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# Code of Good Practice Regarding the Responsible Use of Antimicrobials on Pig Farms



These Guidelines have been developed by Irish Farmers and Veterinary Practitioners to guide good practice in the responsible prescribing and use of antibiotics in farm animals, in response to the global societal challenge of antimicrobial resistance



## The Farmer's Role

### Practical strategies to combat the growing problem of antimicrobial resistance at farm level

For disease to occur, several conditions must be met. These include host (pigs) factors, environmental factors (stresses) and factors dependant on the characteristics of the infectious organism. Manipulation of husbandry and management practices on a farm can go a long way toward tipping the balance against disease. Implementing these well recognised strategies will keep your herd healthier and reduce the need for antibiotics in the long run.



**Guideline 1:** Prevention of disease is always better than cure.



**Guideline 2:** Herd Health Plans are an essential tool for Farmers.



**Guideline 3:** Reduce and Eliminate Disease entry to your farm through Biosecurity

- ▶ Aim to keep a closed herd
- ▶ Have a planned and rigorous cleaning and disinfection routine



**Guideline 4:** Prevent diseases where relevant with vaccination.



**Guideline 5:** Keep animals stress-free through

- ▶ Good Husbandry Practices
- ▶ Good Housing and adequate space
- ▶ Plentiful access to clean drinking water



**Guideline 6:** Prevent and control Parasites to enhance performance, reduce stress and prevent disease.



**Guideline 7:** Where treatment of disease is necessary with Antibiotics, observe the six 'rights' of prescription and use

- ▶ Right Veterinary Diagnosis
- ▶ Right Animal(s)
- ▶ Right Antibiotic
- ▶ Right Dose
- ▶ Right Duration
- ▶ Right Storage and Disposal

# Specific Strategies for Pig Farmers

## Post-weaning Diarrhoea and Other Infections in Piglets

These diseases are caused by a combination of trademark factors, i.e. a naive immune system, poor transfer of antibodies in colostrum, a build-up of the infectious agent in the environment either in faeces or in stagnant air, and other stressful factors such as moving or mixing piglets between groups. Managing levels of disease in piglets means getting these factors right. Reducing levels of disease in your piglets will significantly contribute reducing the levels of antibiotics used. The following are essential guidelines for keeping pigs disease free:

- ▶ Healthy piglets come from healthy sows that can take good care of them.
- ▶ Maintain a strategy for positive gut health in all piglets.
- ▶ Colostrum is vital to piglet health.
- ▶ The main source of bacteria for a piglet is sow manure.
- ▶ Maximize the length of the suckling period. A minimum of 28 days is recommended (as required by law) but every extra day will result in a benefit for the piglet at weaning.
- ▶ Practice prudent cross fostering. Cross fostering should only be conducted when piglets are between 12 and 24 hours old.
- ▶ Clean and disinfect facilities using the proper equipment.
- ▶ Water is essential to both sows and their piglets.
- ▶ Avoid design of facilities with abrasive and pointy edges to minimize wounds.
- ▶ Temperature, ventilation and air flow at pig level are

critical to minimise stress and the development of disease.

- ▶ Stocking densities should reflect the age of the pigs and the environmental control of the shed. Increased stocking rates result in stressed pigs and an increased risk of disease.
- ▶ Where indicated in your herd health plan, use vaccination protocols to prevent infectious diseases.
- ▶ Where a pig becomes ill, prompt action is required. Isolate the sick animal immediately.
- ▶ Last but not least, keep your farm staff trained continually by qualified personnel. Make sure they understand the reason why they need to do things a certain way instead of just following the protocol.

## Infectious Diseases in Finishers

The anatomy and physiology of the pig with relatively small lungs and not very good thermoregulation mechanisms makes it especially sensitive to respiratory pathogens. Respiratory disease affects pigs from birth to slaughter, however it is often the main problem in the finisher stage when the digestive issues typical of the weaning phase are under control.

Respiratory disease in pigs is rarely caused by one unique factor or pathogen and it is described as the porcine respiratory disease complex (PRDC) involving several viruses like PRRS and influenza, bacteria like *Actinobacillus*, *Mycoplasma* and *Pasteurella* and environmental factors such as ventilation, temperature and ammonia concentrations. Digestive diseases are the second most common infectious problem in this production stage, including diseases like dysentery and ileitis. In both cases, endemic herds can be managed



without the use of antibiotics with good management and preventative strategies.

Most of the recommendations apply also for prevention and treatment of finisher disease. However, as finishers have a more developed immune system and are therefore more resilient animals, they tend to get less attention from the farm staff. Nevertheless, finisher pigs are still naive to all those infections they have not been exposed to. This is an important consideration when pigs are produced on 2 or 3 sites, which is becoming more and more common in Ireland. In such circumstances, pigs from different origins and with different immune status may be mixed resulting in sudden exposure of the pigs to new pathogens, outbreaks and, therefore, an increase in the use of antibiotics.

## Lameness

Lameness affects pigs of all ages but may be difficult to observe in small animals and more evident in larger animals like finishers and especially in sows. Managing lameness in your herd can be achieved by following the guidelines below:

- a. Prevention of lameness is key. Provide an environment and conditions for the sows that are comfortable, clean and safe. Minimise aggression at feeding and mixing.
- b. Facilities should be the correct size for sows to lie down and move easily.
- c. There should be enough space for every sow but extra room is recommended.
- d. Concrete slats can rarely provide a comfortable lying or walking surface for pigs. However, it is important that slats are at least kept clean of manure build-up and are non-slip.
- e. Proper claw trimming is rarely done in pig farms but should be an essential component of lameness prevention and control.
- f. Diet plays an important role in the development of gilts. These should be fed a specific diet with higher

mineral levels for bone and claw development than finishers or dry sows.

- g. Where lameness occurs, prompt detection is best. Regular locomotion scoring would identify sows that are lame. Ideally, provide a comfortable bedded isolation pen and consult a veterinary practitioner as soon as possible. Vets can also provide basic training for farm staff on this matter for daily procedures.
- h. Avoid using antibiotics and self-diagnosis. If the sow is lame enough to make you consider treating with antibiotics, then involve the opinion of a vet.
- i. Early treatment (including the use of NSAIDs) and moving sows to a clean straw bedded pen will decrease the time to recovery, improve sow comfort, and potentially avoid culling.

## MMA (Mastitis, Metritis, Agalactia syndrome)

Mastitis, metritis and agalactia, commonly referred to as MMA, is a complex syndrome seen in sows shortly after farrowing (12 hours to three days). It is caused by a bacterial infection of the mammary glands (udder) and/or the urogenital tract. MMA leads to increased piglet mortality and reduced weaning weights.

The most effective prevention of MMA is good hygiene. The farrowing pen and the sow must be kept clean and dry throughout this period to reduce bacterial challenges.

This requires an effective cleaning and disinfection protocol. Sows that get more exercise before farrowing and in the early stage of lactation may be less prone to developing MMA.

Avoid slippery floors, which are one of the main causes of reduced activity in lactating sows. Fat sows (body condition score 4+) are more disposed to MMA, as are those given excessive feed before farrowing. Make sure adequate water is available to sows at all times; lactating sows require 15 to 30 litres per day.

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