

CHESTNUT PROCESSING INFLUENCES CHESTNUTS SENSORY PROFILE AND ACCEPTABILITY



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ABSTRACT

The impact of each product's sensory attributes on our daily consumption requires the development of reliable analytical methods to select products with a good balance between quality and sensory profile. Chestnut (*Castanea sativa* M.) is a fruit with unique nutraceutical properties and sensory characteristics that can be used in several gastronomic dishes, from desserts to main courses. Sensory evaluation of chestnuts, raw, roasted, or boiled, is crucial for developing and improving gastronomic production steps.

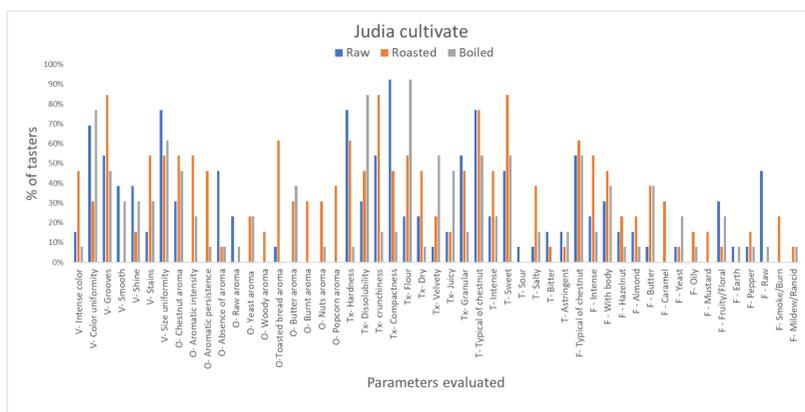
In the present study, the panel of tasters described and named the main sensory attributes of the chestnut. Two cultivars of chestnuts were analyzed - Longal and Judia - and prepared in three different ways: raw, roasted and boiled.

OBJECTIVE

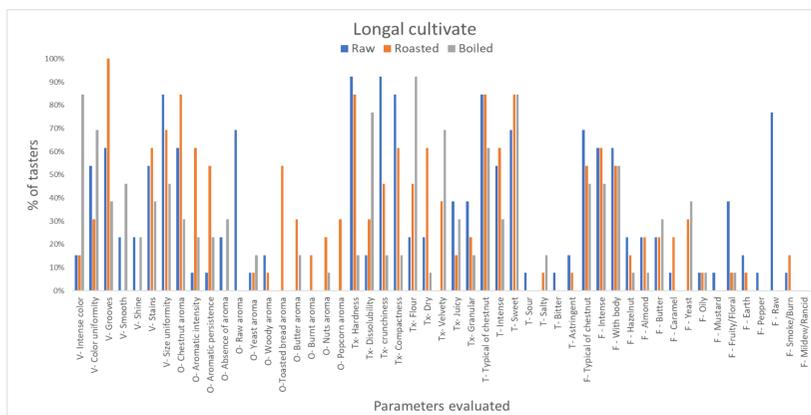
This study aims to verify if the different chestnut processing influences their sensory profile and, consequently, the acceptability of the chestnuts.

RESULTS

In this evaluation, each panel-member described and named the main sensory attributes of the different chestnut samples at visual, olfactory, and taste levels.



Graph 1 - Percentage of descriptors cited by the sensory panel when tasting the Longal cultivate (CATA test). V - Visual; O - Olfactory; Tx - Texture; T - Taste; F - Flavor



Graph 2 - Percentage of descriptors cited by the sensory panel when tasting the Judia cultivate (CATA test). V - Visual; O - Olfactory; Tx - Texture; T - Taste; F - Flavor

CONCLUSION

Regardless of the type of preparation and variety, the typical sweet taste, intense and rich flavor of chestnuts were common in all the samples. Hardness, crunchiness, and compactness were more perceptible in the roasted and raw preparations.

The two cultivars share several common sensory attributes, and the sensory differences are more visible between the different preparations, regardless of the variety. Among the attributes described by the panel, sweetness and texture are, probably, the most appreciated attributes by the chestnut consumer.

The chestnut's unique sensory characteristics confer versatility in creating food dishes with exceptional qualities appreciated by the traditional Michelin cuisine.

MATERIALS

Processing of chestnuts

Raw (A) - thawed at room temperature

Roasted (B) - in the oven at 200° for about 25 min

Boiled (C) - after boiling water, about 5 min

Longal

Judia



METHODS

A sensory analysis sheet was filled out for each of the methods used.

1st phase

2nd phase

FLASH PROFILE

CATA test

Each panel member described, freely, the attributes of the different chestnut samples at visual, olfactory, and taste levels.

Fifty-one sensory terms were selected from the FP method and the panel of tasters selected the most suitable ones for each sample.

DISCUSSION

Table 1 - Attributes highlighted by the tasters (>75%) for each of the samples – Raw (Rw), Roasted (R) and Boiled (B).

V - Visual; O - Olfactory; Tx - Texture; T - Taste; F - Flavor

% > 75	LONGAL			JUDIA		
	Rw	R	B	Rw	R	B
V-Intense color			●			
V-Uniform size	●			●		
V-Uniform color						●
V-Grooves		●		●		
O- Chestnut aroma		●				
Tx- Hardness	●	●		●		
Tx- Crunchiness	●			●		
Tx- Compactness	●			●		
Tx- Dissolubility			●			●
Tx- Flour			●			●
T- Typical of chestnut	●	●		●	●	
T- Sweet		●	●		●	
F - Raw	●					

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