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Summary only

TASTE PANEL RELATIONSHIPS

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FLAVOUR, juiciness and tenderness attributes of cold roast beef were assessed by a taste panel. Relationships between panel assessments of tenderness and Warner-Bratzler shear values were also examined.

The meat was derived from 16 steers, the boned and rolled 8-9-10 rib joints of which were roasted to a standard internal meat temperature of 71°C. The longissimus dorsi muscle portions from each roast were cut up into 1 cm cubes and presented, at room temperature, to the seven members of a taste panel. The tasters, who were partly experienced but not trained, were asked to score the cubes of meat for flavour, juiciness and tenderness according to a 6-point quantitative scale. A 1 in. core was taken from each muscle portion for the Warner-Bratzler shear determination.

Flavour and juiciness scores of the taste panel were positively correlated ($r = 0.52$; $P < 0.05$). This may be due to stimulation of more saliva by meat of high flavour intensity, giving tasters the impression that the meat was more juicy, or, alternatively, it may be that the two taste components were carried within, or imparted by, the same muscle fraction. Intramuscular fat content was positively correlated with the scores for flavour ($r = 0.67$; $P < 0.01$) and juiciness ($r = 0.42$; $P < 0.10$).

The tasters showed good agreement for tenderness but poor agreement for flavour and juiciness. It is suspected that the tasters found it more difficult to score for flavour and juiciness than for tenderness.

Warner-Bratzler shear values were negatively correlated with the mean tenderness scores of the taste panel ($r = -0.88$; $P < 0.001$) but the residual standard deviation was high (8.1%).

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