

Testing the benefits of injecting painkillers before castration

Does use of a mild pain killer lead to better outcomes for castrated piglets?

So far, research suggests that it makes little difference

Animal welfare concerns have led to a range of new rules, especially among countries of the European Union, concerning the age-old practice of castrating piglets to prevent boar taint. Now, Ontario trials are underway to explore whether receiving a mild pain killer before the procedure will lead to better outcomes for the piglets.

Researcher Glen Cassar and Prof. Bob Friendship, both from the Ontario Veterinary College, University of Guelph, are conducting trials involving 1,500 male piglets. Half are given Anafen, a non-steroid anti-inflammatory drug which gives pain relief for up to 24 hours, and half are injected with saline solution 30 minutes prior to castration. Piglets are observed for 15 minutes after castration for signs of discomfort or changes in behaviour.

Cassar says that so far they see no difference in the outcomes for piglets that get the mild painkiller and those getting the saline injection.

“Out of the 800 piglets (done so far),” Cassar says, “I think we found five of them showing a bit of restlessness within a half hour. We thought we might see more than that.”

Cassar says that they are using Anafen, which has the active ingredient ketoprofen, because it was the one product approved when the trials began. Since then, a second drug with similar properties, Banamine S, has been approved for use in Canada. The drugs are approved for use by farmers, which would make their use more cost-effective if drug use before castration ever becomes mandatory.

“General anesthesia is not an option,” Cassar says, “since the drugs required must be administered by a veterinarian, which can make the cost prohibitive.” He notes that local anesthetics — like freezing in

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dentistry — have not been very effective.

The piglets, all six to seven days old, are being castrated using the traditional, on-farm method. The piglet is restrained, a small incision is made in the scrotum and the testicles are pulled out. Then the piglets are immediately returned to their mothers.

“There was no difference between the two groups in weight at castration or at day 21,” Cassar says. The trial data shows the average daily weight gain was 266 grams for the control group and 265 grams for the analgesia group. Litter size was 10.5 and 10.4 and mortality between castration and day 21 was four per cent for the control group and three per cent for the analgesia group.

Using Anafen, the cost of drugs and supplies is about 22 cents per piglet. Injection prior to castration doubles the time for the castration process.

Cassar says that some countries are opting for anesthesia to castrate pigs, but he noted it is not an option in the Ontario market because of the costs involved. He did say that the sooner a piglet is castrated, the better.

“The younger you do it, the incision is smaller, the blood vessels are smaller and they bounce back from it better than if you do it at 14 days or older,” Cassar says.

Assisting on the Guelph project is first-year OVC student Sarah Taylor. The trials, which are funded by Ontario Pork, began in May 2009 with an expected completion date of April 2010. ■



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Glen Cassar, left,
and Bob Friendship.



RESEARCH PROFILE

BY MIKE MULHERN

Glen Cassar

Glen Cassar, a research associate in the Department of Population Medicine, University of Guelph, completed his B.Sc. in agriculture at the University of West Indies, Trinidad, in 1985. He completed his PhD in porcine reproductive physiology at the University of Guelph in 1993 and his Doctor of Veterinary Medicine at the Ontario Veterinary College in 2002.

He won the faculty prize in agriculture three years running at the University of West Indies. He won the Canadian Commonwealth Scholarship (1989-1993) and the Mary Edmunds Williams Fellowship, University of Guelph (1991-1993).

Cassar's professional memberships include the American Association of Swine Veterinarians, the Ontario Association of Swine Veterinarians, the Ontario Veterinary Medical Association, the Canadian Veterinary Medical Association, the Canadian Association of Swine Veterinarians and the College of Veterinarians of Ontario.

Among his "non-professional activities," Cassar notes that he is "a hobby musician with a dedication to traditional Trinidadian folk music." The group of musicians he formed in Brampton in 1994 specializes in a unique Trinidadian Latin form of music known as parang. The group performs each year in Southern Ontario and New York City.

If you happen to attend a music festival in Ontario this summer and order Caribbean cuisine, you might also find that the chef is Glen Cassar. Or you might find him coaching minor league soccer or baseball in Guelph.