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Lameness and welfare

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Ranking welfare concerns is a difficult topic in swine production. Though there has been much emphasis on evaluating whether or not different circumstances are contrary to the welfare of pigs, it has been more difficult to rank the importance of different detrimental conditions. It is difficult to rank welfare concerns as they cover a broad range of concerns about the state of the animal, and the prevalences of conditions vary from farm to farm.

Yet welfare concerns must be ranked on the basis of effect and manipulability. Farming is an economic exercise that must use resources as efficiently and effectively as possible. This includes the application of resources to the welfare of animals. Incorrect application of resources compromises the competitive capability of the farm and the welfare of the animals on the farm.

In this paper we wish to discuss and present an argument that, for sows, lameness may be one of the more important, if not the most important welfare concern in our sow population. Here are some of the reasons to consider:

The performance axiom

Curtis (2008) argues that a central focus of welfare management should be on performance measures, as these measures are a function of though welfare state of the sow. Taking this a step further, the extent of the insult should correlate with the change in sow performance. In our studies we have not seen a common insult to the sow that has as profound an effect upon reproductive performance as the existence of lameness. Figure 1 exhibits the effect of of a diagnosis of lameness at entry into the farrowing crate upon subsequent reproductive performance. (Figure 1)

We see that lameness is mediated through higher levels of removals, both directly through culling or death due to lameness, but also indirectly through removals due to poor reproductive performance. As well, we see poor performance in sows that have been diagnosed as lame if they remain in the herd. This combination of effects results in a relationship of lameness and productivity that cannot be replicated with other common conditions.

The relative importance in other species

Probably the most similar domesticated species is the dairy cow. Expectations for productivity are high, repeated

reproductive success is expected, and milk production is an important aspect of productivity. Yet the emphasis on lameness is much higher in dairy cattle. We would argue that this increase in emphasis is not a function of the difference in importance of lameness between sows and cows, but it is a function of the amount of observation and the relative amounts of research done on the subject (Allerson and Deen, 2006). In dairy cow welfare measurements and research lameness is usually a central measure. This is paralleled by a large amount of research and even a by annual conference that is limited to the subject of lameness.

The relative importance of pain

This, of course, is extremely subjective. Webster's five freedoms suggests that there are a number of adverse conditions for pigs. They range from hunger and thirst to frustration to pain. There has been some work on operant behavior in sows concerning hunger and putative boredom, but little has been done on the subject of pain. Yet it is evident from sow behavior that considerable resources will be used to avoid painful scenarios. Indeed, a great deal of concern about laboratory animals focuses on the control of painful conditions. We would argue that there is an almost universal inference that pain is a major focus in the management of the welfare of farmed animals.

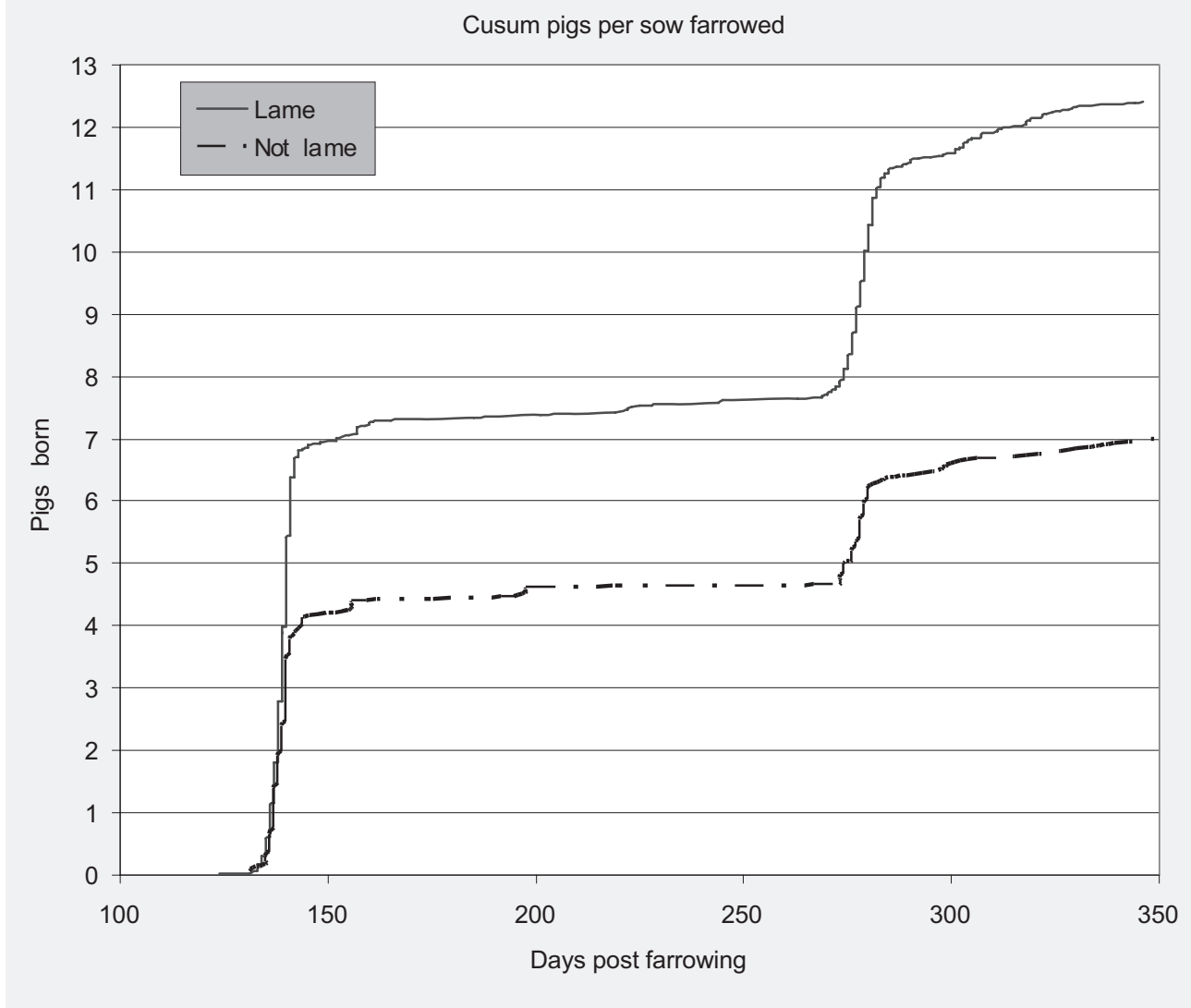
Public concerns about lameness

The delivery of lame and downer livestock to sales barns and slaughter plants has been a focus of concern in the past year. Likewise, when conditions on farms are surreptitiously photographed were filmed, often much of the footage is focused on lame and downer livestock. This increased concern and scrutiny has resulted in a discount of lame sows when they are delivered to markets, but it has also resulted in an increased focus of the management of lame sows with in the herd. It has not entered policy discussions, surprisingly, probably due to wildly different estimates of incidence and prevalence.

Producer concerns about lameness

In a very unscientific and probably biased survey of herdpersons, I have asked "Which sows do you feel could be more comfortable?" Other than on hot days, when the answer is the sows in the farrowing crate, the answer almost universally focuses on lame sows. This parallels

Figure 1: Subsequent performance after a diagnosis of lameness at entry into the farrowing crate



closely the experience in dairy farming, and should not be a surprise. The lack of choice and availability of analgesia should also be a concern.

So what do we do?

One of the real concerns that we have is that it appears that group housing often increases the likelihood of lameness. This is an example of an all too real challenge that there is no simple single factor answer to the improvement of welfare. As mentioned, the improvement of the welfare of sows has to be performed within the confines of economic realities. Creating welfare policy based on external influencers, particularly when these external influencers have little or no understanding of some of the major influences on the welfare of sows on the farm, is thus fraught with inefficiencies.

It is our argument that there is a real underestimation of the financial effects for the owner, the enjoyment of the herdperson, and the welfare of the sow when we consider the effects of lameness. When such opportunities arise for win-win scenarios, these should be followed, emphasized and proclaimed by the swine industry.

References

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