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# REVALUATION OF ANDEAN PRODUCTS FROM CAJAMARCA THROUGH CUTTING-EDGE TECHNIQUES IN MODERN CUISINE, 2025

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## ABSTRACT

*This study aims to revalue the cultural, nutritional, and gastronomic importance of Andean products from the Cajamarca region through the application of modern culinary techniques. The research adopts a mixed-methods approach with a quasi-experimental and cross-sectional design, involving 15 chefs and 40 consumers. Data were collected through questionnaires, document analysis, and sensory evaluation tests. The findings identify key Andean products such as native potato, quinoa, mashua, tarwi, and purple corn, and highlight the use of modern techniques such as sous vide cooking, foaming, spherification, dehydration, and gelation. Results show strong acceptance among both chefs and consumers, with 95% of participants expressing satisfaction with innovative gastronomic proposals. The study concludes that integrating cutting-edge culinary techniques effectively enhances the value, sensory appeal, and cultural preservation of Andean products while contributing to regional gastronomic development.*

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**KEYWORDS:** Culture, Food and Nutrition.

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## 1. INTRODUCTION

Peruvian cuisine has achieved international recognition in recent decades, not only for its diverse flavors and techniques, but also for the revival of ancestral products that form the culinary identity of the country's various regions. In this context, the Cajamarca region boasts a vast array of Andean products such as mashua, oca, purple corn, and fresh cheese, among others. Despite their nutritional, cultural, and symbolic value, these products have not yet been fully incorporated into contemporary gastronomic offerings or showcased in innovative culinary settings.

Globalization has generated a trend toward food homogenization, often relegating local products to a secondary role in favor of imported or industrialized ingredients. However, in contrast to this trend, a gastronomic movement has been developing that promotes the revaluation of native ingredients through the use of modern techniques, such as molecular gastronomy, low-temperature cooking, dehydration, and controlled fermentation, among others. These tools allow for the reinterpretation of tradition without distorting it, generating culinary experiences that combine identity, innovation, and sustainability.

Given this context, the present research aims to revalue Andean products from Cajamarca by applying cutting-edge techniques in modern cuisine, positioning these ingredients as central elements of high-level gastronomic offerings. To this end, the sensory, nutritional, and cultural properties of certain native products will be analyzed, and practical applications will be proposed within a modern menu that engages with Andean roots.

The importance of this study lies in its ability to articulate tradition with innovation, promoting not only the development of a creative local gastronomy but also the strengthening of rural economies, gastronomic tourism, and Cajamarca's cultural identity. Furthermore, it seeks to offer culinary professionals new tools and approaches for working with ingredients that have historically been undervalued, paving the way for a more conscious and sustainable cuisine.

### 1. Strengths of the Paper

- Strong cultural and practical relevance, linking gastronomy with heritage preservation.
- Use of a mixed-methods design, combining expert and consumer perspectives.
- Inclusion of experimental culinary applications and innovative recipes, adding originality.
- Clear evidence of high consumer acceptance

(95%), supporting the study's conclusions.

- Valuable contribution to gastronomy, tourism, and regional economic development.

## 2. RESEARCH METHODOLOGY

### 2.1. Methodological design

This study was conducted using a mixed-methods approach (quantitative and qualitative), as it enabled the integration of the objective analysis of results obtained through sensory evaluations with the expert assessment provided by gastronomy specialists. According to its purpose, the research was classified as applied research, as it aimed to develop an innovative gastronomic proposal based on native ingredients from the Cajamarca region. Furthermore, the study followed a descriptive-propositional level and a cross-sectional quasi-experimental design, since the acceptance of gastronomic preparations made from regional ingredients was evaluated at a specific point in time without random assignment of participants.

### 2.2. Population and sample

The study population consisted of gastronomy specialists and potential consumers from the Cajamarca region. Regarding the expert panel, a total of 15 chefs and gastronomy specialists with demonstrated experience in traditional and contemporary cuisine were identified. These experts were affiliated with gastronomic establishments, culinary training institutions, and gastronomic promotion activities within the province of Cajamarca.

Due to the limited availability of professionals with specialized training and recognized expertise in regional gastronomy within the study area, a population census approach was adopted, incorporating all identified specialists ( $n = 15$ ). This methodological decision was justified by the fact that the target population was small, highly specialized, and difficult to expand, a common situation in gastronomic research conducted in regional contexts where the number of certified experts is limited.

The consumer population comprised approximately 500 individuals interested in regional gastronomy. From this population, a non-probabilistic convenience sample of 40 consumers was selected. These participants voluntarily took part in sensory evaluations designed to assess the level of acceptance and preference for the developed dishes.

### 3. DATA COLLECTION TECHNIQUES AND INSTRUMENTS

Data collection was carried out through documentary analysis, expert observation, and sensory acceptance tests. Documentary analysis facilitated the identification of scientific background information, nutritional characteristics, and the gastronomic potential of the ingredients used.

To evaluate the gastronomic products, hedonic sensory tests were administered to consumers using a five-point Likert scale. Participants assessed attributes such as appearance, aroma, flavor, texture, and overall acceptance of the preparations. Simultaneously, gastronomy specialists conducted a technical evaluation of the dishes based on criteria including innovation, presentation, cultural authenticity, and commercialization potential.

### 4. DATA ANALYSIS AND STATISTICAL PROCEDURES

The collected data were processed and analyzed using descriptive and inferential statistical techniques. Initially, the information was cleaned, coded, and organized into a digital database. Subsequently, absolute frequencies, relative frequencies, percentages, measures of central tendency (arithmetic mean), and measures of dispersion (standard deviation) were calculated to describe the behavior of the evaluated variables.

To determine the acceptance level of the gastronomic preparations, mean scores were calculated for each sensory attribute as well as for overall acceptance. In addition, contingency tables and graphical representations were employed to facilitate the interpretation of the results.

Given the relatively small size of the expert panel ( $n = 15$ ), descriptive analysis of their evaluations was prioritized, complemented by indicators of agreement and consensus among evaluators. For the consumer group, mean comparisons across the evaluated attributes and percentage-based acceptance analyses were conducted to identify the sensory characteristics that most strongly influenced consumer preferences.

Statistical processing was performed using Microsoft Excel and specialized statistical software, ensuring the reliability, consistency, and traceability of the data obtained throughout the study.

3. Results of the Andean products of Cajamarca that have the greatest gastronomic potential to be revalued.

Among the main Andean food products of the Cajamarca region, which possess high nutritional

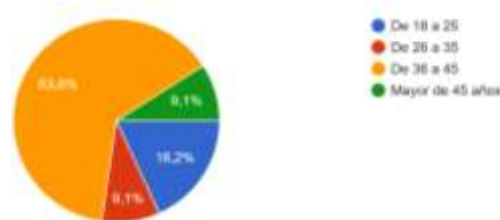
value and greater gastronomic potential for enhancement, are the following:

native potatoes, oca, olluco, mashua, maca, yacón, arracacha, quinoa, kiwicha (amaranth), cañihua, purple corn, giant white corn (chala corn/corn for mote), Andean wheat, barley, tarwi (chocho), Andean beans, broad beans, Andean lentils, aguaymanto (goldenberry), cherimoya, poro poro (passion fruit), capulí (capul), elderberries, highland apples, muña (aromatic herb), lemon verbena, Andean oregano, Andean cilantro (local herb), rue, guinea pig meat, and charqui (dried meat).

4. Main modern culinary techniques to highlight the sensory and nutritional properties of Andean products from Cajamarca.

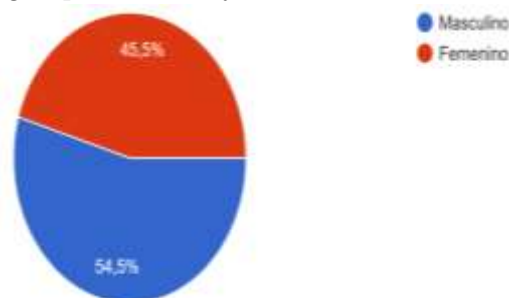
To obtain these results, a questionnaire was administered to 15 gastronomy specialists, including professors from the Alfatec Institute and professors from the National University of Cajamarca's School of Tourism and Hospitality. Given the limited number of gastronomy specialists, the questionnaire was also sent to the food and beverage managers of eight restaurants in Cajamarca. The following results were obtained:

#### I. General Data



*Figure 1.: Age of respondents*

It was observed that the majority of respondents, equivalent to 63.6%, were between 35 and 45 years old, reflecting greater participation from adults with some experience. 18.2% were in the 18-25 age group, while only 9.1% were in the 26-35 and over-45 age ranges, demonstrating a lower representation of these groups in the study.

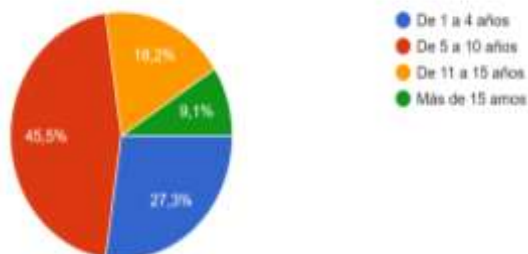


*Figure 2. Gender of respondents.*

Of the total surveyed population, 54.5% were male, while the remaining 45.5% were female.

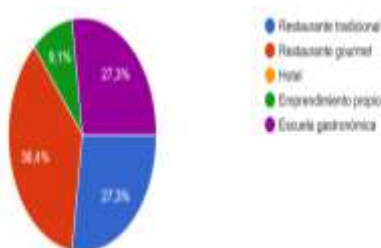
Figure 3.

Years of professional kitchen experience among the study population.



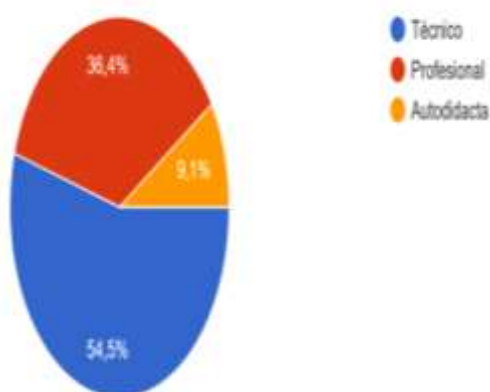
According to the questionnaire results, 45.5% have between 5 and 10 years of professional experience in the culinary field, 27.3% reported being involved in the food service sector for 1 to 4 years, 18.2% stated they have been working in the culinary field for an average of 11 to 15 years, and only 9.1% claimed to have knowledge of [the relevant field].

Figure 4. Type of establishment where they work.



According to the results obtained by culinary specialists, 36.4% reported working in a gourmet restaurant, 27.3% work in traditional establishments and culinary schools (both private institutions and the National University of Cajamarca), and 9.1% have their own business.

Figure 5. Level of Culinary Training.



According to the results, 54.4% reported having a

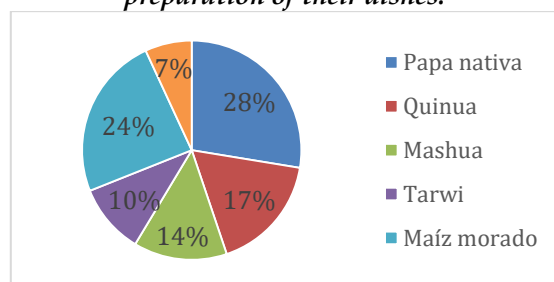
technical culinary degree, 36.4% indicated having a university-level culinary degree, and only 9.1% reported having acquired culinary knowledge through work experience.

Figure 6. Frequency with which Andean products from Cajamarca are used in the preparation of dishes.



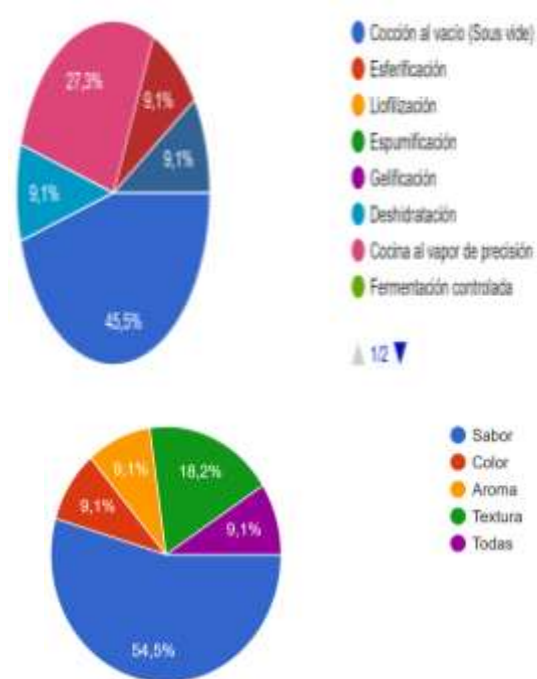
The results show that 45.5% of culinary specialists always use Andean products from Cajamarca when preparing dishes; 36.4% stated they occasionally use raw materials and ingredients from the region, and 18.2% reported doing so frequently. Furthermore, they added that the use of these products is always dependent on the type of dish served in the establishments where they work

Figure 7: According to the respondents, the Cajamarca products they use most in the preparation of their dishes.

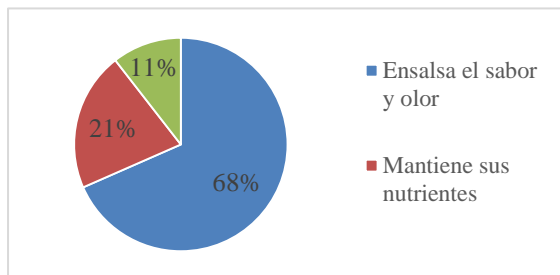


According to the respondents, the most frequently used ingredients from Cajamarca in their dishes, drinks, desserts, and/or soups are native potatoes (28%) and purple corn (23%), while quinoa (17%) and mashua (14%) are commonly used. Finally, only tarwi (10%) and aguaymanto (7%) are frequently used, usually in appetizers and/or desserts. It should be noted that in addition to these native foods, other ingredients are also used; however, these are the most common ones in the respondents' cooking.

Figure 8. From the previous question. The main sensory properties of food.



According to the study population, 54.4% stated that they usually use native products based on the flavor they impart in their dishes; 18.2% stated that, among the main sensory properties of food, the most valued aspect for them is the texture of native products; and finally, 9.1% pay close attention to



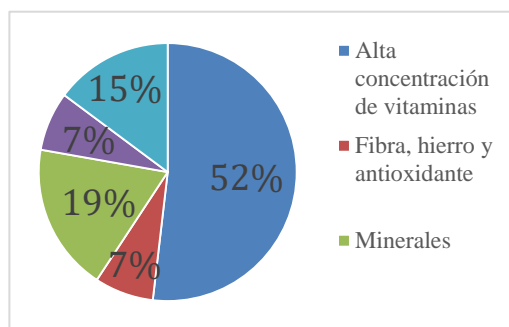
color, smell, and aroma.

Figure 9. According to the respondents, the nutritional properties of Cajamarca products are:

Of the study population, 52% reported using quinoa, mashua, aguaymanto, native potatoes, purple corn, etc., in their dishes due to their high vitamin content; 19% reported that these products are rich in minerals, 15% in omega-3 fatty acids, and 7% stated that these foods have high levels of protein, fiber, iron, and antioxidants.

Figure 10.

Modern culinary techniques most frequently used by gastronomy specialists.



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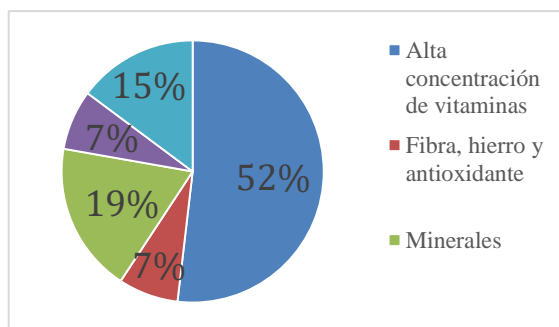
Figure 10.: Modern culinary techniques most frequently used by gastronomy specialists.

45.5% mentioned that the main modern culinary techniques most frequently used by gastronomy specialists are sous vide cooking, 27.3% use precision steam cooking, and only 9.1% use spherification and dehydration.

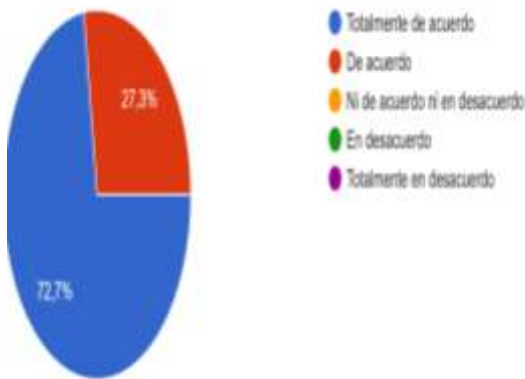
Figure 11: According to the respondents, the benefits of using these techniques to enhance the sensory properties of Andean products.

According to the culinary experts surveyed, 68% stated that the benefits of using techniques to enhance the sensory properties of Andean products include improved flavor and aroma; 21% stated that these techniques help maintain their nutrient content; and only 11% indicated that these techniques allow for easy and quick combinations with other foods.

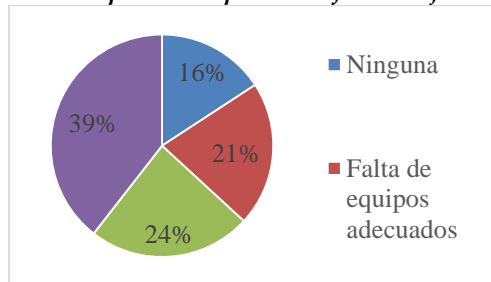
Figure 12.



**Limitations and/or difficulties when applying**

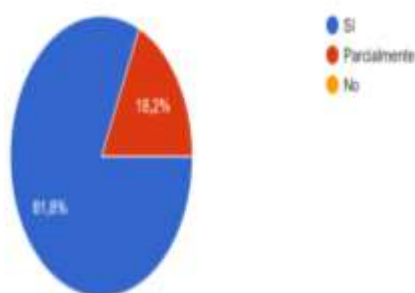


**techniques with products from Cajamarca.**



Among the limitations and/or difficulties encountered when applying techniques with products from Cajamarca, 39% mentioned adapting textures and flavors in some foods and/or preparations. 24% and 21% stated that their main limitations lie in the lack of trained personnel and/or personnel unfamiliar with these techniques, and the lack of appropriate equipment, utensils, and tools, respectively. Only 16% reported having no difficulties or limitations when applying these techniques.

**Figure 13: Adaptation of products from Cajamarca to modern techniques.**



According to culinary specialists, 81.8% stated that adapting Cajamarca products to modern techniques is easy, usually due to their existing knowledge of these techniques. This group included technical and professional gastronomic specialists. Only 18.2% found it partially easy, indicating they had encountered some difficulties when applying

these techniques, primarily due to a lack of familiarity with them.

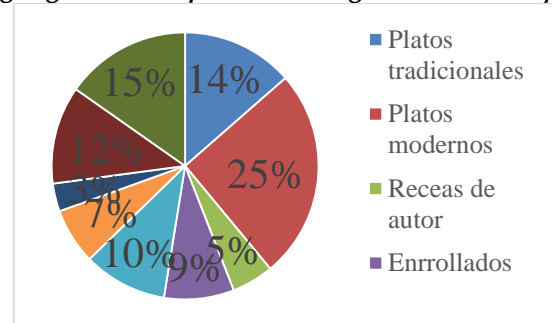
**Figure 14.**

**The application of modern techniques can enhance the value of Andean products from Cajamarca.**

72.7% of respondents strongly agreed when asked if the application of modern techniques could enhance the value of Andean products from Cajamarca, while 27.3% stated they agreed.

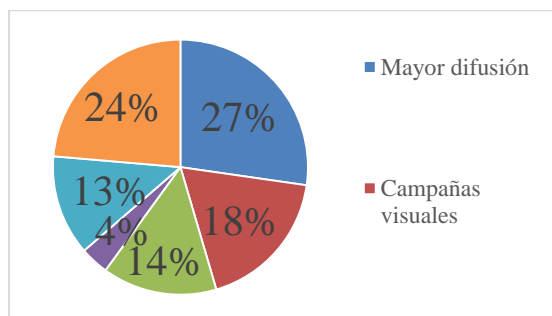
This is also evident in the results of the previous questions, which indicate that native foods offer numerous benefits, including high content of vitamins, minerals, proteins, antioxidants, and other nutrients. Furthermore, the results indicate that their preparation is generally relatively simple.

**Figure 15. Dishes that could be developed to highlight Andean products using modern techniques.**



25% of respondents stated they could prepare modern dishes to highlight Andean products using modern techniques; 14% and 15% mentioned preparing the author's recipes and steamed trout, respectively; 12% and 10% mentioned salads and snacks. Finally, smaller percentages mentioned wraps, cakes, soups, traditional dishes, etc. It should be noted that when discussing the application of modern techniques, there are countless dishes that could be prepared using these techniques; it all depends on the type of restaurant, the type of clientele, and, above all, the choices diners make when faced with different options.

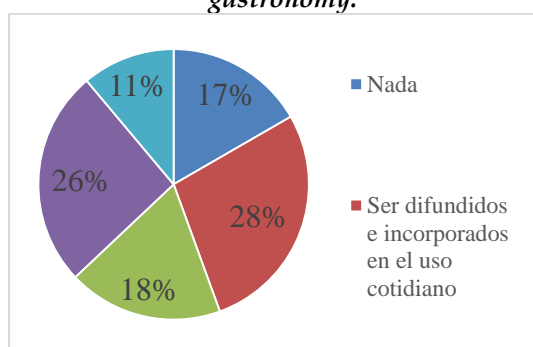
**Figure 16: Recommended actions to promote the use of techniques with Andean products in local gastronomy.**



27% and 24% recommend that promoting the use of Andean products in local cuisine requires greater outreach and training for culinary teachers and students; 18% and 14% indicated that visual campaigns and more research and/or innovation of these modern techniques should be developed, respectively. Finally, only 13% and 4% indicated that it is necessary to adapt to modern culinary trends and conduct market research to determine the level of acceptance of dishes, desserts, and/or beverages prepared using modern techniques.

Figure 17.

*What Andean products from Cajamarca need to achieve a more prominent place in modern gastronomy.*



According to the study population, 28% and 26% mentioned that what Andean products from Cajamarca need to achieve a more prominent place in modern gastronomy is greater dissemination and incorporation into daily life, and organic production, respectively; 18% indicated that research and revaluation are necessary, 17% felt nothing was needed, and only 11% stated that a sound philosophy and approach from the chef were essential.

5. Propose innovative preparations that integrate Andean products and modern techniques.

a) Cajamarca Trout, Vacuum-Packed with Tarwi Crust and Eucalyptus Foam

**Techniques Used:**

Sous-vide cooking  
Aeration (foaming)

**Ingredients:**

Fresh trout fillet: 180 g

Toasted and ground tarwi: 40 g

Egg white: 1

Olive oil: 20 ml

Maras salt: to taste

Eucalyptus leaves: 3

Soy lecithin: 3 g

Fish stock: 50 ml

**Procedure:**

Season the trout with salt and olive oil. Vacuum-seal.

- Cook at 60°C for 30 minutes in a water bath (sous-vide). Mix the ground tarwi with egg white and coat the surface of the fillet. Bake for 5 minutes to form a crust.
- Prepare the foam: infuse eucalyptus leaves in the hot fish stock, add lecithin, and whisk until frothy.
- Serve the trout on a bed of native potato purée with the eucalyptus foam.

Nutritional value: High in protein and omega-3 fatty acids; tarwi provides calcium, iron, and dietary fiber.

b) Tricolor Quinoa with Andean Vegetables and Mashua Foam

**Techniques used:**

- Sous-vide cooking
- Foaming

**Ingredients:**

- Tricolor quinoa: 100 g
- Mashua: 80 g
- Purple carrot: 50 g
- Olluco: 50 g
- Vegetable stock: 150 ml
- Heavy cream: 40 ml
- Soy lecithin: 3 g
- Salt and pepper to taste

**Procedure:**

- Cook the quinoa sous-vide in vegetable stock at 90°C for 25 minutes.
- Wash and chop the Andean vegetables, then briefly steam them.
- Blend the cooked mashua with heavy cream and hot vegetable stock; strain and add lecithin to create a stable foam. Serve the quinoa in a mold, garnish with the vegetables, and top with mashua foam.

**Nutritional value:**

Quinoa provides complete plant-based protein; the vegetables provide fiber, antioxidants, and vitamins B and C.

c) Native Potato Ravioli with Cajamarca Cheese Filling and Purple Corn Reduction

**Techniques Used:**

- Handmade Pasta

**Partial Reduction and Gelation****Ingredients:**

- 200 g Native Purple Potato
- 100 g Wheat Flour
- Egg Yolks
- 80 g Cajamarca Fresh Cheese
- 1 Ear of Purple Corn
- 20 g Brown Sugar
- 2 g Unflavored Gelatin
- Salt and Olive Oil: as needed

**Procedure:**

- Cook the potatoes, mash them, and mix with flour and egg yolks until a dough forms.
- Roll out the dough and cut into discs; fill with cheese and seal the ravioli.
- Cook in salted water for 3 minutes. Prepare the reduction: boil the purple corn extract with sugar until thickened; add gelatin for shine.
- Serve the ravioli with the purple corn sauce and huacatay leaves.

**Nutritional value:**

Source of complex carbohydrates, calcium, and natural antioxidants from purple corn.

d) Confit Guinea Pig (Sous Vide) with Mashua Purée and Oca Chips

**Techniques Used:**

- Confit
- Sous Vide Cooking
- Dehydration

**Ingredients:**

- Guinea Pig Leg: 200 g
- Pork Fat or Vegetable Shortening: 150 ml
- Garlic, Rosemary, and Salt: to taste
- Mashua: 100 g
- Evaporated Milk: 40 ml
- Oca: 50 g

**Procedure:**

- Season the guinea pig and seal it with fat and herbs.
- Cook sous vide at 75°C for 8 hours.
- Brown the confit before serving.
- Prepare the mashua purée with milk, salt, and butter. Slice the oca and dehydrate in an oven at 90°C for 1 hour to make crispy chips.

**Nutritional value:**

Lean protein, low fat content, and high in iron; mashua provides natural anti-inflammatory compounds.

e) "Enchanted Lagoon" Dessert: Cape Gooseberry Gelatin and Lemon Verbena Foam

**Techniques Used:**

- Gelation
- Aeration (Foaming)

**Ingredients:**

- Cape Gooseberry Pulp: 150 g
- Sugar: 50 g
- Unflavored Gelatin: 5 g
- Lemon Verbena Infusion: 100 ml
- Soy Lecithin: 2 g
- Honey or Cane Syrup: 10 ml

**Procedure:**

- Heat the cape gooseberry pulp with sugar, stir in the hydrated gelatin, and pour into molds; refrigerate.
- Prepare the foam: add lecithin to the warm lemon verbena infusion and whisk until foamy.
- Serve the gelatin decorated with the aromatic foam and a drizzle of honey.

**Nutritional value:**

Provides vitamin C, antioxidants, and digestive properties; low in fat.

f) Liquid lupin (tarwi) bonbon with native cacao coating Techniques

Reverse spherification and chocolate tempering.

Description: Liquid sphere of encapsulated tarwi cream, coated with Andean cacao. Ingredients (for 12 units)

**For the tarwi liquid filling:**

- Peeled and cooked tarwi (lupin): 120 g
- Evaporated milk: 80 ml
- Honey or agave syrup: 20 ml
- Natural vanilla extract: 3 drops
- Sea salt: a pinch
- Calcium gluconolactate (for reverse spherification): 3 g

**For the spherification bath:**

- Mineral water: 500 ml
- Sodium alginate: 2 g
- For the coating:
  - 70% native cacao: 150 g
  - Cocoa butter: 30 g

**Optional decoration:**

- Toasted quinoa powder
- Dehydrated mashua petals or edible flowers

**Preparation****Making the Tarwi Liquid Filling**

- Blend the cooked tarwi with the evaporated milk, honey, vanilla, and salt until you obtain a smooth, homogeneous cream.
- Add the calcium gluconolactate and mix well.
- Refrigerate for 30 minutes to stabilize the texture before spherifying.

**Preparing the Alginate Bath**

- Dissolve the sodium alginate in mineral water (use a blender to eliminate lumps).

- Let it rest for 1 hour to allow any bubbles to dissipate and the alginate to fully hydrate.

#### Reverse Spherification

- Using a measuring spoon or pipette, drop small portions of the tarwi filling into the alginate bath.
- Let the spheres rest for 1 minute to allow a gelatinous film to form around the liquid filling. Remove the spheres with a slotted spoon and rinse them in cold water.

#### Dry them carefully on absorbent paper.

- Tempering the Chocolate
- Melt the native cacao and cocoa butter at 45°C.
- Cool to 27°C, stirring constantly, then reheat to 31°C to stabilize the crystals (tempering).
- Dip each tarwi sphere into the tempered chocolate and place them on parchment paper until solidified.

#### Presentation

- Decorate with a sprinkle of toasted quinoa powder or edible dried petals.
  - Serve at room temperature (18–20°C).
  - When bitten, the chocolate releases the liquid tarwi center, creating a unique sensory experience.
7. Quinoa Risotto with Porcón Mushrooms and Huacatay Oil

#### Techniques

- Controlled Cooking
- Emulsification

Description: Quinoa slowly cooked like risotto with a vegetable and wild mushroom base, finished with a huacatay emulsion.

#### Ingredients (serves 4)

- Risotto Base
- White or tricolor quinoa: 250 g
- Natural vegetable stock: 700 ml
- Finely chopped white onion: 1 small
- Ground garlic: 1 teaspoon
- Dry white wine: 60 ml
- Grated Cajamarca cheese: 80 g
- Unsalted butter: 40 g
- Extra virgin olive oil: 30 ml
- Salt and pepper to taste
- Sautéed mushrooms
- Fresh Porcón mushrooms (wild mushrooms or local button mushrooms): 150 g
- Olive oil: 10 ml
- Chopped garlic: 1 clove
- Salt, pepper, and chopped fresh parsley: to taste
- Huacatay oil (green emulsion)
- Fresh huacatay leaves: 30 g
- □ □ Neutral vegetable oil: 100 ml

- Fine salt: 1 pinch
- Hot water: 20 ml (for blanching leaves)

#### Preparation

##### Preparing the huacatay oil

- Blanch the huacatay leaves in hot water for 30 seconds and cool in ice water.
- Drain well and blend with the vegetable oil and a pinch of salt until you obtain a deep green emulsion.
- Strain and set aside for plating.

##### Cooking the quinoa risotto-style

- Wash the quinoa very well and drain to remove the saponins.
- In a large pan, sauté the onion and garlic in butter and olive oil until translucent.
- Add the quinoa and sauté for 2 minutes to seal the grains.
- Add the white wine and let it reduce until the alcohol evaporates.
- Gradually add the hot vegetable stock (one ladleful at a time), stirring constantly until the quinoa is cooked and creamy (approximately 20–25 minutes).
- Season with salt and pepper to taste.
- Mushroom Sauté
- In a separate pan, heat olive oil and sauté the minced garlic until golden.
- Add the sliced mushrooms and sauté until golden brown and fragrant.
- Season with salt, pepper, and chopped parsley.
- Set aside some for garnish and stir the rest into the risotto.

##### Finishing the Risotto

- When the quinoa has a creamy texture, stir in the sautéed mushrooms and the grated Cajamarca cheese.
- Gently mix to emulsify and achieve a glossy finish.
- Let it rest for 2 minutes before serving.

#### Presentation

- Serve the quinoa risotto in a deep bowl.
- Drizzle or drizzle huacatay oil around the edge.
- Add some sautéed mushrooms on top and a fresh huacatay leaf as a finishing touch.
- Nutritional value: protein, iron, and essential fatty acids.

5. Results of the target audience's acceptance of gastronomic offerings prepared with Andean products using cutting-edge techniques.

To obtain these results, three culinary options were prepared, incorporating modern cooking techniques. These dishes were tasted at the La Noria country restaurant in the town of Otuzco, Baños del

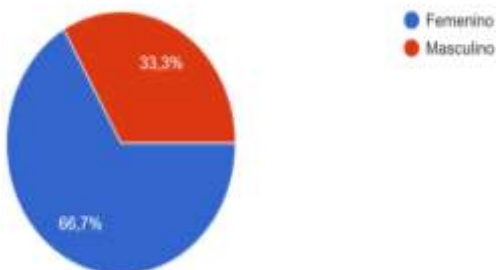
Inca district, Cajamarca province and department.

**I. General Data**

*Figure 18. Age of respondents.*

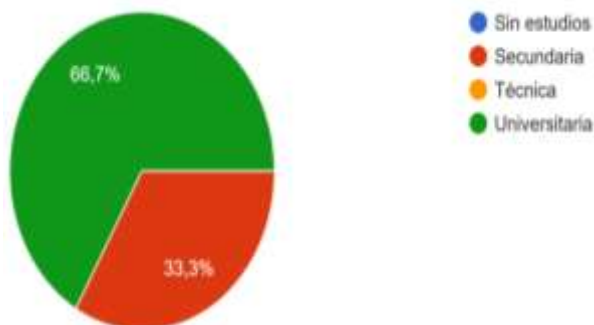
It was observed that the majority of respondents, equivalent to 66.7%, were between 18 and 25 years old, reflecting greater participation from young people who dared to try these dishes; 33.3% were between 26 and 35 years old.

*Figure 19. Gender of Respondents.*



Of the total population surveyed, 66.7% were female, while the remaining 33.3% were male.

*Figure 20: Educational level of respondents.*



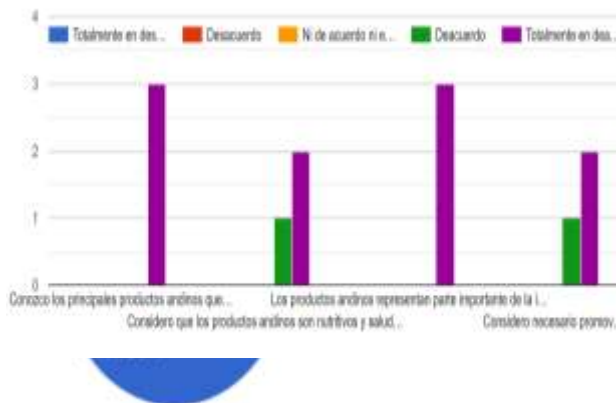
According to the questionnaire results, 66.7% of respondents had university degrees in various fields, while 33.3% reported having only a secondary education.

*Figure 21. Frequency of Andean Food Consumption.*



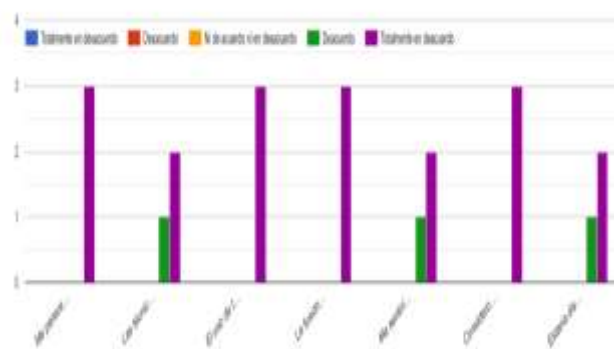
According to the results of the stew evaluators, 66.7% stated that they consume Andean food frequently, while 33.3% mentioned doing so very frequently.

*Figure 22: Level of knowledge and appreciation of Andean products.*



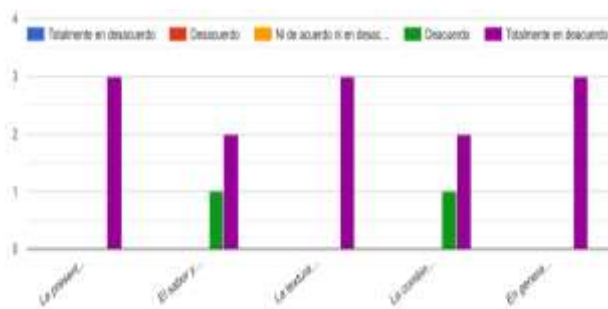
According to the results, 30% of respondents stated they were familiar with the main Andean products, especially those they consume frequently. They also indicated that these products are an important part of their cultural identity. 20% considered Andean products to be very nutritious and healthy, adding that it is necessary to promote their consumption through modern gastronomy. Finally, 10% asserted that Andean products would be better received if they were combined effectively.

*Figure 23. Acceptance of gastronomic proposals prepared with cutting-edge techniques.*



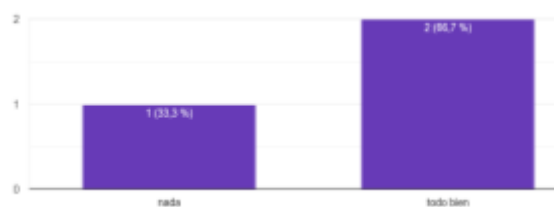
The results show that 95% of the samplers who evaluated the dishes indicated they fully agreed with the culinary proposals prepared using cutting-edge techniques, while only 5% expressed disagreement. Therefore, it is presumed that these culinary options could be fully integrated into the gastronomic offerings and would be highly acceptable to the target audience.

*Figure 24. Sensory Experience and Satisfaction of Respondents.*



According to the respondents, the sensory experience and satisfaction they obtained when tasting the dishes was rated as completely satisfactory by 98%. Furthermore, they highly valued the presentation of the dish, its flavor and texture, the combination of ingredients, among other aspects; 2% stated they agreed, valuing flavor and texture more.

**Figure 25: Aspects that could be improved in the gastronomic proposals evaluated by the respondents.**



According to the opinions expressed by those surveyed who evaluated the tastings, they stated that there was nothing that could be improved in these proposals, as they asserted that everything was.

## 5. CONCLUSIONS

According to the opinion of 15 gastronomy specialists, 63.6% are between 35 and 45 years old, of which 54.5% were male, in addition, 45.5% have between 5 and 10 years of professional experience in the cooking field, 36.4% stated that they work in a restaurant that sells gourmet food, 54.4% stated that they have a technical gastronomic profession, 45.5% of the cooking specialists always use Andean products from Cajamarca for the preparation of dishes; The ingredients most frequently used by Cajamarca residents in the preparation of their dishes, drinks, desserts, and/or soups are native potatoes (28%) and purple corn (23%). 54.4% stated that they usually use native products based on the flavor they impart to their dishes. 52% assume they use quinoa, mashua, aguaymanto, native potatoes, purple corn, etc., in their dishes due to their high vitamin content. 45.5% mention that the main modern culinary techniques most frequently used by gastronomy specialists are sous vide cooking, of which 68% affirm that the benefits of using these

techniques to enhance the sensory properties of Andean products include improved flavor and aroma. Finally, 72.7% of respondents strongly agreed when asked if the application of modern techniques can enhance the value of Andean products from Cajamarca.

The innovative preparations that integrate Andean products and modern techniques, proposed by the researchers, include: Cajamarca trout cooked sous vide with a tarwi crust and eucalyptus foam, using the following techniques: sous vide cooking and aeration (foaming); tricolor quinoa with Andean vegetables cooked sous vide and mashua foam, using the following techniques: sous vide cooking and foaming; native potato ravioli filled with Cajamarca cheese and purple corn reduction, using the following techniques: reduction and partial gelation; and sous vide confit guinea pig with mashua purée and oca chips, using the following techniques: confit, sous vide cooking, and dehydration. "Enchanted Lagoon" Dessert: Cape gooseberry gelatin with lemon verbena foam, using gelation and aeration (foaming) techniques; Liquid lupin (tarwi) bonbon with native cacao coating, using reverse spherification and chocolate tempering techniques; Quinoa risotto with Porcón mushrooms and huacatá oil, using controlled cooking and emulsification techniques.

After tasting several gastronomic options prepared with modern techniques, it was determined that the majority of respondents (66.7%) were between 18 and 25 years old. Of these, 66.7% were women with university degrees who stated that they frequently consume Andean food. Furthermore, 30% indicated they were familiar with the main Andean products produced in Cajamarca. When asked to evaluate the test dishes, 95% of the evaluators mentioned that they fully agreed with the gastronomic proposals prepared with cutting-edge techniques, also indicating that their sensory and satisfaction experience was excellent.

### 5.1. Recommendations

It is recommended to promote strategic alliances between Andean producer associations in Cajamarca and gastronomic establishments (restaurants, culinary schools, hotels) to guarantee a continuous, sustainable, and high-quality supply of native ingredients such as native potatoes, quinoa, mashua, tarwi, aguaymanto, purple corn, and others. This will boost the local economy and encourage the responsible use of native products.

Given that the surveyed specialists recognize the value of modern techniques such as sous vide,

spherification, gelification, and aeration, it is recommended that higher education institutions and technical centers specializing in gastronomy in the region integrate modules on molecular gastronomy and precision cooking into their curricula. This will contribute to the professionalization of the sector and the creation of innovative gastronomic proposals that enhance the value of Andean products.

Based on successful experimental preparations (such as sous vide confit guinea pig, native potato ravioli, and quinoa risotto), it is recommended that a technical recipe book be developed to document the

combinations of ingredients, processes, and modern techniques applied. This material would serve as an academic and promotional reference to boost Cajamarca's culinary identity both nationally and internationally.

To disseminate and position the gastronomic proposals derived from this research, it is suggested that regional culinary events be organized to encourage creativity, the use of native products, and the application of modern techniques, generating a positive tourist and cultural impact for the region.

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