

Research Note

CANNING AND QUALITY EVALUATION OF SWEET POTATO DESSERT¹

Sweet potato, *Ipomoea batatas* (L) Lam, is one of the most studied crops.^{2,3,4,5} Local production in Puerto Rico of this starchy crop for 1989-90 was 200,000 cwt, with a farm value of \$3.29 million⁶. Research has been carried out for the elaboration of sweet potato products such as bars, patties and custard.^{7,8,9} Because of the rapid deterioration of products after harvest, processing of new products can increase the consumption and lessen the loss of perishable crops.

As an alternative use of sweet potato, a new method for canning a gelled sweet potato dessert was developed and evaluated at the Food Technology Laboratory of the Agricultural Experiment Station. The product consists of sweet potato puree, sugar,

corn syrup, vanilla, and gelling agent and a microorganism inhibitor. A white sweet potato variety was cooked in boiling water and mashed. The puree was heated during the addition of sugar, corn syrup, Col-Flo-67, Kelgum, vanilla and lemon juice. Potassium sorbate (Food graded, Pfizer, New York, N.Y.)¹⁰ was added as a preservative. The product was boiled to 60% soluble solids and then put into 303 × 406 enameled cans, which were heated to 190° F (87.8° C) and sealed. Final Brix, pH and Aw of the product was 59.9, 5.6 and 0.891, respectively (data not presented).

Microbiological analyses to detect microorganisms after 2 weeks of elaboration were negative.

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²Bradbury, J. H. and V. Singh, 1986. Thiamin, riboflavin and nicotinic acid contents of tropical root crops from South Pacific. *J. Food Sci.* 51 (6): 1563-564.

³Martin, F. W. and E. J. Rodríguez, 1985. Preference of color, sweetness and mouthfeel of sweet potato in Puerto Rico. *J. Agric. Univ. P. R.* 69 (1): 99-106.

⁴Martin, F. W., 1984. Identification of quality characteristics of sweet potato used as a staple food in the Caribbean. *Caribbean Food Crops Society* 19: 249-54.

⁵Gull, D. D. and R. A. Canover, 1977. Quality characteristics of nutritional composition of boniatos (*Ipomoea batatas*). *Proc. Fla. State Hort. Soc.* 90: 199.

⁶Departamento de Agricultura, Oficina de Estadísticas Agrícolas. Ingreso Agrícola de Puerto Rico Años 1988-89 y 1989-90. Datos Preliminares.

⁷Beauchamp de Caloni, I and E. R. Hernández, 1988. Freezing and shelf-life of sweet potato and citron bars. *J. Agric. Univ. P. R.* 72 (1): 171-72.

⁸Beauchamp de Caloni, I. 1989. Elaboration, shelf-life and quality evaluation of dishes prepared with new sweet potato selections. *J. Agric. Univ. P. R.* 73 (2): 127-32.

⁹Hoover, M., W. M. Walter and F. G. Glesbrecht, 1983. Method of preparation and sensory evaluation of sweet potato patties. *J. Food Sci.* 48 (5): 1568-569.

¹⁰Trade names in this publication are used only to provide specific information. Mention of a trade name does not constitute a warranty of equipment or materials by the Agricultural Experiment Station of the University of Puerto Rico, nor is this mention a statement of preference over other equipment or materials.

TABLE 1.—Sensory evaluation of canned sweet potato dessert

Days in storage	Mean values ¹			
	Appearance	Flavor	Texture	Overall acceptability
0	5.00	5.00	4.91	4.82
30	5.20	5.30	5.10	5.30
60	5.00	5.00	4.89	4.89
90	---	---	---	---
120	5.13	4.63	4.87	4.63

¹6 point scale: 6 = like very much; 1 = did not like. No significant difference was observed at the 5% level in the stored sweet potato dessert in the attributes evaluated.

The formula for the elaboration and the canned sweet potato dessert was as follows:

<i>Ingredient</i>	<i>Quantity (g)</i>
Sweet potato (mashed)	2200.0
Sugar	2087.0
Corn syrup	220.0
Water	878.0
Kelgum	15.40
Col-Flo 67	135.0
Vanilla	0.22
Lemon juice	5.0
Potassium sorbate	5.5

The dessert was evaluated by a taste panel for appearance, flavor, texture and general acceptability on a 6-point hedonic scale ranging from 6 (like very much) to 1 (do not like). Table 1 shows acceptability of the product reported up to 4-month storage.

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Erratum

First name of senior author of article "Contributions to the knowledge of American Ectrichodiinae III. The genus *Cricetopareis* Breddin, 1903 (Hemiptera:Reduviidae)" in Vol. 75, No. 1, page 81, is Diego, not Domingo, as stated.