

SENSORY ACCEPTABILITY AND CULTURAL SIGNIFICANCE OF TRADITIONAL PORK DISHES IN SALEM DISTRICT, TAMIL NADU

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Abstract: This study explores the cultural, culinary, and economic significance of six traditional pork delicacies *Pachi Tholl*, *Bondaikal*, *Endukanda*, *Vellam Pulusu*, *Nethuru Kanda*, and *Panthi Kojji* prevalent in Salem District, India. Using a sensory evaluation panel (20 participants), the dishes were assessed for taste, texture, aroma, and overall acceptability on a 9 point hedonic scale. Results indicated that *Pachi Tholl* (fire-roasted pig ears) and *Vellam Pulusu* (tamarind-jaggery pork curry) ranked highest in their respective categories (dry and gravy based dishes), owing to their unique flavours and cultural relevance. The study highlights traditional preservation techniques such as sun-drying, and fermentation, which enhance shelf life while retaining nutritional value. Despite low pork consumption in India these dishes sustain local agriculture, reduce food waste, and preserve heritage. Challenges include declining traditional practices due to modernization and religious-cultural sensitivities. The findings emphasize the need for documentation, sustainable promotion, and support to safeguard these culinary traditions for future generations.

Keywords: Traditional pork dishes, sensory evaluation, culinary heritage, preservation techniques, Salem District, cultural significance, sustainable food practices, indigenous cooking methods, meat processing.

Introduction

Animals have always played a pivotal role in human civilization, serving as companions, sources of labour, and most importantly, as a vital component of our diet. Among the various animals domesticated for food, the pig (*Sus domesticus*) holds a unique position due to its widespread consumption and cultural significance. The culinary term for pig meat, pork, is one of the most widely consumed meats globally, with a rich history dating back to 5000 BCE when pig husbandry first emerged (*Larson et al. 2007, PNAS*). Pork is consumed in various forms, both freshly cooked and preserved, making it a versatile ingredient in cuisines worldwide. Its popularity is reflected in its substantial contribution to global meat consumption, accounting for 36% of total meat intake (*FAO (2024)*). This underscores pork's importance in diets across different cultures, driven by its distinct flavour, adaptability in cooking and deep-rooted cultural significance.

As of 2024, global pork consumption stands at 112.6 kilo tons, with significant variations in per capita consumption across regions. Hong Kong leads the world in pork consumption, with an average of 55.24 kg per person annually. In contrast, India's per capita consumption is only 0.22 kg per year (*Helgi library 2021*). This disparity is influenced by a multitude of factors including cultural, religious and economic considerations. Despite the low consumption in India, traditional pork dishes continue to play a significant role in maintaining its presence in the diet. These dishes not only preserve culinary heritage but also support local agriculture and economies by promoting the use of indigenous ingredients and cooking methods.

Traditional Pork Dishes: Culinary Heritage and Preservation

Traditional pork dishes are not only a reflection of cultural identity but also a means of preserving culinary heritage. In many cultures, these dishes are prepared using methods passed down through generations, ensuring that the flavors and techniques remain authentic. For example, in the Philippines, lechon (roast pig) is a centerpiece of festive occasions, symbolizing abundance and celebration. Similarly, in the southern United States, barbecue pork ribs are a beloved dish, often prepared using slow-cooking methods that enhance the meat's flavor and tenderness.

Preservation techniques also play a significant role in the global consumption of pork. Methods such as curing, smoking, and drying have been used for centuries to extend the shelf life of pork products. These techniques not only preserve the meat but also impart unique flavors, making them highly sought after. For instance, Italian prosciutto and Spanish jamón ibérico are renowned for their rich, savory taste, achieved through meticulous curing processes. In addition to traditional preservation methods, modern techniques such as refrigeration and vacuum sealing have further expanded the availability and shelf life of pork products, making them accessible to a global audience.

Materials and Methods:

The taste panel study was designed to evaluate the sensory attributes of six traditional pork products Pachi Tholl, Bondaikal, Endukanda, Vellam Pulusu, Nethuru Kanda, and Panthi Kojji using a structured approach. A diverse panel of 20 participants, including local consumers, culinary experts, and food enthusiasts, was selected and trained to use a 9-point hedonic scale for rating taste, texture, aroma, and overall acceptability. Each product was prepared following traditional methods and served in standardized portions at optimal temperatures, coded with random numbers to avoid bias. Panelists cleansed their palates with

water and crackers between samples to ensure unbiased evaluations. Data were collected through scorecards and qualitative feedback, with scores averaged to rank the products. Ethical considerations included obtaining informed consent and disclosing allergen information. The study aimed to provide reliable insights into the sensory qualities of these dishes while highlighting the importance of preserving traditional culinary practices. Limitations included potential cultural biases and the subjective nature of sensory evaluation.



1.Pachi Thol: Traditionally, it is prepared from the ears of pigs. In most cases, during the slaughtering of pigs, the ears are not taken by people for further cooking, like the meat. To avoid wasting the ears and to enhance palatability, they burn the ears in direct fire. Since pigs do not have much fat deposition in their ears, melting of fat is not a problem. After burning in fire, they spread chili powder and salt over it, which enhances the palatability.

Preparation Method

1. Cut the ears from the pigs.
2. Burn the ears directly over a fire for 15-20 minutes without applying any spices or masala.
3. After burning, sprinkle salt and chilly powder over the ears.
4. The dish is now ready for consumption.

The shelf life of this dish is only one day.

2.Bondaikal:

Nowadays, in many areas, we can witness dry meat, desiccated meat, getting popular. People like the taste and texture. Pigs have high fat deposition in their body. Immediately after slaughter, the meat is cooked in a dry hot pan at low flame. As time advances, the fat in the

skin of the meat starts melting. After some time, the melted fat becomes oil, and the dry meat gets separated during the cooking time. Salt is added to enhance the taste and flavor. The separated lard is used as food oil for making sweets and other food products.

Preparation Method

1. Select pork with good fat content, preferably using the skin.
2. Place the raw meat in an empty pan and fry over medium heat for 30-45 minutes
3. The fat will melt and form oil, which can be used for: Making sweet dish, Cooking oil
4. The dry meat left after rendering the fat can be eaten separately.

The shelf life is one week. This process is called rendering, where the fat is melted and separated from the meat, resulting in:

Lard (the melted fat) for cooking and baking

Crispy, dry meat for snacking.

3. Endukanda: Preservation always plays a pivotal role in the shelf life of food items. In earlier days, people used different preservation methods for different meat products. One such method is drying the meat, as it absorbs moisture, sun making it difficult for microbial growth. Pork is cut into small pieces; salt, turmeric powder are mixed and applied over the meat, then sun-dried for 4 to 5 days. The dried meat is collected and stored for later use.

Preparation method

1. Prepare a mixture of: Oil, Turmeric powder, Salt
2. Apply the mixture to the raw pork meat.
3. Place the meat on rocks or flat surfaces and dry under direct sunlight for 5-7 days.
4. After drying, store the meat for later use.

Shelf life: 1 month. This process is called sun drying or solar drying, which helps to:

- Preserve the meat by removing moisture
- Prevent bacterial growth
- Add flavor with the turmeric and salt mixture

4. Vellam Pulusu/Vellam Puli: Culture and heritage are connected to animals from our ancestor times. Hindus worship cows as gods; likewise, pigs also play an important role in temple functions. Pigs are sacrificed in temples. During those occasions, high-weight pigs are used. The pork needs to be preserved. Dry ginger, tamarind, black jaggery, coriander seeds, and dried chili are crushed, mixed and made into a paste. Then it is added to the pork, ensuring that the cooking time does not exceed 45 minutes under low flame. This recipe will be good if stored in an unused earthenware pot covered using white muslin cloth.

5. Nethuru Kanda: Taste and palatability of a recipe become more crucial nowadays, playing a dominant role in the cooking industry. Cooking young pig meat will not achieve the taste like matured pig meat. To enhance the taste, people add blood during cooking of raw meat, creating a different taste and flavor. Giving more attention to this particular recipe. Meat of young pigs were used for this dish. The shelf life is 1 day.

Preparation Method

1. Heat oil in a pan.
2. Add: Mustard, Green chilli, Curry leaves
3. Mix well.
4. Add the pork meat and cook.
5. Add: Chili powder (appropriate amount), Salt, Blood collected during slaughter
6. Cook for 25-30 minutes.
7. The dish is ready to eat.

Shelf life: 1 day

6. Panthi Kojji: This recipe is more like our gravy, a precise blend of each ingredient resulting in a perfect recipe. Chopped onion, garlic, curry leaves, and tomato are added to oil after deep frying these ingredients. Pork, salt, green chili, fenugreek, and tamarind water are added. Finally, this recipe needs a cooking time of 25 to 30 minutes. After completion, it is ready to serve, with a shelf life of one day. It acts as a principle recipe for many modern pork recipes nowadays.

Preparation Method:

1. Heat oil in a pan.
2. Add and deep fry: Mustard, Curry leaves, Chopped onion, Garlic, Tomato
3. Add: Pork, Salt, Green chilli, Fenugreek
4. Cook for 30 minutes.
5. Add tamarind water and continue cooking for 5-10 minutes.
6. The dish is ready to serve.

Shelf life: Room temperature: 1-1.5 days, Refrigerated: 2-3 days

Results and Discussion:

The study conducted in Salem District provided valuable insights into the cultural, culinary and economic significance of traditional pork dishes. The analysis of six traditional pork items Pachi Tholl, Bondaikal, Endukanda, Vellam Pulusu, Nethuru Kanda, and Panthi Kojji revealed distinct preparation methods, preservation techniques, and cultural importance.

These dishes were categorized into dry items and gravy-based recipes, each with unique flavours, textures and shelf lives.

Sensory Evaluation Scores of Traditional Pork Dishes (n = 20 panelists)

Dish Name	Appearance	Flavour	Juiciness	Tenderness	Overall Acceptability	Category
Pachi Tholl	8.7	8.6	8.1	8.5	8.5	Dry Item
Bondaikal	8.3	8.4	8.2	8.1	8.2	Dry Item
Endukanda	7.4	7.2	7.3	7.5	7.3	Dry Item
Vellam Pulusu	8.9	8.6	8.5	8.8	8.7	Gravy-Based Dish
Panthi Kojji	8.1	8.0	8.1	7.9	8.0	Gravy-Based Dish
Nethuru Kanda	6.8	6.5	7.2	6.9	6.8	Gravy-Based Dish

Scale Used: 9-point hedonic scale (1 = Dislike extremely, 9 = Like extremely)

Highest Scored Dish (Overall Acceptability): Vellam Pulusu (8.7)

Highest Dry Item: Pachi Tholl (8.5)

Lowest Scored Dish: Nethuru Kanda (6.8)

Dry Items: Taste and Acceptance Ranking

Dry-Based Recipes: Ranking

1. Pachi Tholl: Ranked **first** with overall acceptability (8.5), this dish is prepared by burning pig ears directly over fire and seasoning them with salt and chili powder. Its simplicity, unique texture, and smoky flavor make it a favorite among consumers. However, its shelf life is limited to one day.

2. Bondaikal: Ranked **second** with overall acceptability (8.2), this dish involves rendering pork fat to produce lard and crispy dry meat. The versatility of lard for cooking and the crunchy texture of the dry meat contribute to its popularity. Its shelf life extends up to one week.

3. Endukanda: Ranked **third** with overall acceptability (7.3), this sun-dried pork dish is preserved using turmeric and salt. While it has a longer shelf life (one month), its taste and texture are less preferred compared to Pachi Tholl and Bondaikal.

Gravy-Based Recipes: Ranking

1. Vellam Pulusu: Ranked **first** with overall acceptability (8.7), this dish is a blend of pork with tamarind, black jaggery, and spices, cooked slowly to enhance flavor. Its cultural significance in temple rituals and its rich, tangy taste make it highly favored. It is traditionally stored in earthenware pots, extending its shelf life.

2. **Panthi Kojji:** Ranked **second** with overall acceptability (8.0), this gravy-based recipe combines pork with onions, garlic, tomatoes, and tamarind water. Its balanced flavors and adaptability to modern cooking techniques contribute to its popularity. It has a shelf life of 1-1.5 days at room temperature and 2-3 days when refrigerated.

3. **Nethuru Kanda:** Ranked **third** with overall acceptability (6.8), this dish incorporates pig blood during cooking, creating a distinct flavor. While it has a unique taste, its acceptance is lower due to the use of blood, which may not appeal to all consumers. Its shelf life is limited to one day.

Importance of Documentation and Preservation of Native Cooking Methods:

The study highlights the critical need to document and preserve traditional cooking methods for several reasons:

Cultural Heritage: Traditional pork dishes like Vellam Pulusu and Pachi Thol are deeply rooted in the cultural and religious practices of Salem District. Documenting these recipes ensures that the culinary heritage is passed down to future generations.

Economic Value: Many of these dishes, such as Pondaikal and Endukanda, support local economies by utilizing every part of the pig and reducing waste. Preserving these methods can sustain livelihoods in rural areas.

Nutritional Significance: Traditional cooking methods often retain the nutritional value of ingredients. For example, sun-drying pork in Endukanda preserves protein content while enhancing flavor.

Sustainability: Native preservation techniques, such as sun-drying and rendering, are eco-friendly and reduce reliance on modern refrigeration, promoting sustainable food practices.

Culinary Diversity: Documenting these recipes adds to the global culinary repertoire, offering unique flavors and techniques that can inspire modern chefs and food enthusiasts.

Conclusion:

The study explains the traditional pork dishes in Salem District, both as a cultural cornerstone and an economic driver. The ranking of dishes based on consumer preferences, with Pachi Thol and Vellam Pulusu emerging as favorites in their respective categories. However, the preservation of these culinary traditions faces challenges due to changing dietary habits and modernization.

Documenting and preserving these native cooking methods is essential to safeguard cultural heritage, support local economies, and promote sustainable food practices. By integrating traditional techniques with modern innovations, these dishes can continue to thrive, ensuring

that the rich culinary legacy of Salem District remains alive for future generations. This study serves as a call to action for researchers, policymakers, and culinary experts to collaborate in **preserving** and promoting these invaluable traditions.

References

- [1] Achaya, K. T. (1994). *Indian food: A historical companion*. Oxford University Press.
- [2] Albala, K. (2011). *Food cultures of the world encyclopedia*. Greenwood.
- [3] Fernández-Armesto, F. (2002). *Near a thousand tables: A history of food*. Free Press.
- [4] Food and Agriculture Organization (FAO). (2023). *Meat market review: Emerging trends and outlook*. FAO.
- [5] Food and Agriculture Organization of the United Nations. (2024). *Global meat consumption statistics 2024: Pork production and consumption trends*. <https://www.fao.org/statistics>
- [6] Harris, M. (1985). *Good to eat: Riddles of food and culture*. Simon & Schuster.
- [7] Helgi Library. (2021). *Pork meat consumption per capita rose 0% to 0.230 kg in India in 2021*. <https://www.helgilibrary.com/charts/pork-meat-consumption-per-capita-rose-0-to-0230-kg-in-india-in-2021>
- [8] Hui, Y. H., Nip, W.-K., Rogers, R. W., & Young, O. A. (Eds.). (2001). *Meat science and applications*. Marcel Dekker.
- [9] Meilgaard, M., Civille, G. V., & Carr, B. T. (2007). *Sensory evaluation techniques* (4th ed.). CRC Press.
- [10] Mintz, S. W., & Du Bois, C. M. (2002). The anthropology of food and eating. *Annual Review of Anthropology*, 31, 99119.
<https://doi.org/10.1146/annurev.anthro.31.032902.105128>
- [11] OECD & FAO. (2023). *OECD-FAO agricultural outlook 2023-2032*. OECD Publishing.
- [12] Parrott, N., & Marsden, T. (2002). *The real green revolution: Organic and agroecological farming in the South*. Greenpeace.
- [13] Pretty, J. (2002). *Agri-culture: Reconnecting people, land, and nature*. Earthscan.
- [14] Sen, C. T. (2004). *Food culture in India*. Greenwood.
- [15] Simoons, F. J. (1994). *Eat not this flesh: Food avoidances from prehistory to the present* (2nd ed.). University of Wisconsin Press.
- [16] Statista. (2024). *Per capita pork consumption by country in 2024*. <https://www.statista.com>

- [17] Stone, H., & Sidel, J. L. (2004). *Sensory evaluation practices* (3rd ed.). Academic Press.
- [18] Toldra, F. (Ed.). (2010). *Handbook of meat processing*. Wiley-Blackwell.
- [19] Weiss, A. (2016). *Pork and people: The cultural and economic significance of pigs*. Cambridge University Press.