

HEDONIC RESPONSES AND INDIVIDUAL EXPECTATIONS OF APPLES AS PREDICTORS OF CHOICE

INTRODUCTION

Consumers differ in their preference for apple cultivars available in the market. This study describes the relationship between liking and choosing an apple among other apples. Hedonic ratings and individual definitions of an ideal apple were used to explain how the appreciation of apple properties affected three repeated choices.



Figure 1. Apples were presented with brand names to the respondents. From left to right:
1. 'Aroma'
2. 'Pekka',
3. 'Eva-Lotta'
4. 'Red Atlas'.

DATA COLLECTION

APPLES

Four commercially available domestic cultivars were presented (Fig. 1): 'Aroma' (crispy, medium sweet and medium-sour), 'Eva-Lotta' (crispy, sweet and slightly sour), 'Pekka' (sweet, low sourness with mealy texture) and 'Red Atlas' (medium-crispy, sour and low sweetness).

RESPONDENTS

The data were collected at two work places in Helsinki:

- 108 (68%) completed the study, 77 female, 31 male.
- Mean age was 45, range 19-65 years.

PROCEDURE

- The participants rated their most favoured intensity of six attributes (red, green, sweet, sour, firm, crispy), on 7-point semantic scales anchored at each end ("ideal apple").
- Liking of the four cultivars was rated three times during one week.
- Each time they chose three fruits from one cultivar to take home.
- Hedonic flexibility (HedFlex) was calculated for each respondent. It was the largest difference between liking scores of the products selected by an individual over the sessions. 67 respondents had low (2 or less) and 41 had high HedFlex (3-5, theoretical max 6).

Table 1. Models for the choice of cultivars, logistic regression analysis (n=104). Third choice, momentary liking.

Cultivar (n) ^{a)}	Predictor	B (SEM) ^{b)}	Odds ratio	Success rate
AROMA (36)	liking (Aroma)	1.1 (0.3) ***	3.1	77.9%
	liking (Pekka)	-0.6 (0.2) **	0.5	
	liking (Eva-Lotta)	-0.6 (0.3) *	0.5	
	HedFlex	-0.7 (0.2) **	0.5	
	constant	0.4 (1.8)	1.4	
EVA-LOTTA (25)	liking (Eva-Lotta)	0.6 (0.2) **	1.9	76.0%
	constant	-4.7 (1.3) ***	0.0	
PEKKA (29)	liking (Pekka)	1.0 (0.3) ***	2.8	78.8%
	liking (Aroma)	-0.9 (0.2) ***	0.4	
	constant	-1.9 (1.6)	0.1	
RED ATLAS (14)	liking (Red Atlas)	0.8 (0.3) **	2.2	90.4%
	HedFlex	0.7 (0.3) *	2.0	
	constant	-7.2 (1.7) ***	0.0	

a) n indicates the number of a cultivar selected for home use in each session.

b) *** p<0.001; ** p<0.01; * p<0.05 denotes the significance of the term.

RESULTS

LIKING AND HEDONIC FLEXIBILITY

'Aroma' was the best liked and most often chosen for home use (145 out of 324 times). The cultivars were chosen in various combinations: 24 respondents chose the same cultivar each time, while 28 chose a different cultivar every time. Respondents with high HedFlex were more prone to change cultivar between sessions. They also chose sweet cultivars ('Eva-Lotta' and 'Pekka') more often than respondents with low HedFlex, although the latter group liked them more.

IDEAL APPLE CLUSTERS

Ratings on the ideal apple questionnaire showed that crispy apples were better liked than mealy ones (mean 5.6 in a scale of 1='mealy' to 7='crispy'). In general, participants preferred red rather than green apples (4.8 vs. 3.8 for red and green intensity), and sweet apples rather than sour (5.1 vs. 3.7). Three consumer segments (Fig. 2) were identified:

- **Cluster 1** (n=25) preferred sweet, soft and red apples and disliked sourness.
- **Cluster 2** (n=34); preferred sour, crisp and firm apples of domestic origin
- **Cluster 3** (n=45) preferred medium sour and medium sweet and crisp apples. Those in cluster 3 were more likely to have families with children.

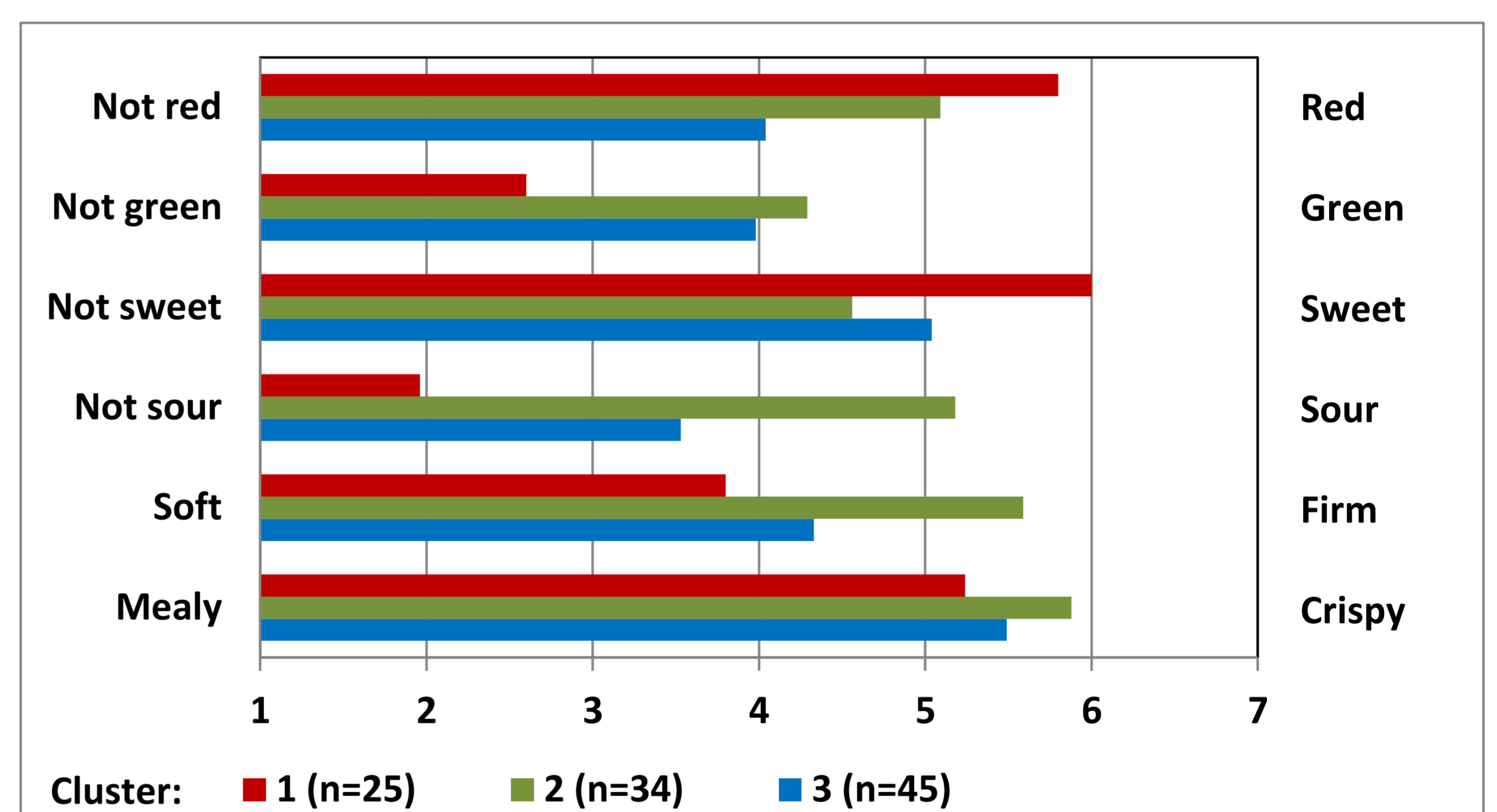


Figure 2. Consumer segments of 'sweet', 'sour' and 'sweet-sour' clusters, based on k-means cluster analysis of the optimal intensity of six ideal apple descriptors (n=104).

ASSOCIATION BETWEEN LIKING AND CHOICE

While both initial and momentary liking explained the choice of apples in logistic regression, the construction of the best model depended on the cultivar and session. Models showed that an apple was chosen based not only on the liking of that cultivar, but also disliking the non-chosen cultivars (examples in Table 1). Success rates varied between 58 and 93%.

CONCLUSION

Aside from the most preferred apples, respondents also chose less preferred options to take home. The main predictors of choice were the hedonic ratings and their choice criterion (HedFlex), and to a smaller extent their orientations towards apples (clusters). Offered side by side, products may affect the acceptability of each other.

REFERENCES

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ACKNOWLEDGEMENT

Financially supported by the Ministry of Agriculture and Forestry, project "Domestic apple varieties: sensory attributes and consumer acceptance", coordinated by MTT Agrifood Research Finland.