Livetec Systems™

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NFU Mutual

The Cost Of Cleaning Up After A Disease Outbreak

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With Input from **Amy Davies** and **Jack Hughes**

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The NFU Mutual has re-commissioned Livetec Systems Ltd, to undertake desk based research to provide updated cost estimates for secondary cleaning and disinfection (C&D) after an Avian Influenza (AI) outbreak.

The study included the collection of new data, revised calculations and testing some new assumptions based on Livetec's learning over last six years. This report presents updated details of guidelines and enforcement oversight and C&D cost estimates using four case studies. It will assist members think through how a notifiable disease outbreak (AI) could affect their business.

PLEASE NOTE:

This Livetec Systems desk based study is intended as best practice guidance. The Guide that follows has been completed, based on the quality, integrity, completeness, and accuracy of all of the information gathered as part of the study, in addition to other factors, such as UK Government regulations and guidelines as far as possible. This Guide is in no way intended to provide any sort of assurance or guarantee that any issues addressed herein will not arise or will be mitigated or eliminated. All information provided in this report is current as of the Date of Consultation.

Introduction

This exercise was first completed in 2018 and was reported in the NFU magazine issued Feb/March. By this time AI had spread worldwide with notable outbreaks in 2003-05 and again in 2014-16 but with a limited number of cases in the UK. However, since 2018 the UK has experienced significant AI outbreaks resulting in the premature deaths of millions of birds.

This new study draws on our experiences over the past six years of being on the frontline of disease outbreak control. It aims to update the narrative with respect to cleaning and disinfection (C&D) requirements after an avian influenza (AI) outbreak. The low number of outbreaks before 2018 meant that the Government and its agencies did not have much on-farm experience of interpreting and implementing specific AI legislation. This resulted in rules being applied strictly to the legislation with little leeway for any risk-based compromises. Since 2018 and over 500 outbreaks later, significant experience has been gained and often more pragmatic, risk based approaches have been adopted by Government.

The study aims to provide up to date estimates of the C&D costs of an outbreak as many of these costs have been affected by the revised Government interpretation of the rules, cost inflation and other world events over which the industry has had little control.

The demand for poultry meat and eggs has not diminished over this time and despite the debilitating effects of the outbreaks the poultry industry has pushed forwards modernising older infrastructure and building new farms. With a reinvigorated emphasis on biosecurity many of these modern units have the infrastructure in place to help control disease incursion and spread.

After a notifiable disease outbreak, full cleansing and disinfection is a requirement for farmers who wish to re-stock and resume business as usual.

C&D Options

There are three C&D options available to a farmer:

3 C&D options

1. **Cleanse and disinfect the farm to the standard based on the European Union (EU) Directive.**
2. **Cleanse and disinfect to the standard based on WOAH (World Organisation for Animal Health) rules.**
3. **Do not undertake cleaning and disinfection but keep the farm closed and under restrictions for 12 months.**

Crucial implications for each of the options.

- **Successful completion of Option 1 will allow a farm to go straight in to the process of restocking.**
- **Option 2 will prevent a farm from restocking with poultry for three months and 21 days after successful completion of C&D.**
- **Option 3 will prevent a farm from restocking with any susceptible livestock for 12 months.**

C&D Options (Continued)

If Options 1 or 2 are chosen then the farm will only be allowed to restock with poultry. Restocking directly after C&D with any other species (e.g. Pigs is prohibited).

If Option 3 is chosen, there will be a 14-day cooling-off period, after which it will not be possible to change the decision. The site will be under full restrictions for 12 months. The entry of any person, vehicle, poultry, other captive bird, mammal or anything on to the infected premises, or part of the premises is prohibited during this period. The buildings cannot be used for anything else. After 12 months restrictions will be lifted, and the buildings can be used for any purpose.

Why Are These Options Important?

Beyond controlling the disease outbreak, it is all to do with regaining country freedom from notifiable disease and the subsequent authority to export poultry (including day old chicks and breeding stock) or poultry products (meat and eggs) to anywhere in the world. Very important meat export markets such as Ghana and Benin, have historically banned imports from the UK during AI outbreaks.

The Government can self-declare country freedom from a notifiable disease under WOAH rules. This is generally accepted as being three months after the completion of cleansing and disinfection of affected farms to WOAH standard or if affected farms are declared to be kept closed 12 months and provided no other outbreaks have occurred.

Since leaving the EU (which had been our largest export market) new export agreements have been negotiated with EU member states which allows fresh poultry meat and eggs to be exported from the UK during outbreak periods. These agreements allow fresh poultry meat to be exported to the EU or moved to Northern Ireland, if it is obtained from farms and slaughterhouses that are outside of any active outbreak restriction zones. These are classified as GB1. Poultry bred, incubated, hatched, reared and/or slaughtered, on breeder farms, in hatcheries, on farms and in designated slaughterhouses within these zones are classified as GB2 and cannot be exported.

When hatcheries and slaughterhouses are caught up in restriction zones there can be significant industry disruption due to additional licensing and traceability demands. There can be significant pressure to complete on farm secondary C&D so that these zones can be lifted, and normal trading is resumed for everyone.

Eggs can be exported if they have not been collected from birds on farms that are within 10km of an establishment infected with highly pathogenic avian influenza (HPAI.)

The C&D Process

To date most affected farms have adopted Option 1.

The process to EU standards, requires the removal and treatment of litter from each building, followed by a series of cleaning steps and then disinfection. Individual buildings are then closed up for seven-days before the cleaning steps and disinfection processes is repeated again.

The requirement of a thorough first clean, where all visible contamination is removed from the building, normally means that the second C&D run is completed much more easily and quickly.

Figure 1: Steps to cleaning & disinfection, © Livetec Systems, 2025.

This restriction is in place for 30 days after the outbreak. Egg products can be exported that are produced from eggs collected within the 10km zone as long as they are heat treated to mitigate the AI risk.

Litter Treatment

There are a number of approved methods for litter treatment but the most practical, economical and now exclusively used is the "stack to heat" method. This can be undertaken on farm or where spare land/space is unavailable arrangements can be made for a third party to complete this process elsewhere. "Contaminated" litter must be treated before any further use can be made of it.

Once treated the litter is classified as a normal product and can be utilised/sold using normal methods/markets, e.g. spread to land or used as feedstock for an anaerobic digestion (AD) plant. Previous options of rendering or incinerating the litter have not been used due to high costs and premise licencing issues. For this report we have costed the stack to heat method and assumed it is removed from site to an adjacent or nearby field. The cost includes the transport cost for moving it from the shed to the field by tractor and trailer.

If litter is moved at any point on public roads it must comply with the ADR transport rules for Category 2 animal waste and this can significantly increase costs due to time and equipment implications, C&D and equipment sealing requirements. The only derogations for this might be for very short journeys from farm to a very close field but each application will be risk assessed by an APHA official.

Any vehicle or item of equipment that enters a site, for example to remove litter, must be fully cleaned and disinfected before it leaves, this will require powered washing equipment and personnel plus oversight from an APHA Veterinary officer. They will sign a certificate of cleansing and disinfection and a movement licence for every load leaving the site. Similarly, if the litter is moved off site the destination premise will also have to comply with the equipment C&D requirements to make sure the vehicles leaving that site are clean. We have included staffing and equipment costs for a single C&D station at the unit entrance for the full duration of the operation in the estimates as in all cases the litter will be stored on or very close to the site. In our experience, this is usual practice on most infected units.

Cleaning

In this context cleaning is defined as "degreasing", for example by applying a foaming detergent, then pressure washing (cold or hot) to further lift and remove visible contamination and finally rinsing with cold water. The surfaces should then be allowed to drain and dry out before the application of a disinfectant product at the specific application rate approved by Defra.

We have assumed the actual cleaning process for secondary C&D will be very similar to a normal clean-down but will take more time as staff will be taking extra care to ensure all surfaces, without exception, are properly cleaned. They will also be significantly slowed down by having to wear additional personal protective equipment (PPE), due to AI virus presence, and follow strict biosecurity protocols every time, they take a break and/or leave the site. Staff may also be subject to testing by the UKHSA (UK Health Security Agency) to determine exposure to the virus. This all takes time.

There is now, no requirement to dismantle complex equipment inside a building to complete the C&D process as a study, conducted by APHA in 2017, concluded that surfaces to which poultry had no access were of little risk to the survival or transmission of virus. Previously, every piece of equipment was expected to be dismantled, cleaned and disinfected and then reassembled. This took an inordinate amount of time. However, the report did highlight places where there was a higher risk of virus surviving and these areas will be closely scrutinised by an APHA Veterinary Inspector. For example, there should be no visible faeces, egg residue or feathers on any surface, this will include egg and manure belts as well as ventilation equipment. Surfaces that require extra attention are nest box lining, perches, scratching mats, slats, drinking nipples. These easily removed, normally heavily soiled, items are normally taken out of the building and put in soaking tanks for a period of time. This makes subsequent cleaning much easier. Manure belts and belt driers in multi-tier and enriched cage systems, should not have to be dismantled and removed to clean.

Cleaning (Continued)

Egg collection/storage rooms and/or anterooms, internal offices, toilets and canteens will also have to undergo extensive C&D. The outside of buildings including roofs are often cleaned at the discretion of the APHA inspector.

Any required building maintenance is normally carried out between the first and second cleaning cycle. The seven days shut down for each individual building after the first clean is rigidly imposed so any required maintenance will only extend the project time. Inspectors will often require any internal floor cracks to be sealed and other areas where water and/or vermin may be able to access the building will have to be proofed.

The Study

The findings in this study are based on four model farms that were the most representative of their system type within the Livetec client base and these include:

Case Study 1: Free-range laying hens in a flat deck system.
Case Study 2: Free-range laying hens in a multi-tier system.
Case Study 3: Broilers in modern clear span portal framed sheds.
Case Study 4: Broilers in older timber frame sheds with internal wooden frameworks.

The findings give an indicative cost for full secondary cleansing and disinfection and have been gathered from discussions with farmers, farm managers, cleaning teams and other providers involved in clean down operations. Additionally, Livetec has amassed a lot of experience and pertinent information from the many avian influenza outbreaks that we have been involved with over the last six years, and this has helped inform our approach to this study.

Preliminary cleansing and disinfection is undertaken immediately after the culling operation and is completed by APHA staff or their contractors. Secondary cleansing and disinfection can start 24 hours after the primary disinfection if a schedule of work has already been completed and agreed with APHA. Normally, a schedule of work is required to be submitted to APHA within 10 days of completion of preliminary C&D. This schedule is a very detailed document describing the processes of C&D bespoke to the individual farm and it will include precise details of all the disposal routes for litter and wash water and the rates of detergents and disinfectants that will be used.

The estimated figures for each case study have been presented for a single shed and include amounts for litter and feed removal and treatment, egg removal where applicable, cleaning and disinfection, wash water disposal and an overhead for site equipment and other facilities. The cost for a full farm can be extrapolated from these figures, but it should be noted and there will be economies of scale on larger farms. All data used for cost estimates was collected in February 2025.

On many units' specific issues can arise during the C&D process and these often require the duty vet to conduct a risk assessment, e.g. internal cladding condition. Do not underestimate the delays inherent in the approval and inspection system. The process can cause significantly delays to predicted timelines.

Case Study Descriptions

Free-range Flat Deck Shed (16yrs old)	
Capacity	16,000 (total farm capacity 32,000)
Size	125m x 20m (with a 5 metre central egg room)
Floor area	2,400m ^{2}
Type	Timber construction, internal stanchions, central next boxes, 2/3 slatted area
Ventilation	10 roof fans with wall inlets
Litter at end of flock	373 / 400 tonnes
Estimated wash water	22,000 litres

Free-range Multi-Tier Shed (9yrs old)	
Capacity	16,000 (total farm capacity 32,000)
Size	67m x 19.5m with a 5m egg room
Floor area	1,306 m^2
Type	All steel construction, clear span
Ventilation	Forced. 12 fans in roof and end
Litter	10 tonnes per week from belts. 50 tonnes at end of lay from floor
Estimated wash water used normally	25,000 litres

Modern Broiler Shed (5yrs old)	
Capacity	34,000* (total farm capacity 136,000)
Size	76.5m x 24.7m
Floor area	1,783m^2
Type	Steel construction, clear span, hygienic wall cladding
Ventilation	Forced. 12 roof fans, 48 wall inlets and 5 gable end fans
Litter at end of flock	48 tonnes
Estimated wash water collected	6,000 litres

Old Broiler Shed (>50yrs old)	
Capacity	18,000* (total farm capacity 90,000)
Size	51.8m x 18.3m
Floor area	930m^2
Type	Timber construction, internal stanchions, fibre cement sheet lined
Ventilation	Forced 9 roof fans 22 wall inlets
Litter at end of flock	32 tonnes
Estimated wash water collected	4,000 litres

*Stocked at 30kg/m^2

Assumptions

Several assumptions had to be made to reduce the countless variables that can be encountered on individual farms.

As previously mentioned for the treatment and disposal of litter we have adopted the now standard industry practice of stack to heat (see detail later). In each case we assume that there are no manure storage facilities or space on site, but the maximum quantity of litter present can be transported a very short distance to a nearby field by tractor and trailer without using public roads. With this scenario onerous ADR restrictions are avoided and the additional cost for C&D equipment at the disposal/ treatment site is negated. Additional cost would need to be calculated if the litter was being transported off site and stored elsewhere.

Any unused feed left on the site after culling will also have to be disposed of. The practical method adopted is to add this material to the litter, mix it in, and use the same stack to heat system. This minimises the disposal cost but does little to negate the financial loss associated with this unused feed. In this study, the costings assume feed bins are 3/4 full. Bins are normally cleaned and disinfected inside and out once emptied.

Surplus eggs are normally removed at the end of the culling operation. It was common practice for these eggs to be tipped into the bulkers taking the dead bird carcasses away and the cost was covered by the Government. However, this was always at the discretion of the on-site case officer, and currently, rules have been tightened. The weight of the eggs in the bulker is calculated, and the farmer is invoiced for the full disposal cost for these eggs. The number of eggs to be disposed of can be significant if the culling operation is delayed. In this study we assume that there are 10 days' worth of eggs on site to dispose of.

All the buildings used for this study had collection tanks installed during initial construction, and it was assumed that all of the wash water used would be collected. The modern buildings had tanks that could hold two washing cycles whilst the older buildings had smaller tanks that would require emptying a number of times for each washing cycle. If there is no effective water collection system from the buildings extra expense will be incurred as temporary bunding will need to be hired/bought to facilitate this. Having to collect wash water in this way can have significant time implications and increase costs.

For this study costs are given for sending wash-water to a treatment works rather than the normal routine practice of spreading it to land as soil conditions are not always conducive to this activity during winter. Additionally, unless the Environment Agency applies a derogation, the site will be required to have an environmental permit to carry out land spreading of this potentially polluting liquid. These permits take time to apply for and can be restrictive.

We have not considered staff accommodation in the model as there are so many options available, but in calculating site costs individuals must plan for arranging for local accommodation where additional staff are employed.

For the egg farms, we have also included an allowance for remediation of range areas. Any requirements for remedial action on poultry ranges will be based on a veterinary risk assessment.
If there is a range on heavy soil prone to poor drainage, with extensive overgrowth, there may be a requirement to improve drainage and top/chain harrow the grass. Allowing sunlight to penetrate down to soil level and maintaining dry conditions will reduce the viral load on a range.

It should also be noted that we have presented cost for organising all the services independently, if work is contracted an administrative or management fee may well be added.

Litter and Water Estimates

All sites gave an estimate based on the number of trailer loads leaving the unit. Litter density is very variable. Broiler litter is generally lighter with a high proportion of shavings whilst layer manure/litter under slats is dense and has a much higher water content. For the multi-tier system, it was assumed that the due to restrictions on manure movement during an outbreak, in the worst case, there would be up to two weeks' accumulation of manure on the belts and this amount plus some floor litter (amount at normal depopulation timing) was costed for disposal. Manure/litter estimates were checked against published UK Government data for manure volumes produced by various classes of poultry (ADAS 2008). All estimates were within 10% of the theoretical amount. Given the variables of manure moisture content and management practices these farmer estimates were deemed accurate.

It is now common practice for water meters to be fitted in individual poultry buildings. During production the readings from these can give an early indication of a disease challenge developing in the birds. However, despite the ability, none of the sites recorded the amount of water used for wash down, farmers tended to guess water volume by knowing how many times the settlement tanks were emptied and/or what volume the tankers took away. To verify the farm data, we estimated water collection as a proportion of water used based on the running time and flow rates of the pressure washers used. This compared well with the estimated figures.

Site Overheads

Fencing:

An increased awareness of biosecurity over the last six years due to AI outbreaks has resulted in many more poultry units having good perimeter fencing and a dedicated entrance.

This has helped on many infected premises as the unit perimeter has to be secure during the C&D process to ensure there is no unauthorised access.

However, for this study, we have included in the overhead a notional amount (100 metres) of hired-in fencing (HERAS) as our experience has shown that some sites still lack full perimeter fencing or hedging.

This fencing may also be required to separate alternative enterprises on site so that they can operate their businesses as usual during the culling and clean down period when site access will be restricted. It may also be required to protect the stack to heat litter/manure clamp.

Additional labour & associated costs:

If Option 1 is chosen, there is likely to be a considerable number of additional staff on site working for several weeks to help complete the C&D as quickly as possible. They require good facilities where it is easy for them to comply with health protection and biosecurity requirements.

Specifically, they will need a facility to use at the start and end of the day, and at break times where they can safely remove PPE and wash their hands. Staff should also be able to change all their clothes at the end of each day before leaving the site.

This is not just a poultry disease precaution but protects family members with whom they share their home. The legislative requirement to shower off an infected site does not seem to happen in practice so there is no allowance for this facility in the costings.

The overhead cost does include provision for additional, toilets, mess room and an office that are separate from the routine farm business although it is acknowledged that on many units existing facilities will be used where they do not compromise separation and biosecurity requirements. There is also a restriction that workers are quarantined from contact with poultry for three days after leaving an infected site and this has been factored into the costs. This is particularly applicable to contracted staff who may lose valuable days of work after working on an infected farm.

Administrative support:

The amount of time required to complete paperwork, develop the required schedule of work, record actions against it, keep additional records, apply for licences and liaise with APHA can be substantial.

Time dealing with devolved environmental bodies and local authorities should not be underestimated, and we have included a sum for competent administrative support.

The overhead is added to each case study as a daily cost based on supporting operations for the estimated duration of operation, from the completion of preliminary cleansing and disinfection by APHA to the approval of secondary C&D on the single model shed.

Stack to Heat

We calculated the cost to establish a clamp to securely store litter in a nearby field, close to the sheds, without going on a public highway. The principle is to build a U-shaped clamp from "Hesston" sized bales and fully line it with polythene. The density of the litter was assumed to be 0.6 kg/m3. As mentioned earlier, broiler litter will be less dense than this but manure from a flat-deck system may be higher. The clamp design for the model farms was five bales wide and stacked three high. The number of bales long was variable depending on the volume of litter to be stored. Litter was stored 2.5 bales high only. Once the clamp has been filled the surface must be sprayed with disinfectant and then sealed with a double layer of polythene sheeting. It is then left to heat/compost for six weeks. The clamp should be secured with a temporary fence to prevent access, and vermin/bird control must be carried out.

We estimate that such a clamp would cost in the region of £20-£45/m3 to establish depending on the tonnage stored. This includes the cost of the tractors, trailers and drivers to transport the litter to the site. There should be unfettered access to the site, if conditions are wet then trackway can be hired to protect the soil/grass surface. Our costings do not include any trackway as it is rarely required. Commonly, siting the clamp on existing concrete or rolled stone largely negate the need for trackway. On mixed farms spare buildings may also be available to use and the farm may already have straw bales on site.

Results

Estimated costs for Secondary Cleansing and disinfection to EU Standards

Case Study	Cost / bird (£)
Case Study 1 – 16,000 Flat Deck Free Range	£5.43 per bird#
Case Study 2 – 16,000 Multi-Tier Free Range	£2.02 per bird
Case Study 3 – 34,000 Broiler Shed (Modern) Indoor	£0.37 per bird**
Case Study 4 – 18,000 Broiler Shed (Old) Indoor	£0.57 per bird**

For broiler breeders indoor on flat deck system cost will be 10-15p/bird less.

** For broilers stocked at 38kg/m2 add 1p/bird to the cost.

Case Study 1

Case Study 1 – 16,000 Flat Deck Free Range	Cost Estimate (£)
C&D cost inc. labour, equipment, consumables and overhead	£64,625
Litter, feed, egg removal & treatment	£19,261
Wash water collection & disposal	£3,040
Total	**£86,926**

Results (Continued)

Case Study 2

Case Study 2 - 16,000 Multi-tier Free Range	Cost Estimate (£)
C&D cost inc. labour, equipment, consumables and overhead	£22,947
Litter, feed, egg removal & treatment	£5,727
Wash water collection & disposal	£4,000
Total	**£32,675**

Case Study 3

Case Study 3 - Modern Broiler Shed 34,000	Cost Estimate (£)
C&D cost inc. labour, equipment, consumables and overhead	£9,398
Litter, feed, egg removal & treatment	£2,245
Wash water collection & disposal	£976
Per shed	**£12,619**
Whole site (136,000)	**£50,475**

Case Study 4

Case study 4 - Old Broiler Shed 18,000	Cost Estimate (£)
C&D cost inc. labour, equipment, consumables and overhead	£7,902
Litter, feed, egg removal & treatment	£1,675
Wash water collection & disposal	£704
Per shed	**£10,281**
Whole site (136,000)	**£51,409**

Discussion

The results show that the cost of secondary C&D depends on the production system, size of unit, age of unit and the complexity of the entire enterprise. It is evident that a single price per bird across the whole poultry sector would not be appropriate.

The results show that broiler type, floor reared, meat producing systems are significantly less onerous and costly to C&D than egg producing farms. There are a number of reasons for this. Firstly, there is very little "extra" equipment in a broiler shed other than feeders and drinkers, so cleaning and disinfection is a straightforward, relatively quick process. In contrast, a layer house is full of additional, complex equipment for egg laying and automated egg collection/grading which significantly increases the effective surface area in the building that needs to be cleaned and disinfected. Multi-tier systems also have automated muck collection/conveying belts and elevators. Ensuring all this equipment is clean will therefore take much longer to complete.

Secondly, if we look at the maximum possible quantities of manure/litter that would have to be removed, treated and disposed of from the four models there are differences which will have significant effect on the cost of the operation. The production cycle of broilers, (6 weeks,) is much shorter than layers (72 weeks,) so there will be less manure/litter generated by each cycle and therefore less to ever remove. Similarly, in multi-tier laying systems most of the manure generated is removed at least weekly so manure/litter quantities do not build up significantly within the building itself. In flat deck laying buildings the quantity of manure/litter to remove will be significantly higher than the others because the manure builds up and remains in the building for the entire production cycle.

Thirdly, within the egg laying systems, it is evident that modern multi-tier systems are significantly cheaper to clean than older flat deck systems. This is due to fact that the multi-tier system is cleaned and disinfected in situ whereas a lot of the equipment in a flat deck (i.e. all the slatted area) is necessarily dismantled and removed for cleaning. Additional time is also then needed to reassemble the system.

Building age and sometimes consequent condition effects the costs of cleaning and disinfection. Most modern egg laying farms are multi-tier systems within steel clad, clear span buildings whereas flat deck systems are in older buildings, generally constructed from wood. These older buildings are intrinsically more difficult to clean, often having internal wood structures and porous cladding. More water will be used in these buildings, and it is more likely that these buildings will require significant maintenance to bring them up to the high standard of hygiene required by the APHA inspector.

The observation that extra cost will be attributable to older buildings is also applicable in the meat sector. Again, more water is used, C&D takes longer and there is likely to be a requirement for more maintenance before the APHA inspector will sign the site off as clean. There may be a requirement to replace roofing/cladding, seal floor cracks and/or replaster walling where there is any evidence of water ingress. These costs can be substantial and can significantly delay the time it takes to restock a holding.

On larger and/or multi building sites cost savings can always be accrued by working efficiently, for example cleaning sheds in sequence so that staff are still working when previously cleaned sheds are on the seven-day, mid C&D, standstill. Other required building and site maintenance and remediation should also be conducted systematically during the C&D process to make maximum use of all staff on site and thus reduce the overall time taken to complete the job.

Discussion (Continued)

Costs can also be saved if manure/litter does not have to be transported off site using public roads. Extra cleaning and disinfection requirements of farm and at the muck storage area can add extra complexity and cost to the muck removal process.

It would be a very useful exercise for producers to try to quantify how much water is used or more importantly collected at wash down as this will help when planning disposal to a treatment plant if the option of spreading to land was not permitted following a disease outbreak (unsuitable soil conditions or lack of required permit).

Significant amounts of time and cost can also be saved by ensuring that all washing water can actually be collected and contained on site. This water must be treated, and this is most efficiently completed within holding tanks of sufficient size ensuring that costly extra equipment and labour is not required for the sole purpose of constantly emptying them.

Conclusion

Some costs associated with the C&D process are fixed and there will be little opportunity to reduce them, e.g. those related to the size and complexity of the building and the amounts of litter/manure and wash water that need to be disposed of. However, how the process is undertaken and how long it takes will have significant implications on the total cost of the operation.

Therefore, creating a detailed cleaning and disinfection plan will save a considerable amount of time and therefore cost if the farm was unlucky enough to suffer from a notifiable disease outbreak. For example, identifying a suitable site where manure could be stacked and stored and/or monitoring how much wash water is normally generated at crop turnaround would be a proactive activity and help to speed up any C&D process.

As a final observation, and we've seen this on farm, a really important aspect of having a plan that is fully disseminated to everyone who might be involved in a disease outbreak and aftermath is that a good plan will reduce personal stress. Everyone's mental wellbeing is improved if all are fully aware of everything that is going to happen and how it is going to be dealt with.

Learn more

Livestock Protect Platform: Digital Biosecurity365

Livestock Protect is Livetec's powerful, subscription-based platform built specifically for poultry producers like you. It puts control back in your hands – delivering the insights and tools needed to manage biosecurity, disease risk, and site compliance all in one place.

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