Acceptability of Rabbit as an alternative meat source for consumption in Amadeo, Cavite

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Abstract: This research aims to look at the acceptability of rabbit meat as an alternative meat source at Amadeo, Cavite. Specifically, this research would like to identify the following: 1.) Demographic profile of the respondents; 2.) Level of acceptability of the respondents on rabbit meat in terms of taste , price, nutritional value and culture; and 3.) Relationship of the respondent's demographic profile and its level of acceptability on rabbit meat as alternative meat source. In order to see the general picture, a total of 100 self-made survey questionnaires were used. The first part was the demographic profile of the respondents and the second part is their perception on the acceptability of rabbit meat as alternative source for consumption. The study also used purposive sampling in determining the samples of the study. Local residents of Amadeo, Cavite were the respondents of the study.

Based on the results, the taste of rabbit meat is acceptable to respondents and thus there is a great potential to commercialize rabbit meat in Amadeo Cavite. It is recommended that breeders of rabbit meat should continuously educate the public on rabbit meat consumption through advertisements on social media focusing on the different ways on how to cook the rabbit meat into different cuisines. They can also organize an annual event that will encourage people to try on rabbit meat. The need for consumer information especially on health benefits of rabbit meat is crucial in eradicating negative notions on eating rabbit meat.

Keywords: Acceptability, Amadeo, Cavite, Rabbit meat, Breeders, Consumption.

I. INTRODUCTION

All of our domestic rabbit breeds descend from the European wild rabbit. First records of rabbits being used as meat animals came from Spain. In the early days of the Roman Empire, Spain shipped rabbits to Rome, and from there they were spread to Italy, France, and the British Isles. Those rabbits could hardly be called domestic. They were not kept in rabbit cages, but allowed to graze and reproduce at will within the boundaries of their range. In England, rabbit keepers erected many-acre enclosures surrounded by a stone wall to keep the "coneys" in and the predators out. These enclosures were called warrens. Hunting the warrens occurred by means of snares, ferrets, or falcons. In the year 600 AD, Pope Gregory ruled that rabbits could be eaten during Lent (because baby rabbits resemble fish). After this, rabbits became popular as a food source in monasteries. Warrens turned into smaller "walled rabbit gardens," and eventually into wooden cages. Domestic rabbits spread from the monasteries into the villages, where they were usually tended by children. Different strains began to emerge. Some of the earliest breeds include the Champagne d'Argent, the Angora, the Silver, and the Brabancon, which gave rise to the Dutch breed. Until the 19th century, rabbits were kept almost exclusively for meat and fur production. But in the early 1800's, a remarkable new breed appeared on the scene: the lop-eared rabbit. The breed quickly gathered a following, and soon breeders were competing to see who could produce the finest specimen. Thus the rabbit fancy was born. The first club to govern rabbit exhibitions was formed in England in 1840. First it was English Lops, and then English Spots, and soon dozens of breeds appeared. By 1880, the rabbit fancy was going full force in England and spreading quickly to Europe and the United States. The National Pet Stock Association was formed in 1910 in Detroit, which would later become the American Rabbit Breeders Association. In the early half of the 20th century, rabbit breeders were usually men, raising the animals for meat, fur, and exhibition. Rabbits were an important food source around the globe during both World Wars. However, in the latter half of the century, the rabbit industry changed quickly. The market for rabbit pets went under in the 1950's. People started keeping smaller breeds to cope with

International Journal of Management and Commerce Innovations ISSN 2348-7585 (Online) Vol. 7, Issue 2, pp: (131-138), Month: October 2019 - March 2020, Available at: www.researchpublish.com

difficult economic times. Dwarf breeds appeared in the 1980's, and attracted more women and children to the rabbit fancy. As the market for meat rabbits dwindled, the market for pets was on the rise. Today rabbits are popular as pets and show animals in many nations, especially in America, Europe, and Australia. Rabbits are regaining a following as a meat source, both in the US as more people seek for ways to live healthier and self-sufficiently, and also in developing countries.

The Farmers United with Rabbit Growers Association of the Philippines (FURGAP) is a professional organization of individuals who are into farming and/or rabbit growing founded by Fil-American Gigi Morris. This rabbit business started, from farming to offering the furry mammal for meals in fine dining restaurants. It started whenGigi was dining with her American husband Robert Morris at a high-end restaurant in Las Vegas in late March 2012 when she stumbled upon a wealthy Filipino man who ordered rabbit dish for supper. That gave Gigi the idea to raise rabbits as meat for fine dining restaurants, targeting culinary chefs. Upon returning to the Philippines, she immediately bought 120 rabbits and bred them. Once they grew in number, she immediately started to give away rabbit meat samples and invited celebrity chefs to cook and taste them. Three months after her return, on July 2012, Morris also held the first Kuneho Festival in their Mocha farm. The Morris family offered farm tours and lectures and, more importantly, invited some celebrity chefs to cook different rabbit cuisines for taste tests. Today, Morris' Robby Rabbitry Farm is among the country's growing producers of rabbit meat, earning an average monthly income of at least P5,000 from selling 10 rabbit heads and meat approximately sold at farmgate prices of P350 to P450 per kilo. Dressed rabbits, which weigh about 1.5 kilos are also sold respectively at P550 per kilo.

In Cavite, the KC RABBITRY located in Amadeo was founded by Clifford Ballesteros. The current president of the FURGAP has a commercial rabbit farming business. However there has been no formal research from the Philippine government on rabbit meat as another meat source in our country. Only private groups or individual is actively pushing rabbit meat for consumption like the FURGAP. They are conducting seminars, making recipe books, and food tasting to spread awareness about the benefits of rabbit meat and that there is another alternative meat around.

A. Problem Statement

This research aims to look at the acceptability of rabbit meat as an alternative meat source at Amadeo, Cavite. Specifically, this research would like to identify the following:

1. What is the demographic profile of the respondents in terms of:

- a. Age
- b. Gender
- c. Occupation

2. What is the level of acceptability of the respondents on rabbit meat in terms of:

- a. Taste
- b. Price
- c. Nutritional Value
- d. Culture

3. Is there a significant relationship on the respondent's demographic profile and its level of acceptability on rabbit meat as alternative meat source?

B. Significance of the study

This study will be beneficial to the following people:

Entrepreneurs: Since there are fewer competitors, the chances of the entrepreneur in becoming successful are high. Rabbit meat is rarely used as an ingredient in the Philippines, so if an entrepreneur can introduce this meat in the market properly, his/her chances of success is inevitably high.

Consumers: Rabbit meat has a high amount of digestible protein. It also contains less- amount of calories compared to other meats and has the least amount of fat among all other available meats making it one of the best meat for health

conscious people. Also, the ratio of meat-bone is high meaning there is more edible meat in the carcass than bone compared to chicken.

Future researcher: The ideas presented may be used as reference data in conducting new researches or in testing the validity of related findings. This study will also serve as their cross-reference that will give them a background or overview about the topic.

II. METHODOLOGY

1. Research Design

In order to see the general picture of the result of rabbit meat as another meat source as being perceived by the residents of Amadeo Cavite, a descriptive survey method was used. As a descriptive study, it collected detailed and factual information to describe existing phenomena. It systematically described the situation or area of interest factually and accurately. It allowed the researchers to carefully describe and understand the behaviour. This study was correlational for it demanded the degree to which the variables were related to each other using various statistical instruments.

2. Sampling Design

The study used Purposive sampling in determining the samples of the study. Purposive sampling is a sampling technique in which a researcher relies on his own judgment when choosing members of population to participate in the study. Residents in Amadeo, Cavite were the respondents of this study.

3. Research Instrument

A self-made questionnaire was used in gathering data. The first part was the demographic profile of the respondents and the second part is their perception on the acceptability of rabbit meat as alternative source for consumption.

4. Data Gathering Procedure

The researchers will personally administer the research instruments to the respondents. They will confer and discuss the significance of the study and accomplish the distribution of the instruments properly. The respondents will be given 5-10 minutes to accomplish the form to prevent them from giving hasty responses. The researchers will go from one place to another on collecting the accomplished questionnaires. After the questionnaires have been accomplished, the results were tallied and tabulated. These data became the bases of our analysis and interpretation.

5. Statistical Analysis of Data

In this study, quantitative technique will be used in analysing the data. The quantitative data is obtained through research questionnaire administer to the respondents. The data to be gathered from the questionnaire will be encoded in the computer. Software such as Microsoft Excel 2010 and Statistical Package for the Social Sciences (SPSS) are the tools used for data analyses and will be presented in tabular form. The data will be analysed according to the problem and hypothesis of the study. The types of statistical analysis will be used in the analyses and interpretations of data are:

Frequency and percentage was used to provide summaries about the sample and the observations that have been made for problem 1, to present the demographic profile of the participant in term of gender, age, tenure and current position

The formula for percentage is:

$$\% = \frac{n*100\%}{N}$$

Where:

% = Percentage

n = Frequency of the given score in a set

N = Total number of the participants

Mean was used to summarize the response of the participants for statement of the problem 2 and 4. The mean is considered as one measure of the central tendency either of the probability distribution or the random variable characterized by that distribution.

The formula is:

Where:

 \overline{x} = mean \sum = summation X = each value in the data set N = number of value in the data set

 $\overline{x} = \frac{\sum X}{N}$

Data Analyses and Hypothesis Testing is the approach will be used. Since data is multi-categorical and will use a multi-categorical logic model to determine which of the variables affects the response. P-value is used to test the significance level of the hypothesis .Chi-square test are the tools used in getting the relationship of the variables.

Statistical Tools

In determining the result of rabbit meat as another meat source as perceived by the selected respondents in Amadeo, Cavite, the Likert Scale has been used. According to *https://en.wikipedia.org/wiki/Likert_scale*, The Likert Scale is the most widely used approach to scaling responses in survey research, such that the term is often used interchangeably with rating scale, even though the two are not synonymous. The scale is named after its inventor, psychologist Rensis Likert. It used a five-point scale: each point corresponding to a Likert item.

Point	Scale	Verbal Interpretation
5	4.2 - 5	Strongly Agree
4	3.4 - 4.19	Agree
3	2.6 - 3.9	neither agree nor disagree
2	1.8 - 2.59	Disagree
1	1.0 - 1.79	Strongly Disagree

III. RESULTS AND DISCUSSION

I. Demographic Profile

A demographic profile is a term used in marketing and broadcasting, to describe a demographic grouping or a market segment. This typically involves Age, Sex, and Occupation. The following was used in segmenting the respondents.

^{1.} Age

Age	Frequency	Percentage
13 - 22	28	28%
23-32	17	17%
33 - 42	26	26%
43 and above	29	29%
Total	100	100%

The table above shows the age range of the respondents. Twenty Nine percent (29%) of the respondents were 43-above years old, showing that most of them were already considered as old. Twenty Six percent (26%) of the respondents were between 33-42 years old. Seventeen percent (17%) of the respondents were between 23-32 years young adult. Respondents' aged 13-22 is 28%. The apparent diversity of the maturity of the respondents reflects several implications in the study's findings. In relation of the age bracket of the respondents, the researcher could presume that in the said percentage, a considerable number could be among the old members of the population.

2. Gender

Gender is an important variable in a given situation which is variably affected by any social or economic phenomenon and globalization is not an exception to it. Hence the variable gender was investigated for this study. Data related to gender of the respondents is presented in the Table below.

Gender of the Respondents

Gender	Frequency	Percentage
Male	50	100
Female	50	100
Total	100	100%

The number of the female respondents (50%) is closed to the male (50%) with the total of 50 for female and 50 for male. Based on the figure, there was congruence between the numbers of female and male respondents. This shows that there are equal who have interest in participating in research studies.

3. Occupation

Person's occupations do have a bearing on his or her personality and so also the ways of looking at the problem before him. The quality of life is also determined by an individual's occupation and the incomes he derives from it. Occupation of an individual also socialized him or her in a particular fashion which in turn reflects his or her pattern of behaviors and his/her level of understanding of particular phenomenon. In other words the person's response to a problem is possible determined by the type of occupation he is engaged in and hence variable occupation was investigated by the researcher and data pertaining to occupation is presented in the Table below.

Occupation	Frequency	Percentage
Businessman	2	2%
Breeder	27	27%
Amadeo Organization	20	20%
Department of Agriculture	22	22%
Farmer	14	14%
Others	15	15%
Total	100	100%

Occupation of the Respondents

It is evident from Table above that sixty-three percent (63%) of the total respondents were employed in agriculture as agricultural laborers and breeders. The number of respondents engaged in private services was twenty percent (20%) and two percent (2%) were businessmen. Fifteen percent (15%) were from other sectors or does have other occupation. A large number of respondents were agricultural laborers and totally dependents on agriculture.

II. Acceptability of rabbit meat as perceived by respondents

This part of the paper will provide the discussion and analysis of the acceptability of respondents based on the Likert scale. Herein, it should be noted that the respondents or individuals were given a set of attitude statements through the survey-questionnaire so as to express their acceptability on whether they agree or disagree with the given statements through the use of five-point Likert scale. With this, 5 represent a strong agreement and 1 for strong disagreement. This will provide a greater understanding the challenges facing the acceptance of Rabbit meat in Amadeo, Cavite.

Acceptability (interpretation scale)

Scale	Interpretation	
4.21 - 5.00	Strongly Agree	
3.41 - 4.20	Agree	
2.61 - 3.40	Neither Agree nor Disagree	
1.81 - 2.60	Disagree	
1.00 - 1.80	Strongly Disagree	

1. TASTE

INDICATORS	MEAN	INTERPRETATION
The taste of Rabbit meat is very evident.	4.24	Strongly Agree
The taste of the other ingredients compliments the rabbit meat.	4.38	Strongly Agree
The taste of Rabbit meat is comparable to chicken.	4.51	Strongly Agree
The product has an extremely satisfying taste.	4.51	Strongly Agree
OVERALL MEAN	4.41	Strongly Agree

Analysis: Based on the indicators presented, the overall mean value of 4.41 which interpreted as "STRONGLY AGREE "means that the taste of rabbit meat was positively perceived by the respondents.

2. PRICE

INDICATORS	MEAN	INTERPRETATION
I will buy rabbit meat if the price goes down	4.03	Agree
I can afford a kilo of rabbit meat at least once a month.	3.57	Agree
The price of rabbit meat doesn't matter as long as it's delicious	3.48	Agree
The price of rabbit meat greatly affects my decision on buying it.	4.38	Strongly Agree
OVERALL MEAN	3.87	Agree

Analysis: Based on the indicators presented, the overall mean value of 3.87 which interpreted as "ACCEPTABLE" means that the price of rabbit meat was acceptable for the respondents.

3. NUTRITIONAL VALUE

INDICATORS	MEAN	INTERPRETATION
I think rabbit meat has a lot of proteins.	4.43	Strongly Agree
I think rabbit meat will not make me fat.	4.23	Strongly Agree
I think rabbit meat is large enough to feel full.	4.26	Strongly Agree
I think rabbit meat can provide all the necessary nutrients of a meal.	4.23	Strongly Agree
OVERALL MEAN	4.29	Strongly Agree

Analysis: Based on the indicators presented, the overall mean value of 4.29 which interpreted as "STRONGLY AGREE" means that in terms of nutritional value, rabbit meat was positively perceived by the respondents.

4. CULTURE

INDICATORS	MEAN	INTERPRETATION
My culture does not forbid me from eating rabbit meat.	4.20	Agree
I prefer Rabbit meat more as a meat source.	3.75	Agree
I prefer Rabbit meat more as a pet	3.85	Agree
It is okay to add rabbit meat as part of my diet.	3.88	Agree
OVERALL MEAN	3.92	Agree

Analysis: Based on the indicators presented, the overall mean value of 3.92 which interpreted as "ACCEPTABLE "means that the use of rabbit meat is acceptable in the respondent's culture.

5. HYPOTHESIS TESTING

Null hypothesis: There is no significant relationship between consumer's acceptability of rabbit meat and their demographic profile.

FACTORS	P-VALUE	INTERPRETATION	
Age and Acceptability of the Consumers	0.155**	Not Significant	
Sex and Acceptability of the Consumers	0.593**	Not Significant	
Occupation and Acceptability of the Consumers	0.044*	Significant	
	> 0.05 ** Not 9	> 0.05 ** Not Significant/ Paigot Ha/A agent Ha	

 ≤ 0.05 * Significant/ Reject Ho/Accept Ha > 0.05 ** Not Significant/ Reject Ha/Accept Ho

Analysis: Using Pearson Correlation to compute the significant relationship of the demographic profile of the respondents and their perception and acceptability on rabbit meat, the p-value will be interpreted as: if the p-value is ≤ 0.05 it means that there is a significant relationship between two or more factors or Reject Ho. However, if the p-value is >0.05 there is no significant relationship or Reject Ha.

Remarks: a. Age and Acceptability: Accept Ho

b. Sex and Acceptability: Accept Ho

c. Occupation and Acceptability: Reject Ho

A. Conclusions

The aim of the study was to know if rabbit meat will be accepted as an alternative meat source in our society particularly in Amadeo Cavite. The following are the conclusions based on the findings:

1. The taste of rabbit meat is comparable to chicken based on the findings in terms of taste. It says that there is a little difference between the chicken and rabbit in which it can be a complimentary to chicken. It also satisfies the taste of the respondents which resulted to "strongly agree" of the results.

2. Since most of the respondents are breeders, they would know the nutritional value of what they are breeding. With an overall mean of 4.29 favoring to "strongly agree", respondents agreed that rabbit meat has the right amount of nutrition for a balanced meal.

3. The price of rabbit meat greatly affects the decision of the respondents upon buying it because it is new to the market and the supply is very low the price is expensive. Most of the respondents answered "agree" with an average of 3.87

4. Culture does not forbid most of the respondents from eating rabbit. Usually we Filipinos like to taste new and exotic foods because it is new for our taste buds. As to religion it is not prohibited to eat meat as long as it is not a four toed animal and is halal approved so our survey got "agree" results.

6. That there is no significant relationship between individual's perception and acceptability of rabbit meat according to their age.

7. That there is no significant relationship between individual's perception and acceptability of rabbit meat according to their sex.

8. That somehow there is significant relationship between individual's acceptability of rabbit meat according to their occupation based on their income by the fact that rabbit meat is expensive.

B. Recommendations

1. Based on the results, the taste of rabbit meat is acceptable to respondents and thus there is a great potential to commercialize rabbit meat in Amadeo Cavite. It is recommended that breeders of rabbit meat should continuously educate the public on rabbit meat consumption through advertisements on social media focusing on the different ways on how to cook the rabbit meat into different cuisines. They can also organize an annual event that will encourage people to try on

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rabbit meat. The need for consumer information especially on health benefits of rabbit meat is crucial in eradicating negative notions on eating rabbit meat.

2. It is recommended for future researchers to conduct a more in depth study on this research since the respondents are limited only in Amadeo Cavite. Also, additional variables should be included and tested further in the study. For example, the role of national government might be a key factor that leads to a greater chance of accepting rabbit meat as meat source in our country. In addition, further studies may consider identifying the impact of these variables on the successful long-term used of rabbit meat as an alternative meat source.

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