

Individual Pig Care (IPC) and Early Detection of Sick Pigs

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TAKE HOME MESSAGES:

- 1. The earlier a sick pig is identified and treated, the higher probability it has for recovery.
- 2. Earlier detection of sick pigs can lead to less overall antibiotic use.
 - 3. Properly training animal caretakers leads to producers and barn managers having a better understanding of overall herd health.

What is individual pig care?

Individual Pig Care (IPC) is an educational program developed by Zoetis in 2005. It was designed to show the importance of detecting sick pigs early and improve the likelihood of a positive treatment outcome. The program aims to reduce pig mortality and increase the number of pigs that reach market weight. IPC stresses the importance of assessing every single pig, every single day. Sick pigs should ideally be first treated on an individual basis before treated on a whole herd basis. A goal of the program is to maximize the judicious use of antibiotics by treating sick individuals in a timely manner, with the hopes of avoiding using mass medication of animals in the feed or water to resolve impending health challenges. This will result in more injectable medication use, but decrease mass medication through the feed or water, which can decrease the overall use of antibiotics. IPC identifies pigs as an A pig-acute illness, B pig-subacute illness, C pig-chronic illness, or E pig- humanely euthanize. This classification system allows for better communication between caretakers, managers, and veterinarians. Increasing communication can allow for more timely and appropriate treatment of sick pigs, which in return can reduce mortality and cull pigs as well as hopefully overall antibiotic use.

How to identify an A, B, and C Pig?

Based on the Individual Pig Care program, pigs are identified as A, B, C, or E. An A pig should ideally be treated and left in pen, B pigs should be treated and left in pen or pulled to an intensive care pen depending on symptoms, while C pigs should be treated and pulled to an intensive care pen to be closely monitored. E pigs should be humanely euthanized. Pigs identified as A pigs have generally been sick for 24 hours or less, B pigs 24 to 48 hours, and C pigs 3 to 5 days. A pigs are the most difficult to identify but have the highest chance of a successful treatment outcome. Therefore, it is important for animal caretakers to slow down and look at each individual animal. If an animal caretaker is in doubt about if an animal needs to be treated, taking the rectal temperature of the animal can be a good indicator to determine if treatment is needed. A pig may look normal, but have a temperature of 104-106° F. When a pig has been sick for multiple days and is identified as a C pig, the probability of successful treatment is low, independent of the antibiotic being used. Because of this, it is important to treat animals early and be able to identify initial signs of illness. When identifying sick pigs, it is important to look at the overall body condition of the animal, including skin and hair. The appearance of the eyes, ears, and nose can show signs of illness. The overall temperament and movement of pigs within the group are factors to consider when identifying a sick pig. Different signs and symptoms can be used to distinguish between A, B, and C pigs. Below are pictures and different signs to look for when classifying sick pigs as A, B, or C.

A Pigs - HIGH Treatment Success

Full flesh from above Slightly drooped ears
Trouble breathing Dimmed, red eyes
Slightly gaunt flank Signs of depression

Fever





B Pigs - MODERATE Treatment Success

Gaunt flank Rough hair coat
Crust around eyes Listless ears
Shoulder blade and spine showing Pushed around by pen mates
Uncomfortable posture Decreased body condition





C Pigs - LOW Treatment Success

Signs of lameness Poor hair coat
Crust around eyes Struggling to breathe
Listless ears Depressed
Not able to keep up with pen mates





Importance of Early Detection

A literature review by Weary et al. states that changes in individual pig behavior can be difficult to observe unless changes are pronounced and detection is usually only observed when obvious behavioral changes can be seen such as lameness and depression. Animal caretakers need to work on identifying sick pigs before severe clinical signs are seen, that if not treated, can lead to pig mortality. Every pig in every pen needs to be looked at every day and cared for on an individual basis. Caregivers should observe each pig for 1 to 2 seconds. The health and economic impact of sick pigs can be greatly reduced by early detection of illness (Fernández-Carrión et al. 2017).

A study compared caretakers that completed an educational program on animal care taking skills through Zoetis to standard caretaker training. Early, moderate, or advanced clinical signs were used to classify sick pigs in the nursery phase. Pigs that were cared for by caretakers that completed the educational program had a significantly lower mortality rate and total cost of production as well as a greater end of nursery weight (Pantoja et al. 2013, Table 1.).

When a pig is treated as an A pig, it has a higher probability of survival compared to a pig treated as a C pig. An unpublished study looked at the effect of timeliness of treatment on mortality during a severe clinical multifactorial respiratory outbreak using the IPC classifications. The study found that when A pigs were treated they had a 6.7% mortality rate, B pigs had 9.8%, and C pigs had a significantly higher mortality rate at 31.6% (Figure 1.). The earlier a sick pig is treated, the more likely they are to respond to treatment.

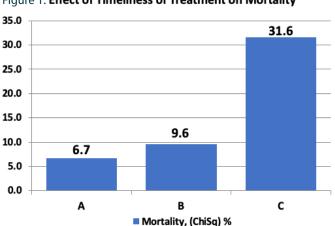


Figure 1. Effect of Timeliness of Treatment on Mortality

Table 1. Effect of caregiver coaching on production outcomes in wean to finish sites Least square mean \pm SE

Parameter	Non-educational Program	Educational Program	P-value
No. of nursery groups	72	83	NA
Starting inventory per group	2395 ± 110	2288 ± 89	0.05
Mortality rate (%)	3.64 ± 0.004	3.12 ± 0.001	<.001*
Weaning weight (kg)	5.90 ± 0.032	5.84 ± 0.0047	0.88
End of nursery weight (kg)	25.51 ± 0.28	26.12 ± 0.20	0.02*
Treat cost (US \$)	1.08 ± 0.08	0.54 ± 0.06	<.001*

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REFERENCES:

Fernández-Carrión, E., Martínez-Avilés, M., Ivorra, B., Martínez-López, B., Ramos, Á. M., & Sánchez-Vizcaíno, J. M. (2017). Motion-based video monitoring for early detection of livestock diseases: The case of African swine fever. PloS one, 12(9), e0183793. https://doi.org/10.1371/journal.pone.0183793

Pantoja, L.G., Kuhn, M., Hoover, T., Amodie, D.M., Weigel, D., Dice, C., Bs, T.M., & Farrand, E. (2013). Impact of a Husbandry Education Program on nursery pig mortality, productivity, and treatment cost.

Weary, D. M., Huzzey, J. M., & von Keyserlingk, M. A. (2009). Board-invited review: Using behavior to predict and identify ill health in animals.

Journal of animal science, 87(2), 770–777.

https://doi.org/10.2527/jas.2008-1297

Zoetis Collaborates with the National Pork Board to Extend Access to its Longstanding Pig Care Training Program. (2016, February 3). https://www.zoetisus.com/news-and-media/zoetis-collaborates-with-the-national-pork-board-to-extend-access-to-its-longstanding-pig-care-training-program. aspx

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