

Body Temperature Changes in Lambs in Response to Pre-Slaughter Procedures

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Stress reactions of animals during the pre-slaughter period can influence their welfare, as well as have a potential impact on the quality of the meat of high pH, dark-cutting meat. (Ferguson and Warner 2008). Changes in body temperature in cattle have been observed in response to the level of stress during animal handling. The aim of this experiment was to investigate the effect of management procedures between farm and slaughter on (vaginal) body temperature in ewe lambs.

Thirty ewe lambs (first and second cross) approximately 6 months old had temperature data loggers inserted into the vagina of each animal at five days pre-slaughter. The temperature loggers, (Dallas Thermocron iButton, DS1921 H) were programmed prior to insertion to record the temperature every one minute over a period of the three days prior to slaughter. The temperature loggers were attached to a progesterone-free ovine intravaginal device (CIDR Interag, Hamilton, New Zealand) as described by Lea *et al.* (2008). All sheep management activities were recorded against time between farm and slaughter. The temperature loggers were removed within 5 minutes post slaughter and the data was subsequently downloaded and analysed.

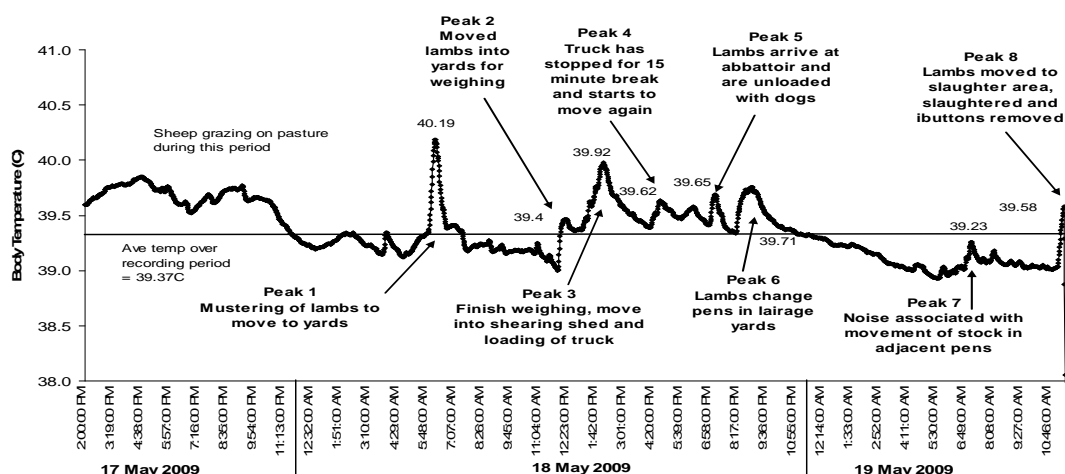


Figure 1: Time vs. vaginal temperatures (°C) with management activities indicated

Figure 1 shows the vaginal temperature plotted against time. The biggest increase in vaginal temperature occurred in response to the initial mustering on the farm (peak 1 in Figure 1). The study clearly indicated that there is an increase in normal vaginal temperatures during standard management husbandry procedures that are carried out on the farm, during transportation and at the abattoir. The monitoring of body temperature, using intravaginal temperature loggers, was shown to be successful, practical and fairly simple, with minimal loss of loggers. In conclusion, measurement of body temperature in animals pre-slaughter may be a practical method to monitor stress levels, and thus detect potential welfare and meat quality problems.

Ferguson D.M., Warner R.D., (2008) *Meat Sci.*, **80**, 12.

Lea J.M., Niemeyer D.D.O., Reed M.T., Fisher A.D., and Ferguson D.M. (2008). *Aust. J. Exp. Agric.*, **48**, 741.

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