

Futureproof your farm business by taking your biosecurity digital

Whitepaper | September 2022



Livetec

systems

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Executive Summary

The UK farming industry has never been as vital to the health and wellbeing of the British population, and national economy, as it is right now.

In the face of global supply chain issues, growing concerns around food security, a cost of living crisis and fears around the safety of imported food, Britain's farmers are playing a more important role on the national stage than we have ever seen before.

Opportunities to grow are plentiful, with soaring demand and government initiatives to increase food self-sufficiency levels. Taking advantage of those opportunities means that today's farmers must use every tool at their disposal to protect livestock from the threat of disease and prevent costly outbreaks on farm.

Livetec is building the future of biosecurity and in this report, we'll explore how digitalisation can benefit your biosecurity strategy, better protect your livestock, and improve your response effectiveness in the event of a disease outbreak.





Introduction

Britain's farmers supply 64%¹ of all food consumed in the country each year. The difficult nature of the past few years, which has seen Brexit, Covid and the war in Ukraine come together in an unprecedented trifecta of disruption, means our nation's farmers have a more critical role than ever to fulfil.

On top of the already significant cost, labour and supply issues created by that trio of events, farmers have also been additionally challenged by a disease outbreak on a scale of which we have never seen before.

More than 130 cases of Avian Influenza (AI) were confirmed between October 2021 and August 2022. A record breaking number of bird flu cases continue to appear well beyond the traditional seasonal window, with the UK's chief veterinary officer, Christine Middlemiss saying AI had reached a "phenomenal level" in the UK along with a "large number of outbreaks across the EU". It is especially high amongst the wild bird population and continues to pose a threat to poultry farmers.

Other diseases are also emerging as potential threats, with cases of African Swine Fever appearing across Europe and Asia². With cases confirmed as close to home as Italy and Germany, it is imperative that UK farmers are prepared for the prospect of this highly contagious viral disease landing on our shores, too.

In increasingly busy times, a move away from time-consuming, inefficient, and potentially costly manual processes towards highly efficient, highly accessible and highly reliable digital tools can dramatically improve biosecurity standards. Crucially, a move away from paper towards digital records can substantially increase response times in the event of an outbreak, helping to contain disease faster and lessen its impact on the farm business.

¹ <https://www.countrysideonline.co.uk/food-and-farming/contributing-to-the-economy/>

² <https://www.daera-ni.gov.uk/articles/african-swine-fever>

What is biosecurity and why is it important?

Biosecurity is the foundation on which successful farm businesses are built. It encompasses a broad range of considerations, each of which provides another line of defence against the incursion of disease.

The standard of biosecurity implemented on farm directly impacts the safety and wellbeing of livestock, workers, and the overall farm business.

There are three tiers of biosecurity to consider:

- **Conceptual biosecurity:** Where your farm is located can directly influence the level of risk faced. Conceptual biosecurity considers your farm's position and the location of animal housing, in respect of risk factors such as its proximity to main roads, other animal related businesses and wildlife.
- **Structural biosecurity:** How your farm is built, maintained, and accessed dictates how it operates. It also determines how people, traffic and equipment move around the farm.
- **Procedural biosecurity:** On-farm procedures and routines are enormously influential when it comes to maintaining a strong level of biosecurity. From how visitors are recorded to how disinfection is approached, this aspect of biosecurity is particularly key to guarding against disease incursion and spread.

A high standard of biosecurity actively works to protect livestock from exposure to disease and ensures that any outbreaks that do occur are quickly stopped in their tracks. Each of these three tiers must therefore be considered concurrently to provide the highest possible level of protection.

A poor standard of biosecurity leaves livestock exposed and vulnerable. It is detrimental to their health and can undermine their welfare. It can also have enormous financial and commercial repercussions, pose a public health risk and place business continuity in jeopardy.



The problem

Biosecurity requires continuous monitoring

Biosecurity is not static. It isn't something that is done once and can then be ticked off until the next year rolls around. It must be continually front of mind to remain effective and functional. Thanks to its many moving parts, it can be time consuming if not approached in the right way.

This can be problematic, given many farmers are facing a chronic labour shortage. Resources are in short supply and more stretched than ever. The UK government has described the shortage of workers as "acute"³ with poultry farmers alone operating without the 40,000 additional pairs of hands they require around the country.

Agility, flexibility, and the ability to respond quickly and decisively to emerging threats is critical for farms to remain biosecure. However, for many farm businesses, the reality is that there simply aren't enough hours in the day to get everything done.

While some tasks must be done manually, any time that can be saved in other areas with more efficient processes can only be a bonus for farmers.



³ <https://committees.parliament.uk/publications/9580/documents/162177/default/>

Many farms rely on paper-based systems

The business of farming has historically been carried out using paper-based systems and manual record keeping. Research⁴ carried out by McKinsey and Co. confirms that agriculture remains true to its status as one of the oldest established industries, relying heavily on analogue rather than digital technologies.

Researchers note that, "Agriculture remains less digitized compared with many other industries globally. Past advances were mostly mechanical, in the form of more powerful and efficient machinery, and genetic, in the form of more productive seed and fertilizers."

Paper-based systems can be problematic, especially in times of crisis. Paper-based visitor records for example can't be easily searched. Data can't be extracted, organised, and analysed when it's provided in a written rather than digital form.

Paper records can also be misplaced, inaccurate, and easily lost. If paper logs are locked away in a cupboard, they become hard to access when they could be most needed, especially if not all farm personnel are issued with keys or the key holder isn't on site.

In the event of an outbreak, working with paper-based records can slow down the speed of response. They don't allow for data to be easily assessed, queried, or sorted in a timely manner in the way that digital records do.

What's more, if all physical logs, diaries, and files can't be immediately located in the event of a disease outbreak, the extent of that outbreak can grow exponentially.



Today's complex world economy and the rapid pace of the farming industry makes it impossible for producers to manage a farm enterprise the way their parents did 30 years ago. Without a proper understanding of record keeping and its current and future implications, the farm operator will not make it very far in today's business environment."

College Of Agriculture & Biological Sciences / South Dakota State University

⁴ <https://www.mckinsey.com/industries/agriculture/our-insights/agricultures-connected-future-how-technology-can-yield-new-growth>



The digitalisation revolution is transforming how business is done

Many industries have recognised the competitive advantage that digitalisation offers, especially when it comes to creating, storing, sorting, and accessing important business documents.

 **Digitalisation involves the introduction of digital technological innovations into existing (organisational, industrial, societal) systems in such a way that changes how those systems operate.**

Simon Fielke, Bruce Taylor,
Emma Jakku

Around the world, billions of organisations are making the switch to digitalise their most important documents for greater security, increased efficiency, and notable cost savings.

Time spent hunting for paper files equals money wasted

With as many as 1.8 hours per day⁵ lost simply in the search for information stored on paper, it's easy to see how the costs of using physical paper documents to run your farm can rapidly add up.

With costs at the farm gate increasing by 50% in the last year⁶, paying any member of your team to spend almost two hours searching for documents alone makes little financial sense.

Source: <https://www.sciencedirect.com/science/article/pii/S0308521X19310522>

⁵ <https://www.accesscorp.com/blog/6-reasons-to-digitize-important-documents/>

⁶ <https://www.bbc.co.uk/news/business-60691116>

In contrast, locating that same document could be accomplished in just a few seconds if it were stored in a digital system with computer-powered search functionality. This is much more efficient, eliminates the financial cost of time spent looking for physical documentation and allows your farm to work smarter and more productively, which again reduces wasted spend.

Digital documents are more secure

Paper-based documents are incredibly susceptible to unforeseen disasters such as fires and floods. Most businesses simply can't take the risk of their business-critical information being lost.

Moving to digital documentation means that vital records are safely stored in the cloud, and won't be lost if a fire, flood, or other natural disaster damaged or destroyed a paper copy or made it impossible to access the physical document storage area.

Information siloes prevent informed decision making

If your livestock records are scattered across various paper files, it could be that you're not always seeing the complete picture. It's hard to get any sense of patterns or data trends if you need to manually view 2000 different pieces of paper.

If information about one element such as feed is stored on one piece of paper, and vaccination or illness records on another, information becomes compartmentalised and siloed.

That means you're never seeing the big picture and can't make data-backed decisions as a result. This could mean that you don't spot trends in disease outbreak for example, which could provide costly in the long term.



Paper files are time consuming to update

If your files are all paper based, your only option to update them is to manually pull out the correct file and then write in new data.

This is not just time-consuming (and therefore a financial expense) it also means that you can't be entirely confident that all records are as up to date as they should be.

Incomplete or outdated records can hamper your response to disease outbreak, which could mean that your farm spends longer under the control of the Animal and Plant Health Agency (APHA) and unable to carry out its normal operations.

This has huge financial implications at a time when many farmers are already feeling economic strain.

Adopting a digitalisation mindset and applying this to record keeping can transform how you respond to the threat of disease and manage disease outbreaks.



The importance of digitalising your biosecurity

Digitalisation can provide both productivity and sustainability benefits to your farm⁷ – but it can also enhance your standard of biosecurity, offering greater protection for your livestock and your livelihood.

It's clear that maintaining the highest possible standards of biosecurity is a priority for today's farmers. However, the farming industry is traditionally reliant on paper records.

When an outbreak happens, paper-based reporting systems often show themselves to be inadequate, can quickly break down and can hamper on-farm responses.

The very nature of their physical form and ease of movement means that paper records are often spread across multiple locations, are incomplete or difficult to locate in moments of high stress and pressure. They may also be outdated or duplicated, which slows down disease response – this can mean more animals are impacted.

What's more, paper files can also only be accessed by one person at a time. If they're shut away in a desk drawer by one person, they're not accessible to another.

Vital records such as visitor logs must be quickly available and accessible from a secured, central location, to assist in the event of a disease outbreak. The simple act of holding documents in a digital format, viewable at the touch of a button by any relevant person, from any location on or off farm, including in animal housing which may sit far away from paper record storage, makes that possible.

Biosecurity sits at the very heart of every successful farm business. Making it accessible in a digital format means stakeholders both on and off farm can better understand the biosecurity measures in place, locate crucial information on demand from any location and react faster to the threat of disease, saving farmers time and money.



⁷ <https://www.sciencedirect.com/science/article/pii/S0308521X19310522>



The benefits of digitising your biosecurity measures

Over and above improving your response times in the event of an outbreak, digitising your farm's biosecurity measures offers numerous additional advantages.

These can help to elevate your overall level of biosecurity as well as offer business-specific benefits to improve animal health and welfare, farm safety and productivity.

Data-driven decision making

Data is highly prized in corporate circles because it provides solid insight and raw information not tainted by opinion or gut feeling. Having a central store of real time data, which can be easily understood and queried, makes for much stronger, solid decision making.

Digitalising biosecurity means that as a farmer, you can make decisions based on real time animal health information. You can more easily track animal movements around farm for example or check vehicle movements on and off farm in a much simpler way.

This allows you to make more informed decisions about processes, check whether biosecurity protocols are being observed and identify areas for improvement.

Pre-emptive biosecurity mapping

Biosecurity mapping can drive down the risk of disease spreading through your livestock population. Taking your biosecurity digital means it's possible to better manage your risk with geographical forecasting as well as more easily see control and quarantine zones in place.

This type of digital modelling can also help to stem disease spread across farms, by facilitating early warnings to those most at risk of incursion.

Faster contact tracing

Research conducted in 2021⁸ into the most effective control strategies for African Swine Flu confirmed that fast, efficient contact tracing was one of the best ways to control the spread of disease.

In modelling carried out by researchers, contact tracing resulted in 95% disease control – higher than that accomplished by the imposition of quarantine zones around affected premises.

Digital record keeping and systems enables contact tracing to be carried out quickly and comprehensively, limiting disease ingress.

Better communication of biosecurity policies

Digital systems, including instant messaging, can dramatically speed up communication. If you rely on analogue channels, key information can take much longer to disseminate and it's harder to follow up.

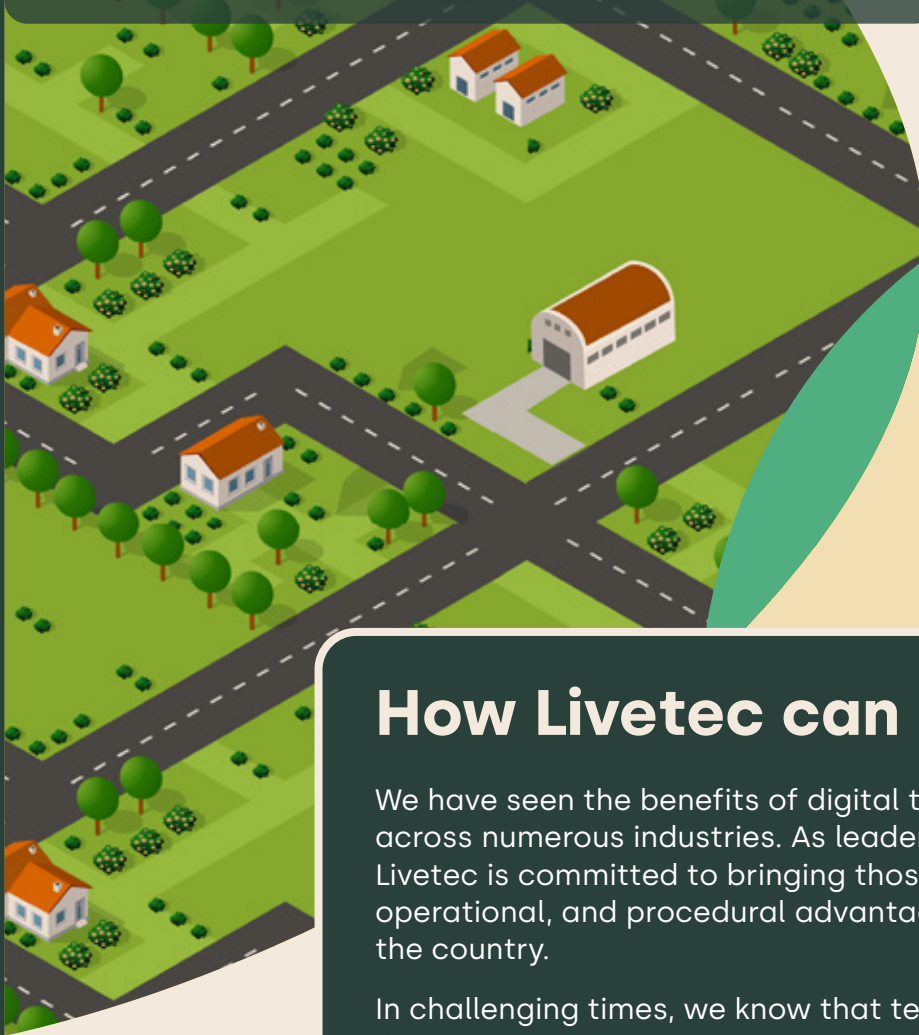
In contrast, digital messaging can be used to send out updates simultaneously to all farm workers and other key stakeholders, communicate new policies instantly and is traceable. You can easily verify who has seen, read or missed an update and follow up accordingly.

This speed and convenience of communication also enables you to send out more frequent reminders about biosecurity practices to ensure high levels of compliance.



⁸ <https://onlinelibrary.wiley.com/doi/10.1111/tbed.14334>

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How Livetec can help

We have seen the benefits of digital transformation sweep across numerous industries. As leaders in biosecurity, Livetec is committed to bringing those same competitive, operational, and procedural advantages to farmers around the country.

In challenging times, we know that technology can offer the best protection, fastest way to identify disease, help to contain an outbreak, display compliance and get the farm back to business as usual as quickly as possible.

Introducing Farm Health Guardian

Farm Health Guardian is a complete digital biosecurity solution designed to give enhanced levels of protection for your livestock and your livelihood.

This digital system helps you to build stronger defences against disease and react faster should an outbreak occur. As the trusted partner of DEFRA, the Livetec team has been present at every notifiable disease outbreak. We know that speed of response matters.

The faster you're able to pinpoint the presence of disease and track where it may have already spread, the quicker you can stop it in its tracks. Farm Health Guardian is loaded with tools and features proven to do just that.

In an era where costs continue to rise, Farm Health Guardian works to actively save you money and reduce unnecessary spend. By enabling higher levels of biosecurity, it works to maintain the health of your livestock and reduce the risk and expense associated with disease.

Farm Health Guardian's digital animal health records, visitor logs and equipment and vehicle tracking come together to prevent disease transmission.

You can instantly customise entrance requirements and health screening as needed. For example, by adding more restrictive requirements if an outbreak of a transmissible disease such as avian influenza (AI) has been reported nearby.

Instant communication via the in-app messaging feature can communicate alerts and lockdown requirements in seconds, again helping to prevent transmission. What's more, centralised health records shared between the farm and your animal health team make for smarter, more complete disease monitoring to enable early disease detection.



**Speak to us
about digitising
your biosecurity
with Farm Health
Guardian.**



Livetec Systems is the industry leader for livestock protection and biosecurity; the go-to partner for livestock management across the industry.



Livetec is the leading provider of livestock protection - the go-to partner for all biosecurity issues across the industry.

We provide an extensive range of innovative solutions for our clients:

