

EFFECTIVE TREATMENT AND HANDLING OF POOR DOING PIGS IN THE FINISHING BARN

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ABSTRACT

A small percentage of grow/finish pigs fail to thrive in the finishing barns of well-managed swine production units. Slow growing pigs in the finishing barn represent a lost investment and are a source of frustration to stockpeople. Poor doing finishing pigs are the result of poor doing nursery pigs, pigs that fail to make the transition to the finishing phase of production for unknown reasons, and pigs that get sick. These pigs die “naturally,” are euthanized, or live without growing. Many can return to productive growth if identified early and treated appropriately. Early identification combined with standard diagnostic and treatment protocols is important. Equally important are decision rules for culling, euthanasia, or return to the finishing barn. Hospital pens and individual care are necessary to allow for efficient handling of some poor doing market hogs.

INTRODUCTION

There appears to be a renewed interest in reaching the mark of 30 pigs/sow/year. Together with an interest in weaning every pig born, we must increase our efforts to save pigs after weaning. The intensive management afforded suckling pigs on some farms is often not matched at later stages of production. However, the same type of early intervention can work for growing pigs. When pigs do not grow as expected they represent lost income for the farm and serve as a source of frustration to the caretakers.

Pigs that grow poorly in the nursery barn should not be moved to the finishing area. These pigs should be sent to cull markets or to hospital pens specifically designed to deal with such individuals. This paper will address the health of fast-growing pigs that “stall-out” when they enter the finishing barn. Some stockpeople expect and accept poor doing pigs as part of hog production. However the percentage of poor doing pigs varies from farm to farm so the opportunity exists on many farms to reduce their numbers.

HEALTHY PIGS THAT FAIL TO THRIVE UPON ENTERING THE GROWER BARN

When the environment in a finishing barn is inappropriate, a large number of pigs will be negatively affected at the same time. Overcrowding, temperature extremes, inadequate

ventilation, restricted access to feed or water, unpalatable, poorly ground, mixed or balanced rations, and many other pen factors will depress growth in large proportions of pigs. This situation is rare but when it does occur, the large number of affected pigs generally leads to rapid recognition and resolution of the problem.

Finishing barns that are “by the book” in terms of stocking density, temperature, feeder space, water placement and flow, and all the other factors recognized to impact the comfort and health of the growing pig are often appropriate for 97, 98, or 99% of pigs placed. One to three percent of grower pigs will not thrive in the finishing barn for reasons that are not necessarily obvious. These pigs may be difficult to identify during the first week they are in a finishing pen. A pig that is not eating but is otherwise alert and healthy in a group of 20 or more pigs can be difficult to see. After a week, these pigs are gaunt and pale although often still relatively bright and alert.

Pigs that fail to make the transition from the nursery to the finishing barn are not much different from pigs that fail in making the transition from the farrowing crate to the nursery. The reason why a few pigs fail to eat and grow in a finishing pen although they had previously thrived in their nursery pen is not easily explained. Social factors associated with new penmates, different feed or feeders, different sounds, temperatures, flooring, etc. may all be involved in the failure to adapt to the new environment. If pigs do not start eating normally within one to two days of entering the grower pen, problems lie ahead. Often these pigs put their snouts in the feeder but consume little or no feed. They will drink and grow some in stature but become thin, pale, and gaunt. They may be treated with antibiotics, vitamins, or other medicines but seldom respond. If they are sent for post mortem examination they usually have no significant gross or microscopic lesions. The stomach and intestinal tract are empty, there may be small, superficial gastric ulcers, but no cause for the failure to thrive is identified. It has been hypothesized that some of these pigs fail to start on feed and then become so debilitated that they no longer seek food. Occasionally these pigs will respond to B vitamin injections to stimulate their appetite but more often they respond to a change in their environment, social structure, and nutrition. Moving these pigs to another pen, with different penmates, a different feeder and different feed (nursery diet for example) can put these pigs back on the growth curve. Wetting feed and placing small amounts of the wet feed in the mouth of a gaunt pig once or several times over a 1 to 3 day period can stimulate the pig’s appetite and return the pig to the feeder and to productivity.

Recent work with group housing of sows has shown us that even in relatively non-competitive computerized feeding systems some sows either forget or are too afraid to approach the feeder. The reason for this is unknown but may be related to recent or past confrontations associated with approaching the feeding station. The mixing of newly arrived pigs in a finishing pen requires the establishment of a social hierarchy within that pen. It is possible that in the creation of this social structure, an occasional pig becomes “feeder shy” and starts on the road towards becoming a “poor doer.” This would explain why many of the “stall-outs” in some barns have no obvious signs of pneumonia, diarrhea, lameness, etc. and no lesions on post mortem examination.

DISEASES THAT SLOW OR STOP THE GROWTH OF FINISHER PIGS

A number of diseases can slow or stop the growth of pigs. Respiratory disease is one of the more common diseases of grower pigs. It is characterized by coughing, rapid, laboured and sometimes open-mouthed breathing. Occasionally, the first sign of an outbreak of respiratory disease is sudden death.

When a respiratory infection is treated but a large proportion of the lung tissue has already been destroyed a “cured” pig may fail to grow. The scarred lung tissue results in a decreased capacity to oxygenate the blood and subsequent ill thrift. A number of viruses and bacteria cause respiratory disease in pigs. Submissions to a diagnostic lab are often necessary to identify the exact cause or causes of the respiratory disease. Management changes together with the use of vaccines and antibiotics normally control respiratory disease in most pigs. A few poor responders however may be candidates for culling or euthanasia.

Diseases of the gastro-intestinal tract may result in pigs that show ill thrift. A disease that affects the intestinal tract can decrease the absorption of nutrients through the intestinal wall. The inflammatory response that the pig mounts to the intestinal disease will also suppress the pig's appetite adding further to the pig's loss of condition. Most enteric diseases of finishing swine respond to changes in diet, or to vaccines, or antibiotics.

A common postmortem finding in finishing pigs demonstrating ill thrift is stomach ulcers. Stomach ulcers can cause sudden death in pigs when the ulcer eats through a major blood vessel causing death from blood loss. This situation is rare as many pigs at slaughter have gastric ulcers without demonstrating signs of disease or discomfort during the finishing period. Factors that increase the risk of ulcers include feed that is too finely ground, pigs off-feed or without feed for as little as 12 hours or pigs with respiratory disease. Therefore when a thin, pale, poor doing pig is found dead or euthanized because of a failure to respond to injectable medications, it is not uncommon to find one or more gastric ulcers and an empty gastro-intestinal tract. There are then two possible conclusions to be drawn. Either the ulcer caused a decrease in the pig's feed consumption or decreased feed consumption caused the ulcer. If a post mortem examination on a typical fading pig finds no abnormalities other than small, superficial gastric ulcers, similarly affected pigs should be encouraged to eat by changing feed, wetting feed, or if possible, placing feed in the pig's mouth.

Another reason for ill thrift in finishing pigs is infectious arthritis with inflammation or abscessation of one or more joints. Affected pigs are easy to identify due to swelling of the affected joints and a reluctance to bear weight on the affected limb(s). Early identification is key to the successful treatment of affected individuals. Pigs that are so severely affected that they cannot move competently about their pen should be removed to a less competitive environment with good footing and supplemental heat if required. Pain killers as well as antibiotics are the treatments of choice for infectious arthritis in grower pigs. If pigs with severe inflammation in one or more joints are not aggressively treated early, they may not respond to treatment. Although the infection can be eliminated, if treatment is delayed, damage to the joint from the infection can permanently cripple the pig.

A large number of other conditions stunt the growth of pigs. Large inguinal or umbilical hernias impede normal intestinal activity and retard growth. Tail bitten pigs may be weak in the hind quarters and struggle to access feed and water. Other pigs may have abscesses and adhesions internally that cannot be seen in the living animal. Poor doing individuals occur in all large populations. The goal must be to reduce their numbers as much as possible. Stockpeople should have an organized approach to dealing with those poor doing pigs that do occur.

ARE HOSPITAL PENS AND INDIVIDUAL PIG ATTENTION WORTH THE TIME AND EFFORT?

At one time hospital pens existed on nearly all swine farms. More recently economic analyses of hospital pens have failed to show a reasonable return on investment. One reason for this poor return is that hospital pens are often not hospital pens. They are sick pens. There is no doctoring or nursing in most hospital pens on most farms. They are holding areas for sick pigs. When used in this manner, sick pens have little chance of demonstrating an economic return nor do they significantly improve the pig's welfare.

It seems appropriate to remove a severely ill pig from competition with its penmates. Unfortunately, in many hospital pens, although there are fewer total pigs, there is no improvement in stocking density or flooring. Since there is also little medical attention or nursing care in these pens, the pig is left in the pen for an undetermined period of time to "see how it does." The pig may share the pen with a tail bitten pig, two gaunt, pale, ridgebacked pigs, a pig with a basketball sized umbilical hernia, a pig that only turns left, a pig with a prolapse, and two "lungers." Sporadic treatments may be offered in this situation but in general the pigs are on their own. You don't need a computer to demonstrate the low rate of return on this square footage.

Sick pens are a poor investment. Properly operated hospital pens can provide an economic return to the farm while improving worker morale and the welfare of compromised pigs. To do this, hospital pens must have some basic features such as extra warmth, good footing, easy access to feed and water and established protocols for treating, culling and euthanizing pigs.

If lameness or weakness is a reason to move a pig to the hospital pen, then the hospital pen must have appropriate flooring. The floor should not be slippery and should not be fully slatted. If the hospital pen is fully slatted, a rubber cow mat designed for dairy cow tie stalls can be cut to cover part of the slatted area to improve footing for weak or lame pigs. Such a mat also insulates sick pigs from the cement floor. This is important because sick pigs have trouble maintaining their correct body temperature and chilling suppresses appetite and attitude and delays healing. The hospital pen can also be made warmer by the use of supplemental heat such as a heat lamp or by the use of bedding materials when practical.

TREATMENT DECISIONS FOR POOR DOING PIGS

Every farm should have an established protocol for treating routine ailments in the finishing barn. Part of this protocol should be rules to follow in determining whether a sick pig is best treated and left with its penmates or whether it is more appropriate to remove the pig to a hospital pen. The decision is based on the severity of the condition and the likelihood that the affected pig will improve within a relatively short period of time. Reasons to remove pigs from their original group will vary from farm to farm but should be based on their ability to compete for warmth, feed, and water.

For each common ailment, the farm should have a strict treatment protocol that involves medications when indicated along with appropriate nursing care. For example, although penicillin is often the drug of choice to treat meningitis in pigs due to *Streptococcus suis*, it can take days for the brain to heal after the bacteria has been destroyed by the antibiotic. If the recovering pig is not given water to maintain its hydration status during this recovery phase, it will appear that the pig did not respond to the treatment when actually it died of dehydration. Likewise pigs with severe infectious arthritis should be treated with pain killers in addition to antibiotics to encourage them to eat, drink and move about the pen while the infection in their joint is resolving. Those pale, gaunt pigs with no outward clinical signs should have wet feed placed in their mouths several times a day to stimulate their appetites. Veterinarians can assist producers in devising practical and effective treatment and nursing protocols for the common types of poor doing pigs encountered in the finishing barn.

EUTHANASIA AND CULLING DECISIONS FOR POOR DOING PIGS

Every treatment protocol on a farm should include rules for stopping treatments and indications for culling and euthanizing pigs. An example of a protocol for a pig with meningitis due to *Streptococcus suis* may be: “Treat with penicillin for three days. Keep pig warm and ensure adequate water intake. Stop penicillin treatments and keep the pig warm and hydrated for an additional three days. At the end of this time period if marked improvement is not noted, euthanize the pig.” Such protocols will vary from farm to farm. A farm protocol for *Streptococcus suis* meningitis however is never simply “penicillin.” It is a specific dose for a specific period of time, it includes associated nursing care, and rules for humane destruction of non-responders.

A pig that dies in a hospital pen should always be a surprise. If the caretaker thinks, “I am glad to see that pig finally died,” then euthanasia decision rules are not adequate on that farm. Stockpeople who say they never euthanize a pig on their farm are neglecting one part of their responsibility as animal caretakers.

The use of a captive bolt gun is the most appropriate means by which to euthanize a pig between 20 and 120 kg in body weight. The manufacturer of captive bolt equipment and your veterinarian can ensure that the captive bolt gun is used properly. One shot should produce an immediate lack of consciousness as evidenced by a lack of any reflex motion of the eyelid when the eye itself is touched. All motion including respiratory efforts and the heartbeat

should stop within 2 to 3 minutes. Pigs should never be removed to a deadstock holding area until the producer is certain that the animal is dead.

CONCLUSIONS

A small percentage of individuals will fail to thrive in any large population. This may be due to physical problems such as infectious diseases or social problems such as an inability to adjust to a new social structure. Since the occurrence of such pigs should be expected on any swine farm, protocols should be in place to identify, treat, cull, or euthanize affected pigs. Easy-to-follow protocols will maximize returns from poor doers and improve worker morale and animal welfare.

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