

A TECHNIQUE TO DETERMINE THE ULTIMATE pH OF BEEF MEAT

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The relationship between dark-cutting meat and a high ultimate pH (pHu) has long been documented (Davey and Graafhuis 1981). However, difficulty still remains in assessing the incidence of dark-cutting meat in the high quality domestic market as carcasses often leave the abattoir before reaching pHu. A technique to determine pHu of pre-rigor meat has been developed. A meat sample (1-2g) is taken from the M.longissimus dorsi at the 12/13 rib 30 min. post-slaughter using a 6 mm core sampler attached to a battery operated drill. The sample is immediately placed in a polypropylene vial and stored in liquid nitrogen. The freeze-thaw technique described by Davey and Graafhuis (1981) is then used at a convenient time to measure pHu excepting that (i) the sample is incubated for 20 min., (ii) pH is recorded 60 min. after removal from liquid nitrogen and (iii) 10 ml of cold distilled water is added to the sample before macerating in a Colworth stomacher. 8 to 10 samples are macerated simultaneously and the pHu is measured directly in the stomacher bag. The pHu determined by this technique is highly correlated ($r = 0.81$, $RSD = 0.07$, $n = 201$) with the pHu measured in situ on carcasses 24 h post-slaughter.

DAVEY, C.L. and GRAAFHUIS (1981). In "The Problem of Dark-Cutting in Beef", p. 231, editors D.E. Hood and P.V. Tarrant (Martinus Nijhoff Publishers: London).

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SHEEP0: A SHEEP MANAGEMENT OPTIMIZATION PACKAGE

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Frequent discussions with sheep industry advisers revealed a need for computer programs which can predict changes in available herbage, animal production and profits in response to different management strategies. These include, for example, changes in flock structure, culling percentages, lambing percentages, the age at which wethers or cast-for-age ewes should be sold, stocking rate and lambing time.

SHEEP0 is an easy-to-use computer package which has been developed as the result of a very successful collaborative project involving Sheep Industry specialists and producers. SHEEP0 uses mathematical functions incorporated in the original model of White et al. (1983). SHEEP0 predicts changes in pasture availability, herbage quality, animal liveweights, requirements for supplementary feed and financial returns.

Our experience to date indicates that SHEEP0 is a realistic, objective means of assessing carrying capacities, feed requirements and alternative management strategies on individual farms. The model is written in PASCAL, initially for use on a Rainbow 100+ microcomputer system. It has recently been released to the District Offices of the Victorian Department of Agriculture and Rural Affairs and is currently being tested in other Australian States. We are grateful to the Australian Meat Research Committee for funding its development.

WHITE, D.H., BOWMAN, P.J., MORLEY, F.H.W., McMANUS, W.R. and FILAN, S.J. (1983). Agric. Systems 10: 149.

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