

Consumer Preferences for Japanese Quince (*Chaenomeles japonica*) Products

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SUMMARY

A study of consumer preferences in Sweden showed that the consumers in general responded very positively to the flavour of Japanese quince in various products. Of the products tested, chaenomeles ice cream was the product liked by most consumers, and on average 80% of the consumers questioned would buy the ice cream if it were available on the market. Chaenomeles lemonade and chaenomeles curd were also very much appreciated. Curd-type preservatives seemed to be unknown for many of the Swedish consumers surveyed. Nevertheless, chaenomeles curd obtained high scores and 83% of women aged 40–60 would buy the product if available on the market. Less appreciated (however with high scores) were jam and yoghurt with the highest buying preferences for 75% for women aged 40–60 and 62% for women aged 20–39. These products could be further developed and thereby appreciated by more consumers.

MATERIALS AND METHODS

Consumer preferences for products based on Japanese quince were investigated in a co-operation between Balsgård–Department of Horticultural Plant Breeding, Kiviks Musteri AB, Skånemejerier AB, Åhusglass AB, SIK–The Swedish Institute for Food and Biotechnology and The Department of Home Economics, Gothenburg University. The study was summarized in 2001 in a partly confidential report (Albinsson & Wendin 2001).

Products

Five different potential chaenomeles products were developed and tested. The products were ice cream, lemonade, jam, curd and yoghurt. The ice cream was flavoured with Japanese quince syrup and jam, the lemonade was carbonated and flavoured with Japanese quince syrup, the curd was flavoured with Japanese quince puree and the yoghurt was flavoured with Japanese quince jam.

Focus study

Initially the five products were evaluated using a focus group of 7 people (women aged 20–60, active consumers). The purpose of the focus group study was carry out a preliminary evaluation of the products as a basis for the extended consumer test. The characteristics evaluated were flavour, fragrance and consistency. Based on the results, a questionnaire was developed and used in the consumer test.

Consumer test

In the consumer test, 76 randomly selected men (35) and women (41) aged 20–60 participated. The products were tested one by one. Appearance, fragrance, flavour, consistency and overall impression was scored using a hedonic scale from one (“extremely bad”) to nine (“extremely good”). In addition, sweetness, acidity, freshness, and in case of the lemonade, content of carbon dioxide, were scored. The respondents were asked to say whether they would buy the product if it were available on the market. There was also a possibility to add comments to the score for each of the products tested.

RESULTS AND DISCUSSION

Chaenomeles ice cream

The ice cream flavoured with chaenomeles jam obtained a high score for overall impression (6.7). The characteristics obtaining the highest scores were flavour (7.0), appearance (6.5) and freshness (6.5). The average interest in buying quince ice cream was very high (80%). Women aged 40–60 were most willing to buy this product (92%). In general there were small differences between the sexes of different ages in product preferences. Some additional comments obtained for the chaenomeles ice cream product were:

“A fresh, fruity summer ice cream, perfect for adults”

“A very fresh flavour! Perfect for a warm summer day or as dessert”

“I would recommend this ice cream if it were available on the market”

Chaenomeles lemonade

The carbonated chaenomeles lemonade obtained a somewhat lower average score for overall impression (5.7) compared to the ice cream. The flavour was most appreciated by men aged 20–39 (6.0). The highest average scores were obtained for freshness (6.0) and acidity (5.8). Some respondents commented that the content of carbon dioxide was too high, whereas others said it was too low. Women aged 40–60 were most interested in buying the product (83%) whereas men of all ages were least interested in the product (50–52%). During manufacturing a precipitate formed that affected the appearance of the product. Therefore the overall impression of the product was most likely biased to the lower end of the scale. Some additional comments obtained for the chaenomeles lemonade product were:

“Not clear, but very tasty”

“It looked very nice in colour and with bubbles but it didn’t taste very much”

“Very little fragrance. Sufficient sweet, acid flavour and fresh! A very tasty lemonade for adults, more tasty than apple, pear and elderberry cider”

“Too much carbon dioxide”

“A taste like gooseberry and elderberry”

“An alternative to table water (mineral water)”

Chaenomeles jam

The score for the overall impression of the chaenomeles jam (5.8) was similar to the score for the overall impression of the lemonade, whereas the appearance of the product obtained a very high score (7.4). Acidity also obtained a high score (6.5) for all categories of respondents. The biggest interest in buying jam was expressed by women aged 40–60 (75%) whereas women aged 20–39 were least interested in buying the product (45%). Some comments obtained for the chaenomeles lemonade product were:

“Very tasty, tastes as if it were home-made, luxury breakfast with toasted bread on a Sunday, a jam for adults”

“Nice with a jam that is more acid than sweet”

“Nice colour”

“You feel healthy eating the jam”

“Bitter, too strong flavour”

Chaenomeles curd

The score for the overall impression of the chaenomeles curd (5.8) was similar to that for chaenomeles lemonade and jam, whereas the appearance obtained a higher average score (6.3). In particular women aged 40–60 liked the appearance of the product (7.1). However, the fragrance of this product received a low average score (4.1). This was probably caused by a too strong fragrance from the eggs. Nevertheless, as with jam, women aged 40–60 were most interested in buying the product (83%) whereas men of the same age were least interested in buying the product (50%). Some comments obtained for the chaenomeles curd product were:

- “Very nice colour and marvellous consistency. The tastiest curd I have ever tasted. Nice fresh taste”
- “A product that I believe has a large market. Very attractive and full of taste”
- “Very tasty, probably a nice flavour in cakes. Or why just not eat it as it is?”

Chaenomeles yoghurt

The average score for the overall impression of the yoghurt (5.4) was the lowest among the products tested. However men aged 20–39 consistently scored every characteristic higher than the other categories of consumers. For appearance a high score was obtained (6.5) and fragrance, flavour, consistency and overall impression also obtained a rather high score (6.0). However, the yoghurt obtained the lowest average score for buying interest (55%) and most interested in buying the product were men and women aged 20–39 (62%). Some comments obtained for the chaenomeles yoghurt product were:

- “Fresh taste. I normally don’t like yoghurt but this was quite tasty”
- “Too little flavour”
- “Too firm pieces of fruit flesh”
- “Tasty with pieces of fruit flesh”
- “Bitter and astringent”

CONCLUSION

The study of consumer preferences showed that the Swedish consumers in general responded very positively to the flavour of chaenomeles in various products. Chaenomeles ice cream was the product that most of the consumers liked and would buy if available on the market. The chaenomeles lemonade and the chaenomeles curd were also appreciated. The concept of curd seemed to be unknown for many of the consumers, nevertheless it obtained high scores. Less appreciated were jam and yoghurt. These products should be further developed and thereby appreciated by more consumers.

LITERATURE

Albinsson B., Wendin. K. 2001. Consumer preferences for Japanese quince products. SIK - The Swedish Institute for Food and Biotechnology, Göteborg 1–36. (in Swedish)

