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Rabbit In, Rabbit Out: The Consumers' Acceptability of Rabbit as an Alternative Meat

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ABSTRACTS

The nutritional content of meat becomes an increasingly important factor in assessing meat quality and consumer acceptance. Rabbit meat was extremely valued for its nutritional and dietary contents. Rabbits have a lot to offer when it comes to health and long-term food. Thus, this study intended to determine the acceptability of rabbits as alternative meat by consumers coming from different households in Tacurong, the Philippines. A Descriptive Survey Research Method was employed and the survey questionnaires were distributed through Google forms. It was transmitted to 392 meat consumers that were randomly chosen. Likert scale and One-way Analysis of Variance (ANOVA) were used to evaluate consumer acceptance. The results showed that the consumers accepted and agreed on the acceptability of rabbits as alternative meat in terms of their healthiness, taste, and price. Hence, the preferred purchasing would be cooked, large farms as a preferred purchasing supplier, and supermarkets as a preferred purchasing location. Chicken meat is the most frequent meat that consumers consume, between one and three days per month, and the common hindering factor of rabbit meat consumption is its lack of availability in the market.

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1. INTRODUCTION

Consumers are concerned with meat's healthiness, pleasurable quality, taste, ease of preparation, and cost (Michel *et al*., 2021). Rabbit appeals to a wide range of ethnic groups because it is less religiously restricted than pork or beef (Malek & Umberger, 2021). Some people who eat meat may be apprehensive about eating an animal that is kept as a pet. It was highly appreciated for its high nutritional contents, including reduced fats, saturated fatty acids, and cholesterol content than some other meats.

However, eating rabbits is still considered taboo in the Philippines (Tsuji, 2021), but advocates are pushing to make rabbit meat a vital part of Filipino tables. We were motivated to determine whether meat customers will embrace rabbit as alternative meat because rabbit meat is not yet known for its health benefits specifically in our locality. This will let meat consumers know that compared to other meats; rabbits have healthier nutrients than a human may acquire.

2. METHODS

A descriptive survey research method was employed to support this study. This research design entails gathering data about current conditions or situations about consumers' acceptance of rabbit meat for description and analysis. Thus, this research method includes proper analysis, interpretation, comparisons, and relationship identification of data gathered. (Aggarwal, 2008).

The respondents of this study were chosen based on the criteria: (i) a Filipino citizen; (ii) between the ages of 13 and above; (iii) a resident of Tacurong City, Sultan Kudarat; (iv) a regular meat consumer; and (v) willing to participate and answer the prepared questions for the study.

We utilized a survey questionnaire to determine consumers' acceptance of rabbits as alternative meat. To gather the appropriate and important data needed in the study, a survey questionnaire was adapted and modified. It was distributed through Google forms, due to the pandemic's restriction on social interactions. The study used a Likert scale in the questionnaires to assess the level of the consumers' acceptability of rabbit meat in terms of healthiness, taste, and price. The scale as it follows: 1.00 – 1.79, strongly disagree; 1.80 – 2.59, disagree; 2.60 – 3.39, undecided; 3.40 – 4.19, agree; 4.20 – 5.00, strongly agree.

Simple random sampling was employed, wherein; each member of the population has an actual possibility of being chosen as a respondent in the study. Tacurong City, Sultan Kudarat, has an estimated population of 98,316 people and 19,559 households. Slovin's formula was used, to figure out the sample size in the given estimated number of households. It was calculated that a total of 392 respondents were chosen through a random number method to be the study's respondents.

Letters of communication were sent initially to the Adviser and the Chairman of the Laboratory High School for permission to conduct the study. The respondents of the study were identified using simple random sampling. We prepared the adapted and modified survey questionnaire. Google Forms was used to gather data and provide answers to the study's questions. The survey questionnaire was drifted to 392 respondents through Google Forms. The data gathered were tailed, tabulated, and verified for accuracy. It was analyzed and presented in tables for the interpretation of the results. Finally, we employed a one-way analysis of variance (ANOVA) and Post-Hoc Test and presented their final output.

We used the One-way Analysis of Variance (ANOVA) to determine the significant difference in the acceptability of rabbit meat in terms of healthiness, taste, and price. see if

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there were statistically significant differences in the computed Mean differences of three or more independent (unrelated) groups. The Post-Hoc test was also utilized to determine which group means differed from one another and to investigate differences between multiple groups' means.

3. RESULTS AND DISCUSSION

Table 1 displays the information collected and analyzed based on consumers' level of acceptability of rabbits as alternative meat, in terms of their healthiness, and taste. and price based on a 5-point Likert scale, (1.00-1.79 strongly disagree, 1.80-2.59 disagree, 2.60-3.39 undecided, 3.40-4.19 agree, 4.20-5.00 strongly agree). The findings revealed that the total grand mean is 3.678. This means that the consumers agree on the acceptability of rabbits as alternative meat in terms of healthiness, taste, and price.

Table 1. The level of acceptability of rabbit as an alternative meat in terms of healthiness, taste, and price.

Parameters	n	Mean	Verbal Description
Do you accept the rabbit as alternative meat in terms of its healthiness?	392	3.860	Agree
Do you accept the rabbit as alternative meat in terms of its taste?	392	3.727	Agree
Do you accept the rabbit as alternative meat in terms of its price?	392	3.446	Agree
Grand Mean	392	3.678	Agree

Table 2 illustrates the consumers' perceptions of rabbit meat characteristics, in terms of their preferred type of meat purchase. Based on the findings, the type of meat purchased that received the highest percentage is cooked, which has a total of 43.4%. While semi-cooked got the lowest, having a percentage of 2%. Therefore, the gathered data indicated that the majority of the respondents preferred purchasing cooked rabbit meat. Where people tend to live and work in cities, eating most meals away from home rabbit meat consumption, can only be increased by including rabbit meat as a component in processed food products such as ready meals, ready-to-cook, and cooked rabbit meat.

Table 2. The consumers' perceptions of rabbit meat characteristics, in terms of preferred type of purchasing meat.

Type of Purchasing Meat	Frequency (f)	Percentage (%)
Fresh	44	11.2%
Frozen	33	8.4%
Semi-cooked	8	2%
Cooked	170	43.4%
In the form of meat products (sausages, salami, ham, pastrami, etc.)	25	6.4%
None, because I do not eat consume/ consume it rarely	99	25.3%
None, because I get/grow my rabbit	13	3.3%
Total	**392**	**100%**

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Table 3 shows the consumers' perceptions of rabbit meat characteristics, in terms of their preferred type of meat supplier. The one that got the highest percentage was large farms, with a percentage of 45.2%. On the other hand, the least preferred type of meat supplier is wilderness, garnering only a total of 1.5%.

As a result, Tacurong City meat consumers' households favored large farms as the type supplier of rabbit meat. Concerning this, Mutsami and Karl (2020) stated that farm-raised rabbits are more sustainable since they can be raised on a plant and grain-free diet. Rabbits, with proper care, can produce more than 40 kits per year, allowing farmers to easily sell their produce.

Table 3. The consumers' perceptions of rabbit meat characteristics, in terms of preferred type of supplier.

Type of Supplier	Frequency (f)	Percentage (%)
Small Producers	52	13.3%
Large Farms	177	45.2%
From Wilderness	6	1.5%
Indifferent	7	1.8%
In the form of meat products (sausages, salami, ham, pastrami, etc.)	41	10.5%
None, because I do not eat consume/ consume it rarely	109	27.8%
Total	**392**	**100%**

Table 4 displays the consumers' perceptions of rabbit meat characteristics, in terms of their preferred type of purchasing location. According to the results, supermarkets got the highest percentage out of all the options, with a percentage of 38.3%. The least preferred purchasing location only got 0.5% which is hunting.

According to the findings, the majority of respondents favored supermarkets as their preferred place to buy rabbit meat. The results of Petracci and Cavani (2013) correspond to the research findings that the rabbit can be easily raised and commendable responding to bio-economic concepts that encourage resource efficiency and the conversion of resources as high-valued food in the market.

Table 4. The consumers' perceptions of rabbit meat characteristics, in terms of preferred type of purchasing location.

Type of Purchasing Location	Frequency (f)	Percentage (%)
Supermarket	150	38.3%
Specialized Shops	22	5.6%
Peasant Market	10	2.6%
Directly from Farms	34	8.7%
Hunting	2	0.5%
Self-production	18	4.6%
Restaurants	56	14.3%
None, because I do not eat consume/ consume it rarely	100	25.5%
Total	**392**	**100%**

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Table 5 depicts how seldom consumers consume rabbit meat. The majority of the respondents consumed rabbit meat less than 1 day per month, having a percentage of 46.7%. Respondents who consume rabbit meat between 5 and 7 days per week garnered the lowest percentage, 0.8%.

As a result, Tacurong City meat consumers' households have consumed rabbit meat less than 1 day per month. This relates to the result of Espiritu *et al*. (2022), which stated that the most significant hindrance to widely spread rabbit production is because of its taste, which is not yet well known although it has been part of many Filipino households.

Table 5. How seldom the consumers consume rabbit meat.

How Seldom	Frequency (f)	Percentage (%)
Never (minimum level)	181	46.2%
Less than 1 day per month	183	46.7%
Between 1 and 3 days per month	20	5.1%
Between 1 and 4 days per week	5	1.3%
Between 5 and 7 days per week (maximum level)	3	0.8%
Total	**392**	**100%**

Table 6 shows how seldom consumers consume chicken meat. The percentage of respondents who consume chicken meat between 1 and 3 days per month is 44.1%, being the highest among the others. On the contrary, the lowest percentage garnered is 0.5%, which stated the number of respondents who never consume chicken meat.

According to the findings, the majority of respondents consumed chicken meat between 1 and 3 days per month. It goes in line with the results of Muka *et al*. (2021) that chicken meat is by far the most commonly consumed poultry product worldwide. It is also the preferred meat in fast food restaurants, which is a rapidly growing industry in the Philippines.

Table 6. How seldom the consumers consume chicken meat.

How Seldom	Frequency (f)	Percentage (%)
Never (minimum level)	2	0.5%
Less than 1 day per month	20	5.1%
Between 1 and 3 days per month	173	44.1%
Between 1 and 4 days per week	146	37.2%
Between 5 and 7 days per week (maximum level)	51	13%
Total	**392**	**100%**

Table 7 displays how seldom consumers consume beef meat. A significant number of respondents consume beef meat between 1 and 3 days per month 42.6%. While, the percentage of respondents who never consume beef meat is 1%, which is the lowest percentage obtained.

As a result, Tacurong City meat consumers' households consumed beef meat between 1 and 3 days per month. It corresponds to the WebMD Editorial Contributors (2020), which indicated that consumers buy and eat beef regularly. However, it should be consumed in moderation because it is high in cholesterol and saturated fats, which can cause fatty deposits to form in the blood.

Table 8 shows the common hindering factor of consuming rabbit meat. The highest percentage which was chosen by the majority of respondents is 46.4%, which is the option

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"The rabbit meat has a lack of availability on the market" as a hindering factor. The last selected option was "I am disgusted by the idea of eating rabbit meat", having only a percentage of 8.2%.

As a result, Tacurong City meat consumers' households concluded that the common hindering factor in rabbit meat consumption is the lack of its availability on the markets. Buitrago-Vera *et al*. (2016), stated that rabbit meat is not ordinary meat that is commonly found in grocery stores and is not always available in the market.

Table 7. How seldom the consumers consume beef meat.

How Seldom	Frequency (f)	Percentage (%)
Never (minimum level)	4	1%
Less than 1 day per month	107	27.3%
Between 1 and 3 days per month	167	42.6%
Between 1 and 4 days per week	84	21.4%
Between 5 and 7 days per week (maximum level)	30	7.7%
Total	**392**	**100%**

Table 8. The common hindering factor of rabbit meat consumption.

Common Hindering Factors	Frequency (f)	Percentage (%)
Rabbit meat has a high price	48	12.2%
I am disgusted by the idea of eating rabbit meat	38	8.2%
Rabbit meat lack availability on the market	182	46.4%
Empathy with another living creature	50	12.8%
The fact that a rabbit is perceived as a cute animal, a friend, a pet, so it should not be eaten	80	20.4%
Total	**392**	**100%**

Table 9 displays that the F critical value is 3.00 which is lower than the F value of 17.12. Also, the P-value is less than the alpha value which is a 0.05 level of significance. Hence, there is a significant difference in terms of acceptability of rabbit meat specifically in terms of healthiness, taste, and price.

Therefore, the analysis rejected the null hypothesis and concluded that not all the means are the same. This means that the healthiness, taste, and price of rabbit meat are factors considered by meat consumers in Tacurong City, Sultan Kudarat when selecting or consuming a meat product.

Table 9. Result of the one-way anova (analysis of variance) for the significant difference in the acceptability of rabbit meat in terms of healthiness, taste, and price.

ANOVA

Source of Variation	SS	Degrees of Freedom	MS	F	P-value	Decision
Between Groups	34.444	2	17.222	17.119	0.00	Reject Null
Within Groups	1180.056	1173	1.006			
Total	**1214.5**	**1175**				

α=0.05 level of significance

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4. CONCLUSION

Rabbit meat is accepted as alternative meat by residents of Tacurong City in terms of its healthiness, taste, and price. Chicken meat is the most frequent meat that consumers consume between one and three days per month. The common hindering factor of rabbit meat consumption is its lack of availability in the market. The analysis of variance (ANOVA) resulted in the P-value which was less than the alpha value which is a 0.05 level of significance, wherein the null hypothesis was rejected, hence, there is a significant difference in the acceptability of rabbit meat in terms of healthiness, taste and the price. Consumers' choices to buy meat in a retail store are determined by factors such as juiciness, tenderness, flavors, visual appeal, price, package appearance, color, size, brand name, and food safety.

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6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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