calving ages (Source: DairyCo)

<table>
<thead>
<tr>
<th>Calving (age)</th>
<th>22-23</th>
<th>24-25</th>
<th>26-28</th>
<th>32-36</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-calfing weight (kg)</td>
<td>591</td>
<td>621</td>
<td>625</td>
<td>769</td>
</tr>
<tr>
<td>Calving Assistance (%)</td>
<td>17%</td>
<td>17%</td>
<td>27%</td>
<td>67%</td>
</tr>
<tr>
<td>Weight loss post calving (kg)</td>
<td>32</td>
<td>26</td>
<td>6</td>
<td>59</td>
</tr>
<tr>
<td>Cows still alive at 5 years (%)</td>
<td>86%</td>
<td>62%</td>
<td>41%</td>
<td>33%</td>
</tr>
<tr>
<td>Total 5 year milk yield (kg)</td>
<td>25,031</td>
<td>20,395</td>
<td>16,671</td>
<td>8,029</td>
</tr>
<tr>
<td>Time in milk during first 5 years (%)</td>
<td>48%</td>
<td>42%</td>
<td>38%</td>
<td>18%</td>
</tr>
</tbody>
</table>

High up on the hill above Caerphilly, with land stretching up to 1,100ft amongst the redundant slag heaps of what was the coal mining centre of south Wales, is 140-acre Tyn-y-cwm Farm, home to the Hillbarn and Jackpot herds of pedigree Holstein cattle. Gareth Watts and his son, Jack, run 100 cows with followers on a simple system that is producing competition-winning cattle.

“Most recently, in the 2014 competition, in addition to being First Herd on Inspection, the Watts’ also took first place in the Champion Heifer class with Hillbarn Shottle Deva 7 (pictured below), first with cow progeny with the Ily family, and also first in the team of three cows (purchased and homebred).

In addition to the herd competition, Jack has enjoyed considerable show ring success, after getting involved with showing cattle while on placement with the Seaton family, in Shropshire. Starting with local shows, just four years ago, he now regularly shows at national events, including the Welsh Dairy Show, Celtic Dairy Showcase, and the National Calf Show.

Results including Reserve Junior Champion two years’ running at the Celtic Dairy Showcase with Hillbarn Sublimity Filipilai 32 and Hillbarn Shottle Ryo 10, as well as 2nd and 5th at the National Calf show 2014 with Hillbarn Goldfish Rose 7 and Jackpot Fever Dawnette, respectively.

There is a strong emphasis on cow families at Hillbarn and Jackpot, with old established families of Fiona, Cross Stitch, Filipilai, and Jasmine featuring heavily. More recently, selective purchases have introduced Ryo, August, Ivy, and Farah families.

Embryos have also played a role in the breeding program with some exciting prospects being Sally from Styche Holsteins, Dawnette from Hodgelyn Holsteins (Canada), and Mist from Heather Holme (Canada). Bulls are selected for type with the current sires being Crackholm Fever and Regancrest Altaiota, as well as older bulls, Comestar Outside and Picston Shottle.

“‘If the bull is good enough, use it,” says Jack. "If the bull is good enough, use it."
**A strong focus on commercial performance at Tim Jones’ Grange Farm near Shrewsbury has seen a move away from suckler cows in the past 12 months in favour of concentrating solely on finishing beef. The 880-acre business, split over two units, carries around 400 head of cattle as well as 1,000 Suffolk cross breeding away from suckler cows in the past 12 months in favour of concentrating solely on finishing beef.**

The strong focus on commercial performance at Tim Jones’ Grange Farm near Shrewsbury has seen a move away from suckler cows in the past 12 months in favour of concentrating solely on finishing beef. The 880-acre business, split over two units, carries around 400 head of cattle as well as 1,000 Suffolk cross breeding away from suckler cows in the past 12 months in favour of concentrating solely on finishing beef.

“The suckler herd just wasn’t profitable for us; while the calves from the sucklers were achieving around £300 more per head finished, that wasn’t enough to just run the cows year round. We’re down to just four cows now and they would have gone but for being on TB shutdown – that was another factor: all the TB reactors came from the suckler herd,” says Mr Jones.

Beef animals are brought in both as 10-day old calves still on the milk machine and as stores at 16-22 months. Everything goes deadweight to ABP.

“All our calves come direct from farm with some stores coming via a dealer. They stay on the milk machine for 42 day before weaning – I’m looking for them to do on 1.5 bags,” says Tim, who feeds NWF Ultra Milk Blue powder.

“We buy in a mix of Continentals and black and white calves – whatever we can get really – but it’s increasingly difficult to get the quality beef crosses out of dairy herds. We take steers, bulls and heifers, with bulls going onto an intensive finishing system.”

“This applies equally to the sheep enterprise. Lambing percentage runs at 180-200% with a high level of triplets, as the hill flock runs at 180-200% with a high level of triplets, as the hill flock.

The LifeStart programme is based on the premise of accelerated growth afterwards either.

Whatever you choose, the health and performance of the calf must be paramount. It’s now recognised that restricted feeding of pre-weaned calves is associated with higher mortality rates; calves on restricted feeding do not always exhibit compensatory growth afterwards either.

The LifeStart programme is based on the premise of accelerated growth afterwards either.

When it comes to the future of your herd, it doesn’t pay to gamble with growth rates and health. A good quality calf replacer like NWF Ultra Milk Blue, specially formulated for bucket systems and machines not requiring free-flow powder, gives peace of mind. Ultra Milk Blue contains Protein, an egg protein, rich in specific proteins, NukloSpray, a special co-spray powder rich in specific proteins, NukloSpray, a special co-spray dried complex of pre-digested proteins and natural digestibility enzymes to improve fat utilisation and absorption.

To request a FREE Leaflet and prices for NWF calf milk replacers call 0800 756 2787 or contact your local NWF sales specialist.

**COMPARISON OF RESTRICTED FEEDING AND ACCELERATED GROW PROGRAMMES USING CMR**

<table>
<thead>
<tr>
<th>Program</th>
<th>CP/Fat (%)</th>
<th>Feed Rate (DMI)</th>
<th>Target ADG</th>
<th>Weight at Weaning</th>
<th>Age Weaned</th>
</tr>
</thead>
<tbody>
<tr>
<td>Restricted</td>
<td>22/18</td>
<td>500 – 600g</td>
<td>550g/day</td>
<td>1.85 x birthweight</td>
<td>63 days</td>
</tr>
<tr>
<td>Accelerated</td>
<td>22/18</td>
<td>900 – 1200g</td>
<td>800g/day</td>
<td>2.25 x birthweight</td>
<td>63 days</td>
</tr>
</tbody>
</table>

Source: Trouw Nutrition 2015

**Q: Is the expense of calf milk replacer really worth it when I could use whole milk from the dairy herd?**

**A: When considering the debate of whole milk vs calf milk replacer (CMR), it always comes back to one fundamental question: which does the better job of optimising the three key factors of health, performance and convenience?**

Inevitably, whole milk is still considered the most natural and nutritious choice for rearing calves; that is what it is designed for after all. Whole milk has qualities that have yet to be replaced entirely by milk replacers.

But just as there are a whole range of CMRs, from those based on milk proteins to those based on soy or modified wheat proteins, to high and low fat alternatives, so there are different types of whole milk beyond that sucked direct from the cow.

Many times, farms look to utilise milk which is otherwise unusable/unsaleable; this might include colostrum, milk contaminated with antibiotics or milk from cows with high SCCs. Otherwise, the choice is between raw or pasteurised bulk milk available for whatever to the calf rearing unit.

Whatever you choose, the health and performance of the calf must be paramount. It’s now recognised that restricted feeding of pre-weaned calves is associated with higher mortality rates; calves on restricted feeding do not always exhibit compensatory growth afterwards either.

The LifeStart programme is based on the premise of accelerated growth afterwards either.

When it comes to the future of your herd, it doesn’t pay to gamble with growth rates and health. A good quality calf replacer like NWF Ultra Milk Blue, specially formulated for bucket systems and machines not requiring free-flow powder, gives peace of mind. Ultra Milk Blue contains Protein, an egg protein, rich in specific proteins, NukloSpray, a special co-spray dried complex of pre-digested proteins and natural digestibility enzymes to improve fat utilisation and absorption.

To request a FREE Leaflet and prices for NWF calf milk replacers call 0800 756 2787 or contact your local NWF sales specialist.

**Questions from the calf shed**

With NWF ruminant sales specialist Sue Bryan

John Allcock and Tim Jones

With this in mind, it’s easy to see how critical consistent nutritional supply is to the calf up to 10 weeks old. This is where CMRs can win out over whole milk, which can have a fluctuating composition especially where farms are using mastitis milk.

Even whole milk which would be otherwise saleable can sometimes not meet the required nutrient content. The composition of milk has evolved over time as a function of breeding, and in some cases can be deficient in vitamins A, D3, E and B1, as well as trace minerals.

While whole milk is a source of 100% dairy protein, rich in energy and containing immunoglobulins not present in CMRs, it is also potentially a source of disease and pathogens. Feeding antibiotic waste milk also contributes to resistance.

When it comes to the future of your herd, it doesn’t pay to gamble with growth rates and health. A good quality calf replacer like NWF Ultra Milk Blue, specially formulated for bucket systems and machines not requiring free-flow powder, gives peace of mind. Ultra Milk Blue contains Protein, an egg protein, rich in specific proteins, NukloSpray, a special co-spray dried complex of pre-digested proteins and natural digestibility enzymes to improve fat utilisation and absorption.

To request a FREE Leaflet and prices for NWF calf milk replacers call 0800 756 2787 or contact your local NWF sales specialist.

**Questions from the calf shed**

With NWF ruminant sales specialist Sue Bryan

John Allcock and Tim Jones

With this in mind, it’s easy to see how critical consistent nutritional supply is to the calf up to 10 weeks old. This is where CMRs can win out over whole milk, which can have a fluctuating composition especially where farms are using mastitis milk.

Even whole milk which would be otherwise saleable can sometimes not meet the required nutrient content. The composition of milk has evolved over time as a function of breeding, and in some cases can be deficient in vitamins A, D3, E and B1, as well as trace minerals.

While whole milk is a source of 100% dairy protein, rich in energy and containing immunoglobulins not present in CMRs, it is also potentially a source of disease and pathogens. Feeding antibiotic waste milk also contributes to resistance.

When it comes to the future of your herd, it doesn’t pay to gamble with growth rates and health. A good quality calf replacer like NWF Ultra Milk Blue, specially formulated for bucket systems and machines not requiring free-flow powder, gives peace of mind. Ultra Milk Blue contains Protein, an egg protein, rich in specific proteins, NukloSpray, a special co-spray dried complex of pre-digested proteins and natural digestibility enzymes to improve fat utilisation and absorption.

To request a FREE Leaflet and prices for NWF calf milk replacers call 0800 756 2787 or contact your local NWF sales specialist.

**Questions from the calf shed**

With NWF ruminant sales specialist Sue Bryan

John Allcock and Tim Jones
Piemontese cattle have been finished at Wallstone Farm in Derbyshire since 2009 by the Matkin family. They exhibited cattle at the recent Beef Expo event, supported by NWF, where visitors had the opportunity to hear more about the excellent fleshing and carcass conformation characteristics of this beef breed.

“We wanted a breed suited to the demands of the deadweight market and the Piemontese seemed to have more of the right traits. Following a trip to the National show of Piemontese in Italy, the first animals soon arrived on farm,” says Craig Matkin.

“We found we could take the bulls to a lower liveweight but still get carcases of 415kg from a 750kg animal. That meant a saving in the amount of feed required.”

Stock are sold deadweight through ABP with pure bulls reaching 600kg at 12 months and the cross bred bulls closer to 700kg. The bulls are fed a diet of NWF’s Super Grower + Yea Sacc, a 15% beef nut, and barley straw.

The Matkins have recently begun supplying semen from their breeding bull Ithersay Uberto via an American AI company, with over 500 straws already ordered.

A HELPING HAND

The Farming Community Network has strong and longstanding links with the farming community and agriculture throughout England and Wales. Volunteers are all farmers or are associated with farming and understand the problems facing agriculture today.

HELP with business issues
HELP with family issues
HELP with health issues
HELP with farm issues

CALL 0845 367 9990 or visit us at www.fcn.org.uk