

Impact of Prod Use on the Incidence of Highly Stressed Pigs

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SUMMARY

We subjected pigs to three different handling treatments as we moved them through a 300m handling course. Despite traveling the same distance as the others, pigs moved at a moderate pace with only a board, quiet voice and gentle slaps, were essentially unstressed by the procedure. Pigs handled aggressively, at a fast pace, with shouting and slapping, but without use of electric prods had a higher incidence of stress, but none showed extremes that might lead to animal losses. Use of the electric prod resulted in a large proportion of the pigs showing both behavioural and physiological signs of stress, with some being extreme to the point of stumbling and falling. We should minimize the use of the electric prod by changing our handling techniques and/or modifying our load out facilities.

INTRODUCTION

The shipping of finishing pigs is a stressful time for the animals, and each year several thousand pigs die or are euthanized in Canada during this process. Although the percentage of animals that are lost is quite low, at less than half of a percent, these animals represent a considerable financial loss to the industry and are a major welfare concern. Although many factors such as temperature and genotype likely contribute to these losses, the data strongly suggest that poor handling is a major cause. We were involved in a study to develop an experimental protocol to study stress induced losses of finishing pigs. The protocol has since been used to study the physiological responses of pigs to handling. As part of our study we examined the role of prod use during handling on the incidence of highly-stressed pigs.



Loading and unloading pigs with paddles can be an effective method of minimizing stress.

EXPERIMENTAL PROCEDURES

Our study included 192 near market weight animals. These animals were taken from their finishing pen, in groups of six, and herded through a handling course. The course was approximately 300 m in length, and involved numerous turns, reversals, and partially obstructed alleys. It took approximately 10 minutes to herd the animals through the course. We imposed three handling treatments on the animals. The Gentle treatment involved herding the animals with a herding board, voice and occasional slapping, at a comfortable walking pace. No electric prod was used in the Gentle treatment. We also used an Aggressive treatment that herded pigs at a fast walk, used a louder voice and involved slapping and/or use of the electric prod. Within each group of six pigs in the Aggressive treatment we identified two animals that were not to be prodded. They were encouraged to move only with slapping by the hand and pushing. The remaining four pigs were prodded frequently.

'Clearly, we should be minimizing the use of the electric prod when handling animals, in our test groups, over 40% showed severe stress when prodded.'

We attempted to identify signs of stress in the animals before they reached the extreme of falling down. These signs included laboured breathing, blotchy skin, stumbling and a strained squeal. If a pig evidenced two or more of these signs it was left behind the remainder of the group and termed a highly stressed animal. Approximately 4% of the animals stumbled and fell during handling and were euthanized if they did not show immediate signs of recovery. Although this level of loss is high compared to the industry average, some commercial loads of pigs will reach similar levels. Numerous physiological measures were taken before and after the handling procedure.

RESULTS AND DISCUSSION

Within the Gentle handling treatment only 1 of 48 pigs was considered to be highly stressed by the procedure (Table 1). The Aggressive treatment, including the use of the prod resulted in over 40% of the animals being highly stressed, including all of the pigs which actually went down and had to be euthanized. When the pigs were moved aggressively, but without the use of the electric prod, the proportion of highly stressed pigs was intermediate to the other treatments. The Gentle treatment pigs moved the same distance as the Aggressively handled animals, so the stress was not due to the exercise per se, but rather to the handling methods. The Aggressive treatment components of more rapid movement, additional shouting and slapping did increase

Table 1. The incidence of highly stressed pigs in three different handling treatments.

	Gentle	Aggressive	
		No-Prod	Prodded
No signs of stress	47	41	54
Highly stressed but not falling	1	7	23
Highly stressed and falling	0	0	9
Total # of Pigs	48	48	96
Handling time in course (sec)	701	467	467

the level of stress, but did not put the lives of the pigs in danger. Only when we used the electric prods did we see an extreme stress response in the animals. Prod use in the study would be higher than typical when loading pigs, but under commercial conditions it would be possible for individual pigs that were confused or overly hesitant to be prodded as frequently as our experimental pigs were. These are the pigs that would be susceptible to extreme stress.

The physiological measures indicated that highly stressed pigs had higher temperatures, lower blood pH, and higher blood ammonia levels than did the pigs with no overt signs of stress. Among Aggressively handled pigs, those that received the electric prod showed extremes in these measures. It is also noteworthy that although blood lactate was similar in those showing low and high levels of stress, it was considerably higher in prodded animals than in non-prodded.

IMPLICATIONS

Clearly we should be minimizing the use of the electric prod when handling animals. Before prodding a pig while it is being loaded the handler should consider if another means of encouraging movement could be effective, even if it took slightly longer. If one pig is repeatedly being difficult to move it should be left behind and perhaps herded separately rather than prodding it again. If a producer finds that they must use the electric prod frequently during the load out process, they should consider changes to their load out design and/or general handling techniques.

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