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George Brownlee, Farmvet Systems and VetIMPRESS

Veterinary surgeon George Brownlee is the principal at Farmvet Systems and VetIMPRESS based in Northern Ireland. *M² Magazine* spoke to him about the origins of his business and how it has developed since establishment in 2010.

***M² Magazine:* So, how does your business fit in to the ever-changing world of veterinary medicine?**

George Brownlee. At the heart of VetIMPRESS – our web and mobile app software platform – and our company, Farmvet Systems Ltd, is the belief that farm animal vets have a vital role to play for farmers and for wider society. They are the advisors and advocates of farmers and the enablers of safe, affordable, ethical-produced food from animals for consumers.

For many years, livestock farming has been high profile news; from food scares and disease outbreaks to the current drive towards convincing consumers to move to plant-based alternatives to milk, eggs and meats on, what is, a contentious environmental ticket.

It is during these times especially, that farmers need the help of the entire supply chain to share the truth about the wholesome food they produce and into which they pour their heart and soul.

Somehow, the farmers' efforts in caring for their animals, their health and welfare, the environment and the sustainability of rural communities in order to put food on our tables, seems lost in the noise of popular opinion.

It is our belief that as vets, we can show our real value to farm clients by helping farmers and livestock farming become more resilient to the challenges that face them. Reducing losses, gaining efficiencies, making effective decisions, building up facts and insights that tell of the provenance of food throughout its journey on and from the farm, alongside veterinary governance and endorsement, are all essential elements.

As they say, "if you can't measure it, you can't manage it" and this is where VetIMPRESS really has its impact for our veterinary practice customers. We help to bring facts and data to the farmer, where previously there was only opinion and advice.

Our business is a software company but we employ more data engineers than application developers. VetIMPRESS brings data from multiple disparate, fragmented, un-standardised sources across farm, veterinary practice and third-party suppliers together after we gain permissions to access and import; we then standardise, validate, integrate and analyse the data as an aid to the work of the vet.

The features of our software help vets make the best decisions possible for their farm clients and their animals when on farm; to work efficiently and to reduce risks for their practice business; and to fully engage with the industry and beyond.

***M² Magazine:* How is your business staffed and what computer and phone hardware and software is needed to deliver your services?**

George Brownlee. Our technical team are based in Northern Ireland where a mix of application designers and developers, data architects and engineers and business analysts with guidance from vets provide input to the process of creating and developing our technology.

Our users access our applications via the web on any connected device, but given the rural nature of farms they also make heavy use of our mobile applications via iOS or Android devices (usually tablets such as iPads) to carry data and data collection and reporting facilities with them when offline.

Farmvet Systems is responsible for delivering the technology to our customers and managing and protecting their data. The security and privacy of our customers' data is of paramount importance to us. We understand the trusted relationship that exists between vets and their farm clients and how priceless that trust is – something that must be protected.

On the road, we have a team of Farm Solution Managers who visit our vet practice customers to discuss their needs and bring together the solutions they require. This is done in partnership with the team at our partner company, Vetoquinol, throughout the countries where we are currently operating across Europe. These colleagues are responsible for sharing the vision of how our technology can help our customers; in training and supporting our users and creating real change for the better in the impact that vets can have for farmers and farm animals.

***M² Magazine:* What drives the business at the moment?**

George Brownlee. Our focus at present is led by two complementary drivers:

- Furthering the reach of our technology across new markets.



- Extending the features in our technology to new areas of vet needs.

In recent months we have added many more data sources across Europe as well as translating and adapting our applications for use in countries such as The Netherlands, Belgium, Germany and France; these are in addition to our home markets in the United Kingdom and Ireland.

We have also defined, from the needs prioritised across these markets, the features and benefits that vets want to see added to or

extended within the system and our team are constantly working to bring these new benefits to our customers. Broadly speaking, these fall into categories of helping the vet when:

- On the farm – to make effective decisions and communicate with farmers
- Working for the practice – to be efficient in their work and reduce risks
- Playing their part in the practice business – to understand new opportunities



VetIMPRESS
beyond the call

Another strong area of use within VetIMPRESS is lameness. Analysis of lameness on a farm is carried out at herd level with the data recorded and imported in the mobility scoring and hoof trimming areas.

■ And – to fulfil their role in the wider industry – by communicating through data and advocating and endorsing the production of food on their clients' farms.

M² Magazine: What do you see as the next steps for the business over the next two or three years?

George Brownlee. In a few words – “more of the same”!

Having now found our rhythm in terms of tackling new markets, integrating with new data sources, translating and adapting our applications into new territories we are in a phase of growth.

To some extent that means we “rinse and repeat” our current learnings. However, scaling also involves many new challenges and opportunities, which we expect to meet by growing our team both in numbers and by investing in our existing people – and people are, by far, our most important asset.

M² Magazine: With particular reference to udder health, how have your systems helped vets and farmers prevent or reduce udder

infections, control somatic cell counts and reduce the use of antimicrobial preparations?

George Brownlee. Led by our customers, we found that fertility and lameness were the two important areas in our product portfolio; long before udder health came into focus for us. I think that is reflective of how vets, in the past, have been operating generally. Mastitis is often a more hidden cost to the farm business.

Lameness is very obvious in terms of both the visual awareness but also in terms of milk yields dropping significantly in the individual lame animals. Fertility impacts on calving intervals and yields and is similarly often within the view of performance indicators to the farmer.

But mastitis is more insidious, often suppressing the return for the farmer right across many animals, moving around through the herd and not being so easy to pinpoint to individual animals so much at any one time. There is a big win for farmers to be had, but it is harder for them to see it and to be motivated to involve their vet in an investigation and consultation.



Routine selectors allow vets to create selectors that inform the farmer whether the animal should have antibiotic dry-off tubes, teat sealant tubes or both. VetIMPRESS also makes it possible to add mastitis analytics to the vets work conveniently and without a significant burden of additional effort.



Nevertheless, the first area we've tackled in mastitis issues is to proactively make it clear to the vet and farmer that there is a problem. Automated imports of milk recording data and robot/parlour data to trigger cell count alerts to both vet and farmer at herd and individual animal level are a great way to indicate early warnings of any problem. More reactionary, but still very useful, are medicine-spend warnings on antibiotic tube use per 100 cows per year.

We've also made the process of helping the vet and the farmer work together on measuring and monitoring the problem much more convenient. Detailed clinical mastitis recording via both vet and farmer apps, easy recording of results of culture and sensitivity data and analytics of these plus milk recording data are an important time saver for vets and farmers making it possible to add mastitis analytics to their work without a significant burden of additional effort in recording and number crunching data.

Finally, we've also made the on-going management of animals around dry-off and mastitis treatments more of a shared process between vets and farmers. These treatments are often performed by farmers initially and our system now helps vets provide their advice on protocols and to create selectors which inform the farmer, for example at dry off, as to whether the animal should have antibiotic dry-off tubes or teat sealant tubes or both.

These features, together with reviewing via reporting, really help vets and farmers get a handle on the data behind udder health and help understand the value of their investments of time, expertise and money in tacking this hidden thief of farm profits.

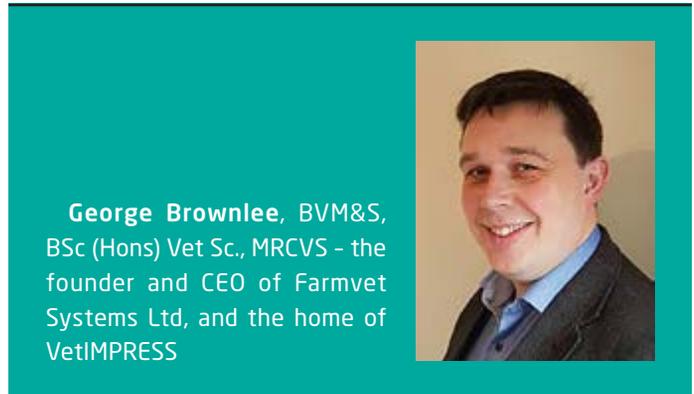
M² Magazine: To complete the picture, what are the origins of the business and how did it develop from its beginnings to what you have to-day? And how do you link with other bodies?

George Brownlee. In many ways, what we do at Farmvet Systems is not new. Over the years vets have made significant efforts to use technology to crunch existing data from milk recording and farm management system.

It is really through my experience of growing up on the farm and seeing veterinary services from a farmer perspective; then working in farm practice for eight years and being frustrated that the best of what vets have to offer was limited by access to data that the business was conceived.

By dint of fortuitous timing (or good vision if you want to believe that!) the company was incorporated some six weeks after the first iPad was announced, and one week before the iPad was available for pre-order. So from the start our thinking was around the mobile nature of the technology and the data.

That said, local skills to develop applications for new operating systems like iOS were hard to come by at that time in 2010 (but note that the technology has moved unbelievably quickly since then) so we started with a website and an application on a Windows tablet, before moving to Apple and Google application stores with iOS and Android applications a few years later in 2014.



George Brownlee, BVM&S, BSc (Hons) Vet Sc., MRCVS - the founder and CEO of Farmvet Systems Ltd, and the home of VetIMPRESS

Key to our success is the automated nature of our integrations with other data sources. Previous efforts over the years have always involved a certain element of the use of bureau service by the vet practice and files of various proprietary formats being passed around between vets, farmers and third parties such as milk recording companies.

Although the most diligent players could work that way, many found that there just were not enough hours in the day to keep up such efforts and really make it a reliable service from the practice to their clients. VetIMPRESS was born into a different era where data integration and data sharing, with appropriate permissions, was becoming more accepted.

So now, with farmer permission, vets can expect to arrive on-farm fully armed with the data they need without having to sit up to 2am the night before surrounded by paper records, files, websites and Excel spread sheets, just to be prepared to do a great job. Our list of data integrations extends from veterinary practice management systems and veterinary laboratories to milk recording organisations, government identity and traceability records, and farm management software and in-line sensors in the milking plant.

With many of these, we are now pushing towards real time integrations to bring even more proactivity and rapid reactivity to the outputs we can create together. I believe this bodes well for the future of the vet and farmer relationship and ultimately for the health of farm animals and the quality of our food.

George Brownlee was brought up on a suckler beef farm in County Fermanagh, Northern Ireland – a County famous for its extensive Upper and Lower Lough Erne lakes and river system. Following High School education, he studied veterinary medicine at the Royal (Dick) School of Veterinary Studies, the veterinary school of the University of Edinburgh, Scotland from 1998 to 2004. He qualified with BSc with First Class Honours in Veterinary Science in 2002; and with BVM&S in 2004 and gained MRCVS in the same year. Returning to Northern Ireland, he worked as a practice veterinary surgeon at Parklands Veterinary Group in Cookstown, County Tyrone from 2004 to 2010. In 2010, he started his business, Farmvet Systems Ltd, based in Moneymore, Co Londonderry and has developed VetIMPRESS, a web and mobile app software platform. M²