



PIGS

December 2019

Editor: Amy Quinn

Welcome to December's Newsletter

Ciarán Carroll



Welcome to the December edition of our monthly newsletter. 2019 has been an exceptional year for pig farmers. From a margin over feed figure of 28 cent per kg dead weight in January to 83 cent per kg dead weight now the fortunes have changed in a significant way for all involved. Who knows what the future holds, but in the immediate short term it looks good and we must make use of this time to address the issues that will help stabilise your business and future protect it for when things turn again. We look to the start of a new year as a time to evaluate our business. Review your herd performance and management practices. What was achieved in 2019? Were you on target with the goals set out this time last year? If not, why not? While cash flow may not be an issue for many farms at present it's always good to prepare one at the start of a new year to give yourself a baseline and to help you focus on immediate priorities. Your PDD Specialist advisor will be more than happy to run a cash flow to see what's needed.

What are the likely priorities? I refer you to the "Investing for the Future" paper from our annual Pig Farmers' Conference in October. This paper prioritised reducing feed credit as a first step. Other areas include capital investments (repairs & maintenance, new builds to accommodate increasing pig numbers and weights), investments in health and welfare management, energy efficiency and in people. On that note, make sure that you and your staff take the time to enjoy Christmas!

From all in the Pig Development Department I'd like to wish you, your family and staff a happy and peaceful Christmas and here's to a prosperous new year.

In this issue:

- Water Quality
- Rodent Control
- Preventing introduction and spread of disease – what is all about?

Water Quality

Ciarán Carroll

Water is the number one nutrient in pigmeat production. Lean pork contains 75% water and sow's milk contains 80% water. How much focus do we put on water in pig production? We check on a daily basis that drinkers are working properly, relieving blockages and fixing leaks. We are addressing the legislative requirements to ensure that "all pigs over two weeks of age must have permanent access to a sufficient quantity of fresh drinking water". We test it annually to comply with the Bord Bia Quality Assurance Scheme requirements. How much attention do we give to these test results and what emphasis do we put on water quality on our pig units?

Water quality depends on the water source and water pipes. It should be of a standard fit for human consumption. There should be few suspended solids as these cause blockages. Dissolved solids and high mineral content can affect palatability of the water and can form deposits which will reduce flow rates.

Where there is a suspected problem with water quality, an initial analysis of water for total dissolved solids (TDS) is recommended. If TDS is elevated a more detailed analysis for Sulphate, chloride, sodium, potassium, calcium, magnesium and manganese may be needed. TDS levels under 1000 ppm is perfectly safe, but over 7000 ppm is unfit for pigs. The recommended upper limit is 3000 ppm (see Table 1). Levels between 3000 and 5000 ppm are usually satisfactory but may cause temporary problems, e.g. refusal of water, diarrhoea. Levels between 5000 and 7000 ppm

are generally safe for grower/finisher pigs, but are less suited to pregnant and lactating sows.

Table.1 Recommended Water Quality Guidelines

Item	ppm
Total Dissolved Solids	1000
Sulphates	1000
Nitrates	100
Nitrites	10
Iron	0.5
Magnesium	400
Calcium	1000
Coliforms	0
Hardness	150
pH (ideal range)	6.5-8.0

Water may contain a variety of bacteria, e.g. *e.coli*, salmonella, leptospirosis. 'Coliforms' is a measure of microbiological contamination. It is more a problem with surface water than groundwater, and with header tanks where sanitary management is poor.

Header tanks should:

- Be emptied and cleaned regularly with an approved disinfectant
- Have a close fitting lid to prevent entry of dust, dirt, vermin and daylight
- Have a draining valve fitted to remove silt.

Other sources of contamination can be eliminated by:

- Cutting off blind-end water pipes

- Installing a water tap at the end of the water pipe and flushing the system before new pigs are moved into the houses
- Flushing pipes supplying water for piglets one week after farrowing
- Consider installing a cleaning treatment system in your water lines

How good is the water quality on your unit? Maybe now is the time to get out those test results and have detailed look through them. It's essential to put in place a programme of testing (bi-annually) and interpret and act on the results you receive.

Rodent Control

Ciarán Carroll

Rodents are responsible for thousands of euro worth of damage on pig units every year. Recent cold weather may have caused an influx of rodents onto units. Aside from the physical damage caused to feed, feed bags, insulation and electrical wiring, rodents can play a big part in the spread of disease, e.g. salmonella, leptospirosis, swine dysentery, and erysipelas, not to mention weils disease in humans. Biosecurity is a key focus these days with regards to African Swine Fever however, biosecurity systems will not work without effective rodent control. An effective rodent control programme should be based on the following:

- Good hygiene will seldom eliminate rodents, but it will help control them
- Examine buildings and structures for openings through which rodents can enter a unit. Where possible, rodent-proof all places where feed is stored, processed or used.
- Eliminate or reduce the number places rodents can use for shelter. Prevent clutter in and around buildings and structures, and remove weeds and other debris from around buildings.

- Close openings around augers, pipes and wires where they enter structures. Doors, windows and screens should fit tightly.
- Store feed in rodent-proof facilities
- Place baits or traps in areas where rodents are active
- Baits should be laid inside and outside buildings
- Lay baits around the perimeter of the unit at a distance of 12-15metres between baits
- Replace baits on a monthly basis, with extra baits being laid in the Winter to Spring period

The key to the success of a rodent control programme is to make it a regular and continual part of the unit routine. Put aside an hour or two each month to check and refill bait points and inspect the units for signs of infestation. As rodents are most active at night, conducting an inspection at nightfall may help identify the location, distribution, and severity of infestation. Mark rodent control on your calendar now!

Preventing introduction and spread of disease – what is all about?

Carla Gomes, Programme Manager, Pig HealthCheck, Animal Health Ireland



What is biosecurity?

Biosecurity refers to the set of measures taken to minimise the risk of introduction and spread of disease-causing agents (pathogens) on the farm. Pathogen can be either bacteria or viruses. Biosecurity is commonly split into external and internal components. External biosecurity includes all the measures taken to prevent pathogens entering or leaving the farm; while internal biosecurity covers all the measures taken to limit or stop the spread of pathogens within a farm. Biosecurity is vital for controlling disease spread, both those that are endemic (i.e. disease already present in the country, such as Salmonella and PRRS) or exotic (i.e. disease not present in the country, such as ASF). The implementation of biosecurity measures has also been shown to have other positive effects. For example, in several studies with pigs, biosecurity showed a positive correlation with the production results (such as daily growth) and the profitability of the farm. Along with this, the use of antibiotics can be greatly reduced, which, consequently, will reduce antibiotic resistance.

AHI activities

Animal Health Ireland has recently started working with the pig sector in Ireland. Some of the ongoing activities include a review of farm

biosecurity. Private veterinary practitioners (PVPs) have undergone training on the Biocheck tool for reviewing biosecurity at farm level. This service is free and funded under the Targeted Advisory Service on Animal Health (TASAH) under the Rural Development Programme, with payment made directly to the PVP following completion of the assessment/review. To find out more information about the service, see http://animalhealthireland.ie/?page_id=11041.

The complete list of trained PVPs and their locations is available on http://animalhealthireland.ie/?page_id=11109. If you have not yet availed of this service, contact one of the trained veterinary practitioners or AHI (071 9671928). The PVP will review your farm biosecurity and provide you with three specific recommendations to improve it. During 2020, AHI aims to make biosecurity benchmarking reports available to individual farmers to allow farmers to compare their biosecurity status with the national biosecurity status.

Biocheck tool

Biocheck is a risk-based scoring system developed by the University of Ghent to evaluate the quality of on-farm biosecurity in a scientific and Independent way (<https://www.biocheck.ugent.be/>). External biosecurity and internal

biosecurity are scored from 0% (poor biosecurity) to 100% (good biosecurity) and are divided into several sections (Table 1).

Table 1. External and Internal biosecurity components of BiocheckUGent tool for pigs

External	Internal
Purchase of animals and semen	Disease management
Transport of animals, removal of manure/dead animals	Farrowing and suckling period
Feed, water and equipment supply	Nursery unit management
Personnel and visitors	Fattening unit management
Vermin/bird control	Measures between compartments, and the use of equipment
Environment and region	Cleaning and disinfection

Latest results for Ireland

At the end of November 2019 101 units have been reviewed in terms of their biosecurity. External biosecurity scores were higher than internal biosecurity (Figure 1). The areas where the scores are typically lower (i.e. poor biosecurity) are the management of feed, water and equipment coming into the farms, the measures implemented between compartments and the use of equipment within the farm, the cleaning and disinfection procedures and measures focusing on specific compartments (e.g. all in/all-out systems, keeping groups together, stocking density) (Figure 2). Although these are preliminary results (there are still a significant number of farms to undergo a biosecurity review), they highlight that simple things can be done to improve biosecurity at herd level.

Biosecurity scores

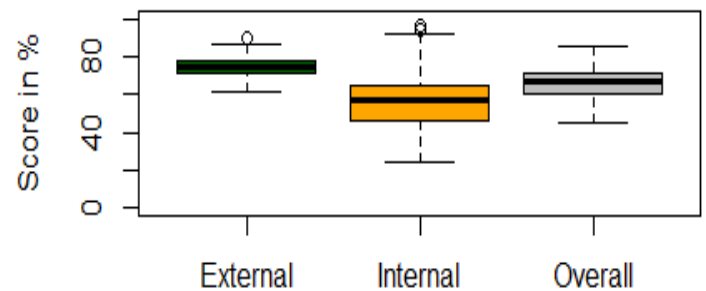


Figure 1: The distribution of the scores per farm for the components of external (dark green), internal (orange) and overall (grey) biosecurity for all the farms assessed until the end of October 2019.

The above graph shows the distribution of the scores per farm for the components of external, internal and overall biosecurity for all the farms assessed until the end of October 2019. The thick line is the median (half of the farms assessed have scores lower than this line when the other half have scores higher than this line). The lower and upper limits of each box represents the distribution of herds falling with 25%-75% of the distribution, while the lower and upper 'whisker' represent 5% to 95% of herds.

What can you do to improve biosecurity in your farm?

- Improve your cleaning and disinfection procedures (e.g. make it compulsory to wash and disinfect hands before entering the farm and between compartments; wash and disinfect your hands after dealing with sick animals; clean and disinfect any equipment before entering the farm and after use; clean and disinfect the buildings after each production round).
- Install footbaths at the entrance of the farm and at the entrance of each stable and USE them!
- Use different boots and clothes for each compartment (Tip: use a different colour for each compartment – you can easy

check if any staff member is not where he/she supposed to be).

- Separate/isolate sick animals from healthy animals and only take care of them after you have taken care of healthy animals.
- Handle young animals BEFORE handling older animals (i.e. move from young to older animals in your daily routine).
- Demand that the feed purchased meets good hygienic requirements (e.g. Salmonella free).
- Wear gloves when disposing of carcasses/or wash and disinfect hands after disposing of carcasses.

- Make sure your pest control programmes are working properly.
- Evaluate your disease status regularly.
- Wash sows before moving them to the farrowing unit.
- Reduce cross-fostering.
- Keep to an all-in-all-out management system for all pens and compartments.

Ongoing AHI activities include the risk assessment for tail biting. This activity is also funded through TASAH, therefore speak with you PVP to request a farm assessment.

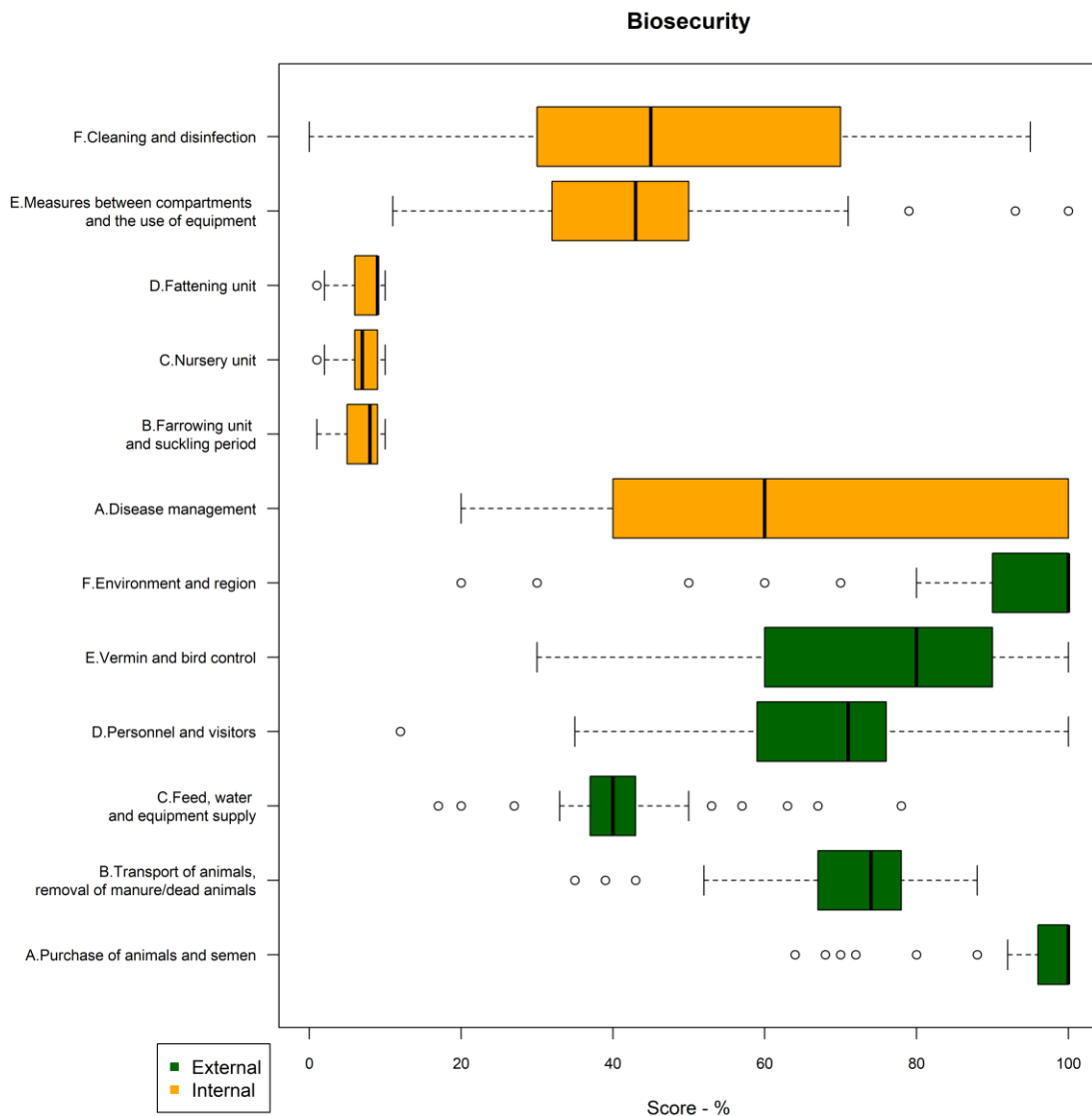


Figure 2: Biosecurity results for each of the several sections that are part of the overall external (dark green) and internal (orange) biosecurity assessments.

Final PathSurvPig Meeting

The final meeting with the farmers collaborating in the longitudinal phase of project PathSurvPig took place last Wednesday 11th in Portlaoise. Feedback was provided to the farmers and an interesting discussion about outcomes of the projects, things to improve and future actions was had. In attendance were participating farmers, Teagasc advisors, AHI, PVPs and DAFM. Case studies will be published in the 2020 newsletters so all farmers can benefit of the conclusions

DISARM project

Edgar Garcia Manzanilla is a scientific advisor in project DISARM and participated in the panel discussion in the first project workshop with stakeholders in Brussels on December 3rd. DISARM is a H2020 Thematic Network dedicated to promote good and best practice in prudent use of antimicrobials. You can find more information and regular updates on:

<https://disarmproject.eu/what-we-do/species/pigs/>

Job Vacancies in PDD

There are currently two vacancies advertised in the Pig Development Department, Teagasc Pig Research Facility in Teagasc Moorepark, one Farm Operative position (<https://topjobs-teagasc.thehirelab.com/LiveJobs/JobApply/73033?source=1&externalAgency=-1>) and one Farm Technician position (<https://topjobs-teagasc.thehirelab.com/LiveJobs/JobApply/73031?source=1&externalAgency=-1>) on 1 year contracts initially. Both jobs are funded under the Teagasc/IFA Joint Programme. If you know of suitable candidates for the positions please encourage them to apply.

Final GroupHouseNet Meeting

Teagasc staff Keelin O’Driscoll and Laura Boyle and PhD student Roberta D’Alessio (PigNoDock project) travelled to Paris during December to take part in the last meeting of the COST action ‘GroupHouseNet’. Since 2015 this EU funded project has enabled pig and poultry researchers and stakeholders across 30 European countries to meet and discuss solutions to damaging behaviour. The final meeting focused on developing good methods of dissemination of information to industry stakeholders. The Teagasc team also met with Dr. Sabine Dippel from Germany, to discuss development of a thorough risk assessment tool for tail biting tailored towards Irish farms. Dr. Dippel is an advisor on the PigNoDock project, and will work with us in the coming year in rolling out the programme across commercial units – more to follow in the New Year!

Congratulations Phoebe

The Pig Development Department would like to congratulate Phoebe Hartnett on recently submitting her PhD thesis ‘Rearing Strategies to Optimise Gilt Welfare’, to University of Limerick. Phoebe’s work comprised a complicated and extremely long study, which followed gilts from their conception to their 5th parity, as well as investigating the performance and welfare of their offspring; her work is thus not only scientifically interesting, but of great industry relevance as it reflects ‘real-life’ experiences. Phoebe remains in Teagasc for the moment as a research technician in the dairy board laboratory in Moorepark – we wish Phoebe every success in her viva, and future career!



For more information:

Please visit our webpage at:
<https://www.teagasc.ie/animals/pigs/>

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