

STATEMENT OF WITNESS

STATEMENT OF: PROFESSOR DONALD MAURICE BROOM
IN THE MATTER OF: **Treatment of pigs in a slaughterhouse**
AGE OF WITNESS: 71
OCCUPATION: EMERITUS PROFESSOR
ADDRESS: DEPARTMENT OF VETERINARY MEDICINE
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This statement, (consisting of six pages each signed by me), is true to the best of my knowledge and belief and I make it knowing that, if it is tendered in evidence, I shall be liable to prosecution if I have wilfully stated in it anything which I know to be false or do not believe to be true.

Dated the 14th March 2014

Signed: _____

I hold M.A., Ph.D. and Sc.D degrees from the University of Cambridge and I have been employed as Lecturer and then as Reader in the Department of Pure and Applied Zoology, University of Reading 1967-1986 and as Professor of Animal Welfare in the Department of Veterinary Medicine at the University of Cambridge from 1986 to 2009. I have carried out biological and veterinary research since 1964 and continue to do so in 2014.. This research has been concerned with animal behaviour, stress physiology, animal welfare, animal management, disease transmission and interactions between man and other species. In particular I have studied the effects of housing, management procedures, transport, handling and slaughter on domestic animal welfare. The animals studied have included cattle, sheep, deer, pigs, chickens, ducks, dogs, cats, laboratory animals and fish. I have published over 300 refereed scientific papers and 7 books including "Stress and Animal Welfare" (with K.G. Johnson) and "Domestic Animal Behaviour and Welfare" (with A.F. Fraser). My advisory work to governments on animal welfare include the following:

Chairman of the E.U. Scientific Veterinary Committee, Animal Welfare Section 1990-1997,

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Member of the E.U. Scientific Committee on Animal Health and Animal Welfare 1997-2003,
Vice-Chairman of the European Food Safety Authority Scientific Panel on Animal Health and Welfare 2003 – 2012.

Chairman of the O.I.E. (World Organisation for Animal Health) Working Group on the Welfare of Animals during Land Transport 2003 -2007.

Scientific advisor to the Council of Europe Standing Committee of the Convention on the Protection of Animals Kept for Farming Purposes 1987-2000,

Member of the Farm Animal Welfare Council (Ministry of Agriculture, Fisheries and Food, U.K.) 1991-1999.

Member of the Animal Procedures Committee (Home Office, U.K.) 1998-2006.

I have carried out scientific research on the behaviour, physiology, production and welfare of pigs since 1981 and have written 66 scientific papers and parts of two books on the subject. Hence I have a specialised knowledge of pig management and welfare and, as a result, I have given invited lectures on the subject at scientific meetings in twenty countries. I have also given lectures to many pig farmers' groups. When I was chairman of the E.U. Scientific Veterinary Committee I was a member of the working group that produced "The welfare of intensively kept pigs" (208pp). I was also chairman of the working groups of the European Food Safety Authority Scientific Panel on Animal Health and Welfare on the welfare of pigs in relation to stocking density and flooring and on the welfare of fattening pigs and a member of working groups that produced reports on other aspects of the welfare of pigs including slaughter procedures and welfare in relation to meat inspection.

I have been shown a series of video sequences of pigs and slaughterhouse staff. The web address for viewing the sequences is <http://vimeo.com/86881495>. I am told that the sequences were taken at Rivalea slaughterhouse, Corowa, NSW. I have not visited this slaughterhouse. I describe here what I can see of the pigs shown in the video sequences, referring principally to effects on their welfare of the conditions and management practices. The video sequences show pigs being stunned using a gas which I am told is carbon dioxide. The pigs are lowered into the carbon dioxide. I have watched many pigs being stunned in this way.

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Information about gas stunning of pigs in relation to welfare

The principle advantage of stunning pigs with a heavy gas is that they can be handled calmly and quietly in the pre-stunning period. The best practice for good welfare and good meat quality is for the pigs to be kept in the same social groups that they were in on farm when moved to vehicles, during transport, when moved from the transport vehicles at the slaughterhouse and when moved to the stunning chamber. A group of calm pigs can then be lowered into the gas. The best gas to use in the stunning chamber is argon, or a mixture of argon and up to 20% carbon dioxide. Pigs do not detect argon so are stunned without being aware of the gas. They can then be killed by exsanguination while unconscious. This means that, with quiet handling and no social mixing, the welfare of the pigs stunned with an inert gas, and not recovering consciousness until killed, can be good throughout the stunning and slaughter procedure.

For financial reasons, efforts are made to reduce the time taken to unconsciousness so some or much carbon dioxide is often used. Carbon dioxide is somewhat cheaper than argon. If the concentration of carbon dioxide is less than 20%, the pigs show little sign of awareness of the gas. Carbon dioxide is an aversive gas that causes a violent reaction by most pigs when in high concentrations. If 100% carbon dioxide is used, the pigs become unconscious in about 30 seconds but are very distressed during that time. Hence welfare is very poor for 30 seconds. After becoming unconscious, there is a period before the pig is exsanguinated and death ensues. After death, a series of violent muscle contractions often occur. Since the animal is dead, these do not indicate poor welfare.

The practices at the Corowa slaughterhouse

The date and time mentioned here are those shown on the video sequences. When I view the video sequences, I hear the sounds of pigs and often they are squealing. However, I sometimes do not know whether or not the sounds come from the pigs shown in the video sequence. In some cases I can see the pig opening its mouth when the sound is heard.

Date time 2014-02-12 06:01:06

Some sequences, such as that noted above, show pigs entering a small pen from the right and being encouraged to turn through a right angle and exit below left. A person is standing in a position that the pigs have to pass. There is substantial noise of pigs squealing as this happens. The major objective of getting pigs to move quietly and calmly is defeated by the

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bad design of the system for moving the pigs. Pigs are disturbed by having to pass close to a person. Races without sharp turns should be used. Provided that the route for the pigs to follow is clear, pigs will normally move with little or no encouragement. The sounds of loud squeals are likely to make pigs stop so should be avoided as much as possible. A person who allows the use of such a badly designed system for moving pigs is directly causing a high risk of poor welfare, suffering and distress in pigs moved in the system. The poor welfare, suffering and distress is unnecessary because a better system could be designed and used.

Date time 2014-02-12 06:01:06 (I understand this to mean 12th February 2014 at one minute past six in the morning if a 24 hour clock is used.)

The man standing by the pen is in full view of the pigs and his presence causes them to stop. He has his left arm extended over the place where he wants the pigs to go. Both of these are bad practices. Almost immediately after the pigs move into the pen he uses an electric goad on them. Electric goads cause pain, fear and other poor welfare to pigs. The poor positioning of the man and his behaviour when the pigs arrive have caused the pigs to stop so his use of the goad in these circumstances is cruelty and causes unnecessary pain, suffering and distress to the pigs.

Date time 2014-02-12 06:06:30 (10 minutes 40 seconds from the beginning of the video compilation).

Three pigs enter the pen. A man is standing in the inappropriate position described above. The first two pigs move out of the pen to bottom left fairly rapidly. The third pig rears up on its hind legs and tries to climb out of the pen, runs around rapidly in showing much fear of the man. The man uses the goad on the pig several times. By 06:07:10 he is holding the electric goad in the ear of the pig continuously. This would cause extreme pain to the pig and is likely to have effects on brain function in addition to those caused by pain. At 07:22 a further three pigs enter the pen. These leave within 30 seconds but the third pig from the previous group is left in the pen being goaded by the man.

Date time 2014-02-12 06:13 and 08:41

Further sequences in which the same man is using the electric goad frequently on pigs that are running around squealing in evident fear of the man and not knowing what to do to avoid the goad. The pig that is being goaded at 08:41 has a large umbilical hernia. After 50 seconds of being goaded and trying to climb out of the pen it falls to the ground. It stands again but is still in the pen over one minute later.

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Date time 2014-02-12 11:05

A different man is attempting to move the pigs from the same inappropriate position. However, he is using a plastic paddle that does not normally cause much pain to the pigs. He seems more successful in moving the pigs.

Date time 2014-02-12 12:19

The man with the goad uses it about 20 times on a Duroc type pig that is moving rather slowly. After this it appears to partially collapse and the man climbs into the pen. He kicks the pig, then tries to push it with his foot in the bottom left direction. The pig has collapsed so he cannot move it. He drags it back by its right ear and it remains collapsed on the ground. Other pigs come into the pen but the Duroc type pig remains collapsed on the ground, making occasional movements.

The man using the goad has caused much unnecessary poor welfare, pain, suffering and distress to the pigs. All of this was unnecessary because the pigs could have been moved without the use of a goad. Application of the goad to the ear, multiple use of the goad in a short time span, dragging the pig by its ear and kicking the pig were especially cruel actions. The Duroc type pig was able to walk when it entered the pen and its collapse was caused by the actions of the man using the goad.

These sequences are in the first 10 minutes of the video compilation.

Date time 2014-02-10 05:59

The crate with three pigs in it is moved down into the gas. The pigs are quite quiet until they reach the bottom of the movement downwards, presumably where they enter the carbon dioxide. As soon as they reach the bottom they react very vigorously, jumping against the bars and apparently trying to climb upwards. They push the nose up through the bars at the top of the crate. The sound level increases with a big increase in screaming noises at this time. For at least one of the pigs it is clear that the screaming comes from this pig. The vigorous reaction lasts 20-30 seconds.

Date time 2014-02-10 09:26.

Similar to the 05:59 record. The pigs show a vigorous reaction for 25-35 seconds then move little.

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Date time 2014-02-10 06:56 and 20 further similar sequences.

Similar to the 05:59 record. The sequence shows the extreme reaction for about 20-40 seconds then ceases. If the sequence lasted less than 20 seconds, the reaction was still evident at the end of the sequence.

The extreme reactions of over 60 pigs described here is typical for pigs lowered into a high concentration of carbon dioxide. For all of these animals, their welfare was very poor for 20-40 seconds.

The major welfare problems observed in these pigs had three main causes.

1. Use of a poorly designed system for moving pigs. The responsible persons were those who designed the system, those who supervised the running of the system on the day in question and those who operated the system as described.
2. The use of an electric goad in a cruel and inefficient way as described.
3. The use of carbon dioxide, which is very aversive to pigs, rather than an inert gas or mixture of gases that is not aversive.

All of these causes of poor welfare would also have adverse effects on meat quality so should be changed on purely financial grounds.

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