In the mix MAGAZINE

ISSUE 3
2020

USING TECHNOLOGY ON THE FARM

NAVIGATING THE COTSWOLDS

WORK-LIFE BALANCE ON THE FARM

KEENAN®
an Alltech® company

ONE Alltech in the Cotswolds

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KEENAN® an Alltech® company

WELCOME TO
IN THE MIX

Welcome to our first magazine of 2020. This issue lands at a strange time in our global world. Many of us are experiencing lock-down and are operating within the confines of our respective government's directives. Never before have we been more acutely aware of the space in which we live, and grateful for the absolute luxury the extended boundaries of living on a farm bring us.

In this issue we have deliberately kept the focus on positive stories. We share some upbeat tales about how our diet feeders are helping to increase feed efficiency and reduce emissions on-farm around the world. We also pay a visit to the famous Cotswold Country Farm Park where an Alltech Navigate™ assessment was conducted pre-lockdown, yielding some interesting results, and generating advice on how to improve silage yield.

For those of you who would like to become more tech savvy, we look at some of the ways that you could make technology work for you on-farm from your mobile device. Delving a little deeper into the feed management side of tech, we look at ways of controlling the cost of feed, so you know exactly what you are spending.

Our country focus this issue is Australia, a country that faced devastating fires earlier in the year. Read about some of the ways KEENAN and Alltech are helping farmers down under.

We wish you and your families all the best.

Matt Higgins
General Manager
KEENAN

HELPING AUSTRALIAN FARMERS

Bushfires wreaked havoc across Australia in January of 2020

Record-breaking temperatures and months of severe drought caused an outbreak of bushfires across Australia in January of this year. The bushfires destroyed an estimated 10 million hectares, claiming lives and killing wildlife and livestock. As farmers assessed the damage, the loss of livestock was estimated to be in excess of 100,000.

Producers, who were already enduring persistent drought, were unable to source supplies, including feed. Even as rains began to fall, the recovery was painstaking. In response to the growing crisis, the Australia Farming Relief Fund was established to help provide goods and services directly to affected farmers, coordinated on the ground by the Alltech family companies, Alltech Lienert Australia and KEENAN Australia.

The money raised was used to source much-needed supplies, including hay, finished feed, feed supplements, silage, water troughs, fencing and non-perishable items. Trucks and drivers were provided to deliver these supplies directly to farmers in Victoria, South Australia, New South Wales (NSW) and Queensland — areas devastated by the bushfires.

Our team members volunteered their time to work alongside farmers to help rebuild fences, repair sheds and offer any on-farm support that was needed.

THE MECHFIBER 345 SELF PROPELLED IN ACTION

Impressive pit-face management on Irish dairy farm

Milking 460 cows and managing a large free-range poultry enterprise alongside an anaerobic digestion (AD) plant, the McDonnell family in Limerick is not short of work. The family team consists of brothers Richard and David alongside their father Michael. Richard manages the dairy and poultry enterprises, while David manages the AD plant alongside his business, Anuland. Anuland is a precision farming solutions company that provides technology-based grass management solutions via sensors, artificial intelligence and camera systems.

In 2018, Richard found himself in the market for a new diet feeder as his KEENAN Klassik 200 approached its 18th year on the farm. It was bought new in 2002. The previous September, Richard and his father had been at the National Ploughing Championships where they first laid their eyes on the KEENAN MechFiber345SP, which was in the Innovation Arena having been launched earlier that year. Richard's father took an instant liking to the machine and the general concept of a self-propelled diet feeder.

After making initial enquires with KEENAN following the Ploughing in 2017, Richard began looking into the self-propelled feeder market more. A demo version of the MechFiber345SP was taken to the farm. Richard was impressed with its ease of use and performance around the farmyard.

With the old Klassik feeder working away, Richard attended EuroTier show in Hannover, Germany the following year. He knew he would see multiple self-propelled diet feeders and be able to compare and contrast each to the KEENAN. Richard noted that a number of features stood out on the KEENAN that some other brands didn't have, one being the two individual foot pedals for forward and reverse instead of a left-hand shuffle. After analysing the costs, opting for the self-propelled machine made the most sense in the long run. Richard explained: "Straight away I was only going to be running one engine instead of two if I bought another trailed feeder, the tractor and telehandler. The telehandler was going to need to be changed in the near future if I was to continue on with a trailed feeder." So, Richard opted for the MechFiber345SP having taken everything into account. This included costs and the "if it's not broke don't fix it" approach, considering the service provided by KEENAN and his older Klassik 200 feeder over the years.

Three generations of McDonnells - Michael, Richard and his son Geoffrey

Engine and transmission

Powering the MechFiber345SP is a four cylinder, 4.5l 170hp Iveco FPT engine, meeting stage IV emission standards. Although there are two tub sizes available – 16m3 and 20m3 – both are fitted with the same engine. Richard noted that during a typical week the feeder takes two fills of diesel. "A typical week generally consists of five loads daily at roughly 25 to 30 minutes per load from when loading starts to unloading finishes." Richard believes that this alone is a major saving across a full feeding season, burning at least one-third less diesel than he was previously, running a tractor and telehandler. The MechFiber345SP is fitted with a dual speed hydrostatic transmission. The transmission has a maximum forward speed of 25km/h, suiting Richard as the majority of feeding takes place in the main yard, with a short distance to travel up the road to the out farm. Power transmission to the feeder is via a mechanical drive developed by Storti. This being a straightforward mechanical driveline means its PTO shafts need to be greased routinely. Richard noted that the shafts receive a thorough greasing every two weeks, even though it means dedicating 20 minutes to getting in under the machine and greasing each joint. From a service perspective, the essential areas are easily accessed either through the panel under the loading arm or via the panels located behind the cab.

Cab and manoeuvrability

The MechFiber345SP adopts the Storti cab. Richard complimented the clean and straightforward layout. All essential switches are either on the joystick or alongside it, he explained, while a small screen displays machine information such as fuel level, temperature and loading functions. Foot pedals inside the cab are straightforward. There is a brake pedal to the left of the steering column and forward and reverse pedals located on the right-hand side. The feeder is fitted as standard with a reversible fan for removing debris from the engine's cooling pack.

The InTouch controller is located at eye level on the A-pillar along with the monitor for the two cameras on the machine, one of which views the inside of the feeder and the other monitors the machine's rear. Richard noted how these monitors can hinder visibility out towards the cutter head at times.

Visibility is good from the driver's seat, especially while loading. Unloading just wouldn't be the same naturally as Richard noted he tends to glance behind or have the side window open while unloading.

The cameras are a good addition given the length of the machine and the ability to see what's happing in the feeder.

Feed intake and mixing

The MechFiber345SP adopts the Storti cutter head and loading arm.

This 2m cutting head can reach a height of 5.2m at full reach, which Richard uses to its limit given the nature of his large silage pit. A Bosch Rexroth hydraulic motor powers the stainless-steel drum which is fitted with 84 tungsten-coated blades, 42 of which are straight and the remaining 42 curved. Richard explained that blades only need to be sharpened at the start of every feeding season if no foreign objects are encountered along the way. A lump of concrete managed to make its way into the silage pit, which the feeder later lifted. Apart from a few damaged blades, the machine was otherwise fine. This impressed Richard, proving the overall robustness of the feeder. Lifting longer material such as straw, the head spins back towards the feeder so that material moves over the drum to prevent longer fibres getting jammed underneath.

All control of the loading arm is done through the joystick, giving Richard full control over the speed and height at which he starts removing feed from the pit face. The head can even lift concentrates off the ground cleanly if required. The only issue Richard found was that on a windy day when loading straw, a certain amount will blow out of the feeder. KEENAN has since rectified this on new machines with a deflector fitted to direct straw and lighter material into the feeder, not allowing wind to catch it.

The KEENAN six-paddle MechFiber feeder comes standard mounted on four weigh cells, which along with the InTouch system provides Richard with the exact weights inside the feeder. As with all KEENAN paddle feeders, knives are mounted to the feeder's base, similar to what he was familiar with beforehand. Unlike a trailed feeder, the front of the MechFiber feeder on the self-propelled machine is the rear of a trailed unit. This is done so that the driveline can be easily accessed from the rear via two large doors. Behind the doors is the main drive sprocket and chain which is oil-immersed for a long working life. A central greasing point makes greasing easy, Richard pointed out. The steady intake of silage and other feedstuffs is key to a faster more consistent mix compared to dumping in bucketloads with the telehandler, Richard said. An autogreaser is fitted to ease lubrication of the loader arm and conveyor system.

"Even passing by the pit face now you'd take pleasure in looking at the way in which the MechFiber345SP is able to manage it. This alone is a huge saving over the year that I never considered to be as substantial when looking into the machine first," he explained.

Pit and waste management
Before taking delivery of the MechFiber345SP, waste proved to be an issue that really only became apparent a short while into the ownership of the new machine. This resulted from the way in which the silage was removed from the pit face. The way the cutter head essentially shaves the pit face has reduced wastage by between 70% and 80%, according to Richard. The clean-cut pit face reduces the amount of air from entering the silage, reducing secondary fermentation. Feeding passages have not been cleaned out in three months and still show little signs of wastage compared to dumper loads previous. This has been a standout feature of the machine for Richard.

Verdict
Richard took delivery of the KEENAN self-propelled feeder in October 2018. Since then he has clocked up in excess of 1,000 hours. Estimating that he will clock up in the region of 900 hours annually, hopes to keep it for roughly 10 years. "After spending just over 14 months using the machine, I certainly don't look back on the decision to buy it. Right from the ease of use and training staff on the feeder to the comfort and safety of not jumping from a telehandler to a tractor before mentioning the savings. I can say for sure that I will never return to a trailed system having owned this machine."

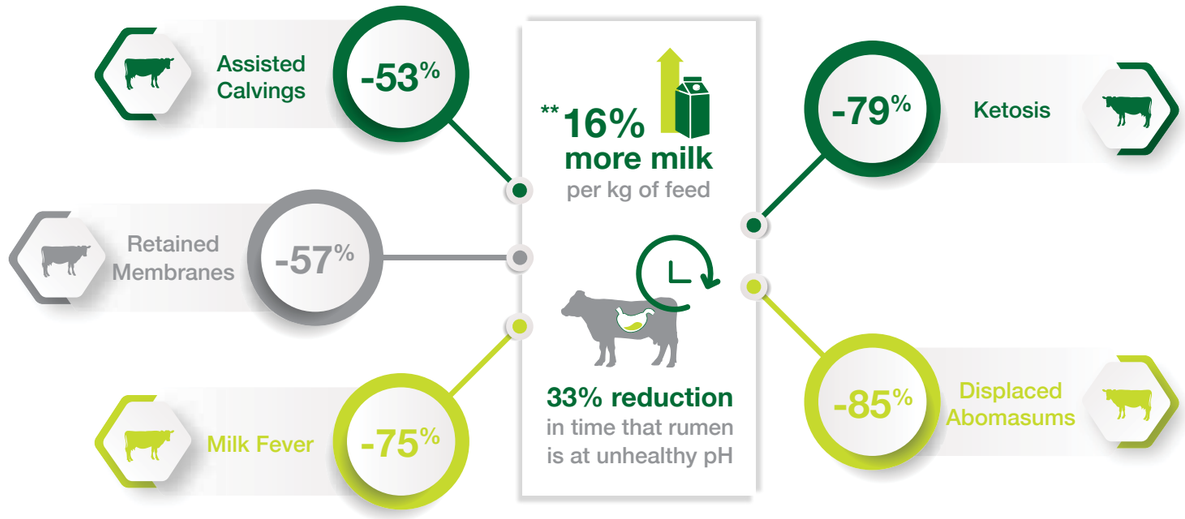
FARMER'S FAVOURED FEATURES
- Overall reduced wastage due to better pit face management.
- Consistent mix due to gradual infeed of feed constituents.
- The fact one machine does all without the need to leave cab.
- Overall safety of the machine.

SPECS
MODEL: MechFiber345SP
CAPACITY: 16m³
CUTTER HEAD: 2m wide
FEED OUTLETS: Two
ENGINE POWER: 170hp Iveco 4.5l four-cylinder
LENGTH AND WIDTH: 9.64m x 2.56m

SELF-PROPELLED OR TRAILED – THE MECHFIBER BENEFITS ARE THE SAME!

NUMEROUS SCIENTIFIC STUDIES* HAVE CORROBORATED WHAT KEENAN HAS KNOWN FOR DECADES - THE MECHFIBER FED RUMEN IS HEALTHIER AND AS A RESULT ANIMALS ARE MORE PRODUCTIVE.

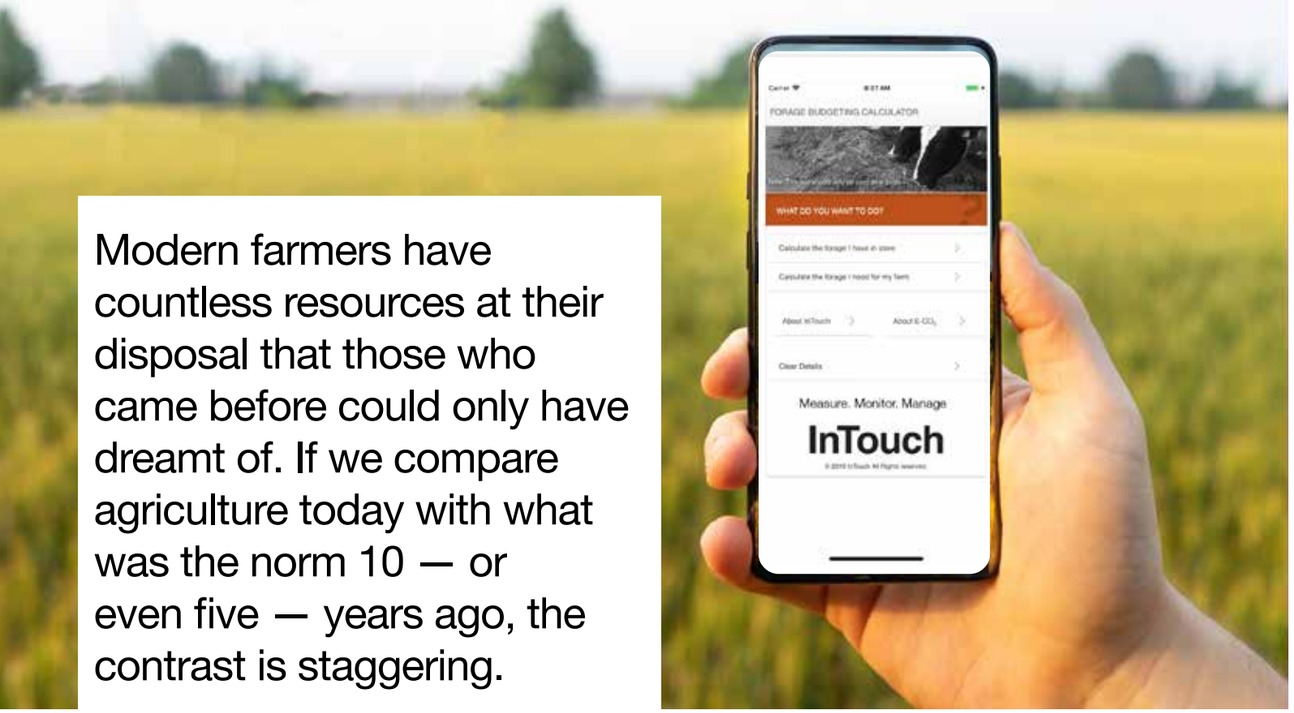
RESEARCH MONITORING 24,450 DRY COWS ACROSS 277 FARMS SHOWED A REDUCTION IN THE FOLLOWING:



* University of Illinois 2008, University of Reading 2008 & Colman et al, 2011. Professional Animal Scientist, 27, 505-17
** "Subtle changes in rumen conditions had major effects on feed efficiency" Professor Jim Drackley

12 FARM APPS THAT COULD CHANGE THE WAY YOU WORK

LIAM DOYLE



Modern farmers have countless resources at their disposal that those who came before could only have dreamt of. If we compare agriculture today with what was the norm 10 — or even five — years ago, the contrast is staggering.

Over the last few years, farmers have reaped the benefits of numerous technological advances, and some of the most useful of them have come in the form of agricultural apps on smartphones.

The array of apps that could be useful for farmers is already vast and continues to grow. Armed with an Android, iPhone or even an iPad, they can scroll through the available apps to find a program that fits their every need, from buying new machinery to analyzing soil types.

But it is not only ag apps that are making farmers' lives easier. Help can come from some unlikely places, and programs that were not designed specifically for agricultural use can be utilized in innovative ways. With this in mind, we thought it would be a good idea to take a look at some of the useful apps currently on the market. Some are obvious choices for any farmer, while others may have previously been overlooked. Whether you are already ag-tech-savvy or are only just learning how the device in your pocket could change your farm management, this list will give you a sense of what is out there and how it can be used to your advantage.

Feed-management apps

Long neglected in terms of innovation and investment, feed management technology is finally making strides in the ag-tech industry. Until recently, it was still common for farmers to manage their feeding by using a pen and paper. Now, however, there are plenty of resources available on the App Store to make this process more efficient and cost-saving.

1. FeedSmart
Taking into account key variables, such as maintenance requirements, animal growth, lactation and more, this free calculator can provide farmers with instant information on their livestock's nutritional needs, feed values and feed allocation.

2. InTouch Forage Budgeting
The management of forage stocks has also become a topical issue on farms in recent years, especially with changing weather patterns. Fortunately, smartphone technology can also play a role in long-term planning.

This app calculates the total forage available to the farmer in both fresh weight and dry matter from clamped forage and additional baled forage. The user inputs the forage required to feed livestock during the winter housed period, and the app then determines if the farmer has enough resources at his or her disposal.

Developed in association with the team at Alltech E-CO2 and available on all mobile devices, this app becomes particularly handy moving into the winter, when the demand for forage is at its greatest. Farmers need to be proactive in measuring conserved forage quantities in order to avoid any potential shortfalls.

Note-taking apps

Whether they want to admit it or not, some farmers are careless note-takers. For a profession in which constant checks and record-keeping are essential, many farmers leave too much to chance. This task can be made easier and quicker with modern technology. On a base level, it is standard practice for all smartphones to come with some form of notepad app included. You can even set reminders that will alert you about certain items and tasks at a pre-arranged time.

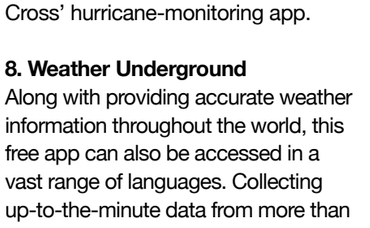
3. Evernote
This multi-platform app allows you to access your notes and photographs from your smartphone, desktop and tablet, syncing everything to make sure you are always up to date. It also allows you to share content with other users, which comes in handy when disseminating information among your team.

4. Google Docs
The only drawback to Evernote is that many of its sharing and collaborative features are only available through a paid subscription. Google Docs, a free alternative with similar capabilities, could be a suitable replacement.

Field-measurement apps

5. GPS Fields Area Measure
Ask any farmer how much land they have, and they will be able to give you an answer straightaway. Being able to do so is an essential aspect of the profession and is an ability that many wear as a badge of honor. However, this off-the-top-of-the-head figure is only ever a ballpark number, probably rounded up to the nearest acre.

GPS Fields Area Measure is the perfect tool for determining distances and field perimeters and areas, fast! Using satellite imaging, this app provides you with an accurate measurement of your piece of land, saving you time and money. For added convenience, it can also be used offline, and saved measurements can be shared between users.



Weather apps

By its nature, farming is an outdoor enterprise. The success of a harvest, down to the budgeting of forage, depends heavily on the weather. While it can never be fully predicted, many tools and devices have been developed over the years to make dealing with the weather a bit easier. Modern technology now provides the most comprehensive methods of navigating the whims of Mother Nature. There is a plethora of weather apps on the market, all of which can provide highly accurate forecasts.

6. Strawberry Advisory System monitors the weather so as to help keep strawberry crops free from fruit rot.

7. Hurricane is the American Red Cross' hurricane-monitoring app.

8. Weather Underground
Along with providing accurate weather information throughout the world, this free app can also be accessed in a vast range of languages. Collecting up-to-the-minute data from more than 270,000 global weather stations, it also lets users contribute by reporting on weather conditions in their own regions.

Buying and selling apps

These days, it has never been easier to go on a shopping spree. A short time spent browsing online can quickly leave you with myriad new possessions and an alarmingly low bank balance. The agriculture industry is not immune to this — and now, farmers are able to get in on the fun, too!

9. TractorHouse
If you are in the market to buy or sell new or used machinery and farm equipment, this global app gives users access to thousands of sale listings. Its user-friendly interface allows you to easily search for equipment and parts, which can be bought directly or at auction.

10. Cattle Market Mobile
Your smartphone can even give you the edge when bidding on livestock. Traditionally, farmers would enter a market blind, not knowing anything about the animals being offered. Now, apps are emerging that allow farmers to do research and even make bids beforehand. This handy tool collects data on current auction prices across the U.S. Using this information as a guide, farmers can see exactly how much they should be paying for steers, bulls, heifers and more.

11. MartBids
While only available in Ireland, this app is changing the way producers make decisions about livestock. This app works in conjunction with livestock marts throughout the country to provide users with vital information before they make their decisions. Whereas before, a farmer at an auction often had to rely on gut feeling when bidding, this mobile app negates any guesswork, helping you find the perfect animal for your needs.

12. FarmHedge
For an all-around app that connects farmers with multiple sectors of the agriculture industry, this real-time agribusiness app puts users directly in touch with suppliers of feed, fertilizers, parts and more. It allows producers to create personal and secure working relationships while also saving them time and money.

Farm smarter, not harder, with these helpful apps for farmers. We hope these useful tools will help you better manage what you have worked so hard for.

FEED MANAGEMENT TECHNOLOGY: AG-TECH'S MISSED OPPORTUNITY?

LIAM DOYLE AND MARTIN MINCHIN

The benefits of using modern feed management tools are indisputable. Both in the long and the short term, updating your methods of managing feed on-farm has the potential to improve not only herd output but also overall herd health.

Technology is disrupting and changing every aspect of the agriculture industry, and, for the most part, farmers are embracing it. Already, autonomous robots are taking over the milking of cows, grading of fruit and vegetables and many other duties on farms around the world. Advancements in electric-powered vehicles could also mean that, before long, we will be enjoying the near-silent purr of electric, eco-friendly tractors in our fields. With $2 billion invested in ag-tech in 2018, this is just the tip of the agriculture technology iceberg!

As far as innovation and investment go, however, there is one section of the industry that is struggling to keep up with the rest: feed management technology. At the same time that drones are surveying our land and self-driving machines are harvesting our crops, many farmers are still managing their feeding using old, outdated technologies — or, in some cases, pen and paper.

This seems to be a major oversight of the industry, considering the potential savings and efficiencies at stake. Animal feed and nutrition is one of the most critical areas on livestock farms, accounting for up to 70% of the cost of production (COP). A modern solution that could help to increase feed efficiency should be shouted from the rooftops!

Thankfully, while feed management technology may be bringing up the rear in terms of innovation, it still has not dropped out of the race altogether. There are many established names currently offering platforms that are both effective and affordable.

The benefits of using modern feed management tools are indisputable. Both in the long and the short term, updating your methods of managing feed on-farm has the potential to improve not only herd output but also overall herd health.

Maximize income over feed cost (IOFC)

IOFC is a critical measure in driving farm profitability. One of the key benefits of using feed management technology is the ability to continually track and maximize this figure. Central features of such a platform include the precise loading of individual ingredients and the subsequent TMR mixing, tracking of feed intakes, management of feed costs and the direct linking of outputs to inputs — all contributory factors in optimizing IOFC. Where IOFC is not meeting targets, problems are quickly identified, and necessary changes can be made in real time.

Feed inventory management

Keeping track of feed inventory on-farm is a notoriously manual task that usually involves significant guesswork. This leads to farmers carrying too much feed, tying up both space and capital, or too little feed, which presents a whole different set of management challenges. Feed inventory management is a common feature within most feed management platforms, allowing farmers to accurately monitor and balance quantities of feed given to the animals against quantities of feed held on-farm. Depending on the system, automatic alerts notify when stock levels reach a certain point, and in some cases, automatic re-ordering (via links to feed mills) can be set up.

Cows crave consistency

What is the one thing that cows love more than anything else? Consistency. Cows are creatures of habit, and a consistent management routine leads to optimal dairy production. This is especially true for feeding; the more consistent a cow's daily diet, the better the cow will perform in terms of milk output, fertility and overall health. Any disruption to a cow's rumen environment can quickly result in sub-optimal output, an issue that can take weeks to reverse. Feed management technology allows for the precise loading and feed-out of each ration, ensuring that animals will receive a consistent diet every day. When combined with a diet feeder, such as a KEENAN MechFiber, the software can tell farmers the optimal loading order of the ration. This means that the end product is the best-quality mix possible. It also helps to negate any human error, so no matter who is loading the machine, the result is always the same.

Make it easy for anyone to do the feeding
On most farms, there is usually one person assigned to manage the feeding operation and ensure that the correct protocols are followed each day. However, what happens if that person is not available and the person who fills in is not as attentive to good feeding practices? Overall cow performance and health can quickly suffer if diets change from one user to the next. Using technology to manage feeding on-farm ensures that, no matter who is in charge, once they follow the loading and unloading instructions provided by the feeding system, diet consistency should not be compromised. This guide to TMR feeding is almost foolproof. Equally, as all data is recorded, it is easy to identify if labor performance has not met the expected standards.

Control of feed cost
Of course, there is another major benefit to this precision: control of feed cost. This is where feed management software can really make a difference on-farm. By taking stock of what ration goes into the mix, as well as the amount, the program can keep on top of costs, so the farmer knows exactly how much they are spending. Beyond this, by ensuring that the animal's diet offers optimal efficiency, further savings can be made by removing wasted feedstock from the process.

Progress reporting and data-sharing
The abilities of feed management software go far beyond the day-to-day running of a farm. As it is monitoring diets and ration stocks, the program is also recording and storing all of the data it collects. This means that farmers have access to a library of information at the push of a button. They can generate detailed graphs and reports that illustrate what has gone before, helping them to make informed decisions about the future.

Bringing this feature one step further is the cloud-based technology of modern feed management software. By availing of these wireless capabilities, farmers can share information and data with employees, meaning that everyone can be kept up-to-date and share advice. Equally, where access to the technology is provided to the farm's third-party consultants, communication is improved, and adjustments to animal diets can be made in a more proactive and timely manner, without the need for consultants to be on-farm.

Adaptability
Another great benefit to the cloud-based aspect of modern feed management software is that it opens the program up to previously unseen flexibility and adaptability. Many programs can now link up and operate in conjunction with other management software that a farmer may be using. For example, a farmer in the dairy industry may be using one program for feed and another for herd and milk production. By allowing these programs to work in tandem, dairy farm data management becomes more streamlined, saves time and, most importantly, allows for the generation of more actionable insights.

The thing to remember is that the points outlined here are not just something that farmers can hope to take advantage of in the future. There are already numerous established companies offering technologies to help deliver on these promises. Furthermore, there is a noticeable upsurge of dairy ag-tech startups advancing on the pre-existing technology, meaning that dairy automated feeding technology might finally reach its much-needed potential in terms of agricultural innovation.

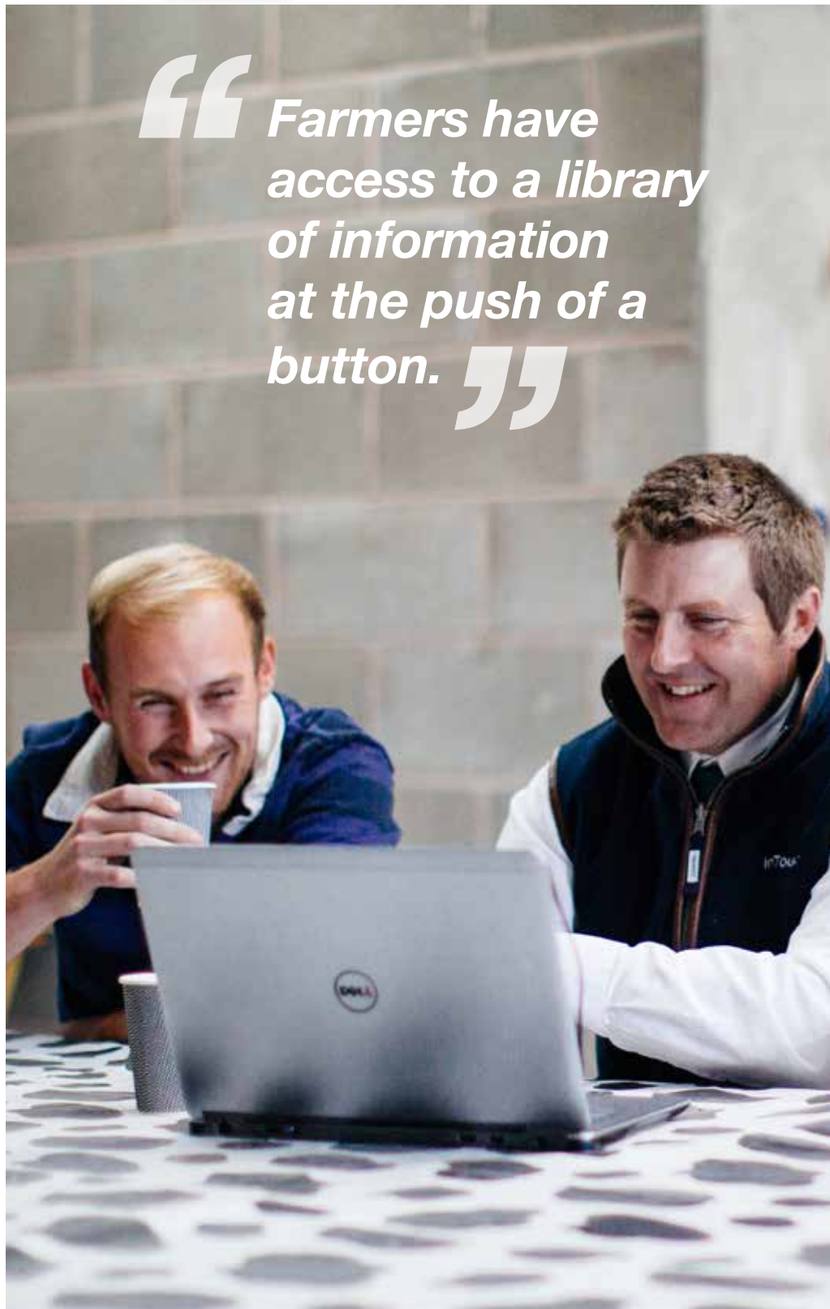
"Make it easy for anyone to do the feeding."

One such platform is InTouch. Cloud-based and combining the latest in hardware and software, InTouch manages the feeding of over 300,000 cows in 37 countries worldwide each day. As part of Alltech, InTouch utilizes user-friendly dashboards and reporting tools to provide farmers and nutritionists with the most relevant insights and analytics for delivering optimum nutrition to the herd.

Collaboration with other on-farm technologies is a key principle of InTouch, which is the reason behind the recent announcement of its integration with UNIFORM-Agri, one of the world's leading herd-management software providers. Collaborations like this reduce the need for the manual input of data, deliver more effective insights and ultimately enable both farmers and nutritionists to work together to make more informed herd-management decisions.

Continuing the tradition of innovation at InTouch, the team showcased InTouchGo at ONE: The Alltech Ideas Conference in 2019. Currently in the proof-of-concept stage, this all-new technology uses advanced analytics and features — like machine learning — to deliver automatic ration recommendations directly to the farmer's smartphone in response to changes in milk output.

Alltech's commitment to a Planet of Plenty™ also features in the InTouch vision. Modern agriculture is under continuous pressure to demonstrate its sustainability credentials, and increased animal productivity has been shown to reduce the amount of methane produced per unit of milk or meat. Feed conversion efficiency, one of the most widely used measures of animal productivity, is the measure by which livestock convert feed into milk or meat. Adapting technologies like InTouch to increase feed conversion efficiency as part of a wider on-farm nutritional strategy may be one solution to this growing and complex challenge.



ONE ALLTECH

ADAM HENSON'S COTSWOLD FARM PARK

KEENAN, InTouch and Alltech working as ONE

The Cotswolds is famous for its glorious landscape of gently rolling hills and quintessential English towns and villages built from honey-coloured stone. Nestled among these is the Cotswold Farm Park, set up in 1971 by Joe Henson to help protect rare breeds of farm animal. Adam Henson, a well-known TV personality, followed in his dad's footsteps and is passionate about sustainable and authentic farming.

Cotswold Farm Park has expanded and developed over the years and is now a global attraction, welcoming thousands of visitors from all over Britain and the world. In springtime, the "Live Lambing" event is especially popular with schoolchildren, who are excited to see lambs and goat kids being born. Alongside it is also a sizeable farming enterprise operated under the Henson & Andrews Ltd. Name, which includes 500 breeding ewes and 1,000 acres of arable.

In 2018, Henson & Andrews decided to invest in a KEENAN diet feeder based on the positive experiences farm manager Mike Caunter had using a KEENAN MechFiber320 while consulting for a local commercial Hereford beef unit. The accuracy of feeding provided by the KEENAN controller allows for great results with both the cattle and sheep on the farm.

"Using a diet feeder, to start with, is a different way of feeding out," explained Mike. "It took us a little while to get used to how to do it and how to do it in the most efficient way. It took time to get used to the machine, but when you realise that you are feeding a lot more in one go and are only using it every 2–3 days, you realise that overall it is timesaving.

"We've found that it's been really beneficial for the cattle — we have turned out our growing cattle the best they've been this winter."

"The fertility has been better that ever before — the heifers have been bulling before turn-out, very noticeably, which did not happen in previous years. We feed all types of cattle with the diet feeder; calves, growing stock, a few dry cows and cows with calves at foot."

"We also use it for the sheep flock — we've been able to include maize into their diet, which has made them very milky. Before, we were on a bale system. Because of the KEENAN diet feeder, we can use TMR (total mixed ration), so this has made a huge difference in the amount of milk the sheep have when they come to lamb."

Denis Dreux, InTouch senior feeding specialist, is a regular visitor and an integral part of the success of the KEENAN system on the farm. Through conversations between Denis and Mike Caunter, it became increasingly obvious that Cotswold Farm Park could further benefit from an Alltech® Navigate™ assessment. Launched in 2019, Navigate is a free on-farm assessment designed to highlight any waste in terms of feed. The highest and most variable cost in any livestock production system is feed. Feed costs on a dairy unit, for example, can fluctuate between 10.9 and 19.7 pence per litre. Home-grown forage is the most cost-effective feedstuff on any farm, but some of the most substantial losses are found in the making, storage and feeding of it. By identifying where wastage occurs and understanding how it can be avoided, Navigate will demonstrate how significant gains can be made.

So, one bright winter's afternoon in December 2019, Ian Leach, Alltech® Navigate™ specialist, joined Denis to visit the Cotswold Farm Park and carry out an on-farm Navigate assessment.

As sustainable and authentic farming is a key mission of the farm, Mike Caunter was keen to see how they could combat waste and increase efficiencies from an environmental perspective. Ian began by highlighting a common mistake made by farmers when assessing the amount of silage that they have in their pit.

"Farmers can easily overestimate how much clamp silage they have in their pit," explained Ian. "For example, if their pit is 10 metres wide, 20 metres long and three metres high, they assume that there's 700 kg of fresh matter per metre cubed, and they'll make their calculation based on that. In reality, the actual volume is 300–400 kg per m^3 down the sides, a mixture of density across the top, and we might get towards our figure of 700 kg per m^3 in the middle. Forty percent of silage pits are in the top metre and down the sides. So, farmers have a half to two-thirds of the amount of silage that they thought they had — and then they wonder why they're running out!"

The focus for this particular audit was the silage in the Ag-bag. Usually, Navigate assessments are carried out on a silage face in a pit where the clamp is open, so this assessment was a little different from the norm. The assessment involved taking silage samples and conducting various tests, as well as examining the overall visual signals from the pit. The Navigate assessment also involves testing the temperature in the pit. "One of the things we look at is aerobic stability," said Ian. "The protocol looks at the temperature at 10 cm and 50 cm behind the face of the pit. If the temperature at 10 cm is cooler than at 50 cm, the Ag-bag or the pit is aerobically stable."

The assessment on the Ag-bag at the Cotswold Farm Park showed wastage of just £805, which was an excellent result. This was due to a little mould on the face of the silage, with just some waste across the top. The temperatures showed that the Ag-bag was aerobically stable. Ian Leach was also able to offer Mike Caunter some practical advice on minimising waste during silage production:

1. Grass should be mowed at 9.30 am to maximise optimum wilting conditions.
2. Ted grass out within 30 minutes of mowing, as wilting is five times faster in the first two hours.
3. Leave a 7-cm stubble height for airflow for wilt and rapid regrowth.
4. Discard all spoilage (such as any mould) from the pit.

"These actions will help to retain more of the 'true protein'," explained Ian, "which is locked up in bound amino acids that your beef cattle will be able to convert to meat more effectively and will help your sheep to produce milk more efficiently."

It was also suggested that the farm could consider some other solutions from Alltech to help reduce environmental impact and improve efficiency, sustainability and profitability of the enterprise, as follows:

Breeding stock mineral source

Wherever possible, inorganic trace elements should be replaced with organic trace minerals, such as Bioplex® and Sel-Plex®.

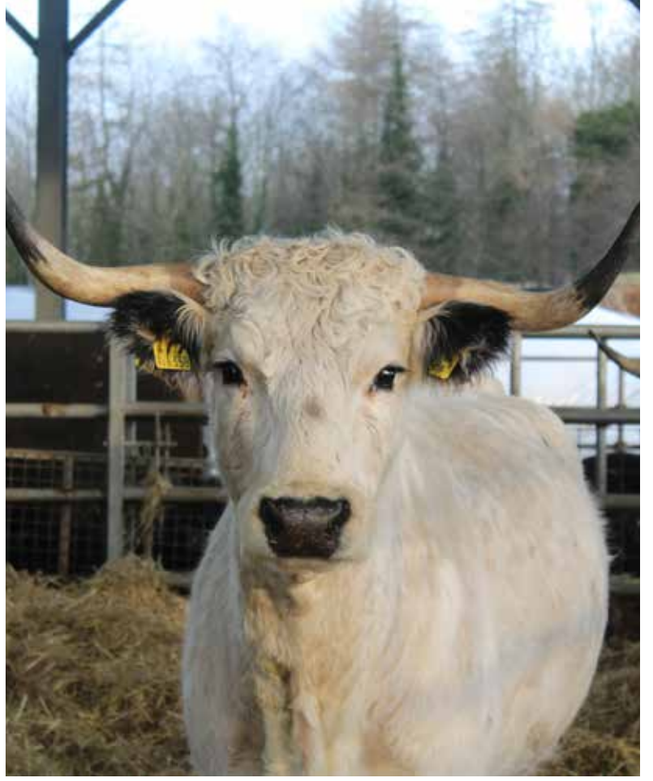
- With more bioavailability, organic minerals replicate the form found naturally in plants and can help contribute to the fertility and overall health of the breeding herd/flock.
- The efficacy of organic trace minerals means that lower levels are added to feed compared to inorganic minerals. This leads to fewer minerals being excreted in the manure, which benefits the environment.

Growing and finishing

- Any cattle/sheep two months from calving/lambing would benefit from Bio-Mos®, which would improve the innate immunity transfer and colostrum quality post-birth.
- For beef cattle, Yea-Sacc® inclusion can optimise rumen health and function to improve feed utilisation (FCR) further.

KEENAN was delighted to offer the free Navigate assessment to Henson & Andrews. The Carbon Trust validates KEENAN MechFiber diet feeders as helping to reduce emissions on-farm. Being able to provide free Navigate assessments is part of KEENAN's enduring commitment to environmental stewardship.

If you would like information on getting a Navigate assessment on your farm, please contact your KEENAN representative.



"Feed is the single biggest variable cost on farms. Interestingly feed can be linked to 2/3 of the average farm carbon footprint through raw material source and enteric emissions."

THE RESULT IS IN THE MIX

SPEND MORE TIME ON THINGS THAT MATTER

ALAN DWYER, AN IRISH DAIRY FARMER, DESCRIBES THE REASSURANCE THAT HAVING A KEENAN DIET FEEDER BRINGS TO HIS FARMING LIFE

In society today, we understand the importance of achieving a work-life balance. Home-life and work-life are both important, and neither should be neglected. For those who are self-employed, it can be even harder to separate the two.

Alan Dwyer, from Cashel, Co. Tipperary, married to Julie and father to three-year-old Lee, has long been a proponent of the benefit of maintaining a work-life balance on the farm. Little did he know that when he purchased a KEENAN diet feeder in April 2018 that it would bring additional personal benefits, as well as an increase in profitability on the farm.

As a young boy growing up on a farm, however, Alan's future career path was never certain. "I wasn't sure if I wanted to be a farmer at all," explains Alan. "I hadn't a massive interest in it when I was very young. As a child, I liked being on the farm, but I didn't love being on the farm. It was only around age 15 that I decided farming was the life for me."

After school, Alan went on to complete a four-year degree in agriculture in the Waterford Institute of Technology. Like many graduates, he then went travelling for a year. He headed to New Zealand for 12 months and admits that in all that time — unusually for an agriculture graduate — he never once set foot on a dairy farm! Now farming full-time for nine years, working alongside his mother, Gaye, and father, John, Alan milks 200 cows on their 300-acre farm. They keep all replacements for the dairy herd and sell all remaining stock. They also grow 40–50 acres of maize silage every year to include in the milking diet.

Work-life balance

The ability to separate farm life and home life has been key for Alan, his family, and his parents. They take it in turns working on weekends so that everyone gets some downtime.

"I am lucky that working with my parents allows me to have a life outside of farming," he says. "I get up at 5.30 am every day. After milking, I go to the gym for an hour and then drop my son to school. I try to fit the farm around my life, so that when I finish at 6 in the evening, I can switch off and spend time with my son, Lee, and my wife, Julie."

How reducing time on tasks helps

"I purchased the KEENAN diet feeder as I was told that my milk solids would improve by 50 kg over the year," remembers Alan. "Within six months, I had already achieved an increase of 40 kg per cow. As well as improving profitability on the farm, there have been other benefits I wasn't expecting too. It's been easier for me to take time out knowing that when it's my father's turn to feed, he literally only has to turn on the box and everything is on the screen for him, he is walked through the loading weights and orders, which means the mix he feeds the cows is the exact same as though I had mixed it myself.

"In the springtime, I find it very handy that the mix is already programmed into the diet feeder, so literally as the cows are calving, I only have to increase the cow numbers from the previous day on the KEENAN controller. The mix stays the same day on day, as the system automatically adjusts the diet as each increase in herd number is inputted following calvings. Previously, I was trying to work it out on a calculator which is no big deal but was time-consuming nonetheless! I'm saving time, and my animals are getting the very same feed in front of them every single day; which is important, as consistency is key for a cow to perform.

"In summary, it's made my life easier. Not in a major life-changing way. But it's the little things that make a difference. This morning at half six, my son's first words were, "We have to go feed the cows now Daddy". He loves being with me on the farm. Outside is king for him. He gets great enjoyment from it and similar to my own parents, who didn't apply any pressure on me to take up farming, I'd be quietly hopeful that he will follow in our footsteps."

EMPLOYEE SPOTLIGHT

GERALDINE VIEL

Marketing Co-ordinator
KEENAN France

Tell us about your background?
I was born and live in Brittany, France. I live about 40 minutes from the famous Mont Saint Michel, a gothic-style Benedictine abbey perched on a rocky islet, France's most picturesque UNESCO world heritage site. I have been working for KEENAN for 16 years. I have three children, Anais, Camille and Baptiste.

Describe yourself in three words?
Dynamic, smiling, determined.

What is your role in KEENAN?
I am the marketing coordinator for the French market. My role includes the organisation of internal and external meetings, open days on-farm, group stays and sales-team challenges. I look after all aspects of the 25 trade shows that we attend every year, from idea conception to execution.

Our online presence is very important to us, and I look after updating the website and our social media channels. We stay very close to our customers, so I ensure that we have relevant marketing materials (flyers, etc.) to support the activities of our salespeople. No two days are the same when working in marketing!

What do you most enjoy about working at KEENAN?
The versatility of my tasks — working in communication and marketing is never boring! Each day I get the opportunity to try new tasks, so it is inevitable that each day I learn a new skill. I like promoting the results of KEENAN diet feeders and supporting the KEENAN brand every day.

What do you find most challenging about your role?
Dealing directly with customers on-farm requires a quick response and access to all the answers. When I do not know the answer, I liaise with multiple people within the organisation so that I can respond to the query as quickly and as accurately as possible.

What has been your proudest moment at KEENAN?
My trip to Ireland for KEENAN's 30th birthday.

Can you describe your personality type (red, blue, yellow, green), and how does it benefit your job?
The colours that define my personality are blue and green. This benefits me as I need to have excellent attention to detail for my role and I also need to be able to work with lots of different people with varied personalities.

What are your hobbies outside of work?
My favourite hobby is running. I enjoy the mental and physical benefits that it brings. My personal record for 10 km is 42 min 03 sec.

What does success look like to you?
For our team in France, success would mean a further increase in our customer base — more happy KEENAN customers! It would be nice to expand the team in the future too, with more staff on the ground.

Geraldine's youngest, Baptiste, is already a KEENAN fan

"I like promoting the results of KEENAN diet feeders and supporting the KEENAN brand every day."

WHERE IN THE WORLD IS **KEENAN?**

USA
A proud winner of a KEENAN 365 diet feeder at the Keystone Farm Show in Pennsylvania, US on January 8-10

GERMANY
The prototype electric-ready KEENAN e345 at Agritechnica, Hannover, Germany. Europe's largest indoor machinery show November 2019

BULGARIA
STEAKSO, Bulgaria, a beef & ruminant focussed event took place in November 2019. At the event a KEENAN MechFiber320 was on display and our French nutritionist, Segolene Labesque, was a key speaker at one of the seminars at the show.

UK
Dairy Tech took place on February 5 in Stoneleigh Park, Kenilworth, UK. KEENAN had 2 stands at the event

UK
LAMMA, the UKs leading agricultural show took place at the NEC in Birmingham on Jan 7 and 8.

USA
Our American distributor Troop Equipment exhibited at Powl's Dairy Expo in the US in February 2020

KEENAN SERVICE

TIPS TO KEEP YOUR MACHINE IN OPTIMUN CONDITION

OUR KEENAN SERVICE SPECIALIST SHARES SOME TIPS

Having your machine checked and serviced regularly will help ensure reliability and avoid costly downtime. A correctly serviced machine will also have better chopping and mixing performance - thereby reducing the power requirements and fuel consumption, extending the working life and helping to maintain the value of your machine.

A fully functioning machine, producing a consistent and good-quality daily mix, also improves feed intake and rumination and supports the health of the herd. Aside from creating less waste, it improves feed efficiency and increases the output of animals, which results in more milk or beef.

Here is a checklist for keeping your KEENAN in optimum condition:

Weighbox:
The weighbox is the brain of the operation. In order to feed the correct amount of ingredients, it needs to be working properly. Look at the overall condition of the weighbars, cables and sockets and run a test to confirm that everything weighs correctly. Start with zeroing the system. To check that the system is weighing correctly, find an item whose weight is already known (e.g., a bag of fertilizer), place it on top of the machine and then check the read-out on the controller.

Hitch, chassis and drawbar:
Check the condition of the parts, including pivots, springs, U-bolts and pins. Grease all smear points. The newer oil bath models have a greasing manifold that tends to all the inaccessible grease points of the machine's drive system..

Brakes, tyres and wheels:
Check that your brakes are engaging; carefully look at the overall condition of tyres, rims and wheel bearings and check that wheel nuts are tight. Don't forget to check the tyre pressure.

Driveline:
Check all sprockets and bearings and make sure all chains are tensioned correctly to avoid increased wearing. Grease all pivot points and the tensioner mechanism. Refill the oil bath or the automatic oiler, if necessary. Regularly oil the chains to lengthen their working life. (Fitting an automatic oiler or having a model with an oil bath negates the need for this.)

Hydraulics:
Check for leakages and do a test run. The design life of hydraulic hoses depends on the level of usage and wear and tear. They should be checked yearly and replaced about every 10 years.

Mix quality assurance:
Check the condition of body blades and paddle rubbers. Replace if necessary — these parts have a significant impact on the mix quality. Also, check the condition of the top knife and the clearance between it and the paddles. If you have a bale handler, check the clearances of moving parts and grease pivot points on each bale handler tine.

Overall machine:

- Check seals and flighting and grease the VFC-door with a food-grade grease.
- Check paddles, rotor and tray parts.
- Ensure the safety of your machine by checking protective devices and guards.
- If your PTO cover is worn or damaged replace it and make sure it is securely tied and not spinning freely.
- Check that the lights and indicators are working correctly.

Most common issues with the machine can be prevented by simply keeping the bearings and chains greased and not overloading the machine.


THE RESULT IS IN THE MIX
Spend more time on things that matter.
Backed by years of independent research, the KEENAN ration has been shown to deliver increased herd performance and reduced herd health issues, meaning you have more time to spend on the things that matter, safe in the knowledge your herd is being looked after.
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