

**THE EFFECT OF RABBIT FARMING ON HOUSE HOLD INCOME.
A CASE STUDY OF BUDDO SUB COUNTY WAKISO DISTRICT**

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ABSTRACT

Rabbit farming has become increasingly common among Ugandan communities as a source of animal protein and a possible source of increased income.

However, empirical evidence only marginally supports the effect of rabbit farming on average earnings, notably in the context of Buddo Sub County, Wakiso District.

The aim of this study was to assess how annual salary in the sub-county was impacted by rabbit farming.

Using a method known as case study, information was acquired from houses that raised rabbits through surveys, conversations, and focus group discussions. The survey found that rabbit growers contributed significantly to household income, earning an average of UGX 350,000 each month.

The research also revealed that low startup costs, increased consumer spending for game meat, and ease of maintenance were the main drivers promoting rabbit farming.

Breeders, meanwhile, faced a number of challenges, including limited access to husbandry practices, a lack of market expertise, and rabbit theft.

The report recommends promoting rabbit agriculture as a sustainable source of income for residents of Buddo Sub County, Wakiso District, by providing value addition, market data, and reasonable legislation to address the challenges the sector faces.

Overall, the most recent findings add to our understanding of the promise of small-scale animal production.

Key words: *rabbit farming and household income*

Background of the study.

As according Anderson et al., between 1995 and 2020, an additional 73 million people will be added year, or 32%, bringing the global population to 7.5 billion (1999).

According to a report on demographic shifts that Mirkin (2005) gave to the UN, the population of earth, which is currently estimated to be around 6.5 billion, will likely reach 7 billion by the year 2013. This rapid increase in people is demonstrated in new as well as varied various versions in family composition, pregnancy and childbirth, death rates, ageing, rapid urbanization, and migration.

Developing countries will have the speediest urban and rural inhabitants, which will increase global sales of both meat and cereals. The Global Watch Institute (2004), an organization dedicated to achieving sustainable development, discovered that the profitability of cropland around the world is progressively lagging population expansion.

According to FAO, the LEAD initiative has allotted more than half of Zambia's land to farming production, while the remaining third is devoted to animal agriculture (2006).

The International Policy Institute's Anderson's Food Policy Report claims that as additional land was cleared to make room for livestock, Uganda's woodlands and meadows shrank (1999).

As according IFPRI, agricultural efficiency has risen worldwide, including in Uganda (1999).

The food situation in Sub-Saharan Africa is still fairly dire because neither crop productivity nor food security have significantly grown in these regions. While accounting for a sizable portion of GDP in African countries, Chauvin et al researches for UNDP revealed that the nation's effectiveness in the sector has fallen behind other hemispheres.

Agricultural production is inadequate, in decline, and inefficient compared to potential.

Due to the rural voter's impossibility to generate their fundamental agriculture productivity, a major source of growing business, the World Bank positioned farming and rural progression at the top of its initiative in hopes of accomplishing the goals of the Millennium Development Goals (mdg) of halving world hunger.

Uganda Vision 2040 provides a detailed account of the order to prepare of the vision 2030 development plan by the state counselor for Uganda (2017).

Statement of the problem

Rabbit agriculture is becoming more common among Ugandan communities in both rural and urban areas due to its capacity to boost family income and provide as a source of animal protein. However, empirical evidence only partially supports the effect of rabbit agriculture on average earnings, notably in the context of Buddo Sub County, Wakiso District.

The aim of this study was to assess how annual salary in the sub-county was impacted by rabbit husbandry. The study especially examined how much domestic income is generated by raising rabbits, what factors lead people to start raising them, what challenges they encounter, and what rabbit producers may do to boost their productivity. Via surveys, conversations, and focus group discussion, the study used a case study technique to acquire data from households that were engaged in rabbit farming. The research authors gives some insight into the likelihood of rabbit cultivation as a means of earning a living for people in the household in Buddo Sub County, Wakiso District, as well as projects and proposals designed to encourage small-scale meat production as a means of lowering food insecurity and guaranteeing adequate nutrition.

Specific objectives

To determine the effect of rabbit farming on household incomes in Buddo sub county Wakiso district.

To find out the challenges associated and possible solutions of rabbit farming in Buddo sub county, Wakiso district

Hypothesis of the study

Ho: There is no relationship between the effects of rabbit farming on household incomes

Ha: There is a relationship between the effects of rabbit farming on household incomes

Ho: There is a relationship between challenges associated and solutions of rabbit farming

Ha: There is a relationship between challenges associated and solutions of rabbit farming

Research questions

What is the effect of rabbit farming on household income in Buddo sub county Wakiso district?

What are the challenges affecting rabbit farming in Buddo sub county Wakiso district?

Methodology

Research design

The study, which was conducted in a real-world setting where the environment was unaltered, was deemed appropriate for behavioral science by Kombo et al. (2006) since it appeared to pinpoint factors related to specific events, outcomes, and psychological circumstances.

It comprises information collecting using methods such as surveys and interviews, as advised by Orodho (2003), to assist reveal the circumstances surrounding the present situation.

Target demographic

Producers who raise rabbits and are members of a registered group in the Buddo-Wakiso district were the target audience. There are five recognized groups of rabbit farmers, each with 194 individuals (119 men and 75 women) and 2681 rabbits. The division has a 61.4km² area, an approximate 38000 people, and a division-wide yearly animal agriculture.

Sample and sampling procedures

In accordance with the study's core demographic of rabbit farmers, 194 manufacturers who are registered with the File format county office for the division of normal gender retraining are engaged in rabbit growing.

As according Morgan, a 5% error rate was considered appropriate given that this was a social scientific study (1970).

The required sample size was determined using the Hyper Hyperbolic geometry equation so because targeted audience was so small.

The bias continues to vanish as the sample size grows over time, and the sample mean finally converges to the true group average.

This is referred to as asymptotic bias.

$$n = \frac{NZ^2pq}{[E^2(N-1) + Z^2pq]}$$

N – target population.

n – desired sample.

Z – value corresponding to level of confidence required (level of confidence at 95%).

p – proportion belonging to a specified category (50%).

q – proportion not belonging to specified category (50%)

(when proportions are not known)

E – margin of error (0.05)

$$n = \frac{194(1.96)(1.96)(0.5)(0.5)}{(0.05)(0.05)(194-1) + (1.96)(1.96)(0.5)(0.5)}$$

Adjusted minimum sample size calculated using the formula below;

$$n^1 = \frac{n}{1 + n/N}$$

*n*¹ - adjusted minimum sample size

n - minimum sample size

N – target population

$$n^1 = \frac{128.907}{1 + 128.907/194} = 77.44 \text{ (sample size of 78 farmers)}$$

Research instruments

A questionnaire, interviewing, and observations were used as research tools to compile secondary data from the local rabbit producers. The questionnaire designs contained both open-ended and closed-ended items. It was important to mention that only bunny farmers were questioned in order to guarantee that the data gathering was uniform and objective.

methods for collecting information

Each respondent received one of the 78 surveys separately. While some reacted quickly, others asked for and received more time. On the surveys, there were both open-ended and closed-ended questions about the four factors affecting rabbit farming in the region.

Data analysis

Starting with a consistency and completeness evaluation of the inquiry replies, data processing began.

The 88.4% response rate decreased to 84.6% throughout the data cleaning procedure since three of the helps reinforce could not be evaluated due to inadequate data.

To facilitate analysis and identification, submissions were arranged and coded.

The analytical program SPSS was used to carry out the study's mathematical methodology.

The gathered information was entered into SPSS 16.0.

For the study's independent as well as dependent variables, the descriptive statistics employed qualitative analytics.

Tables that displayed incidences, percents, and the total number of people in each category to represent the dispersion of respondents were used to offer qualitative data for the predictor factors.

RESULTS

Response rates

The targeted sample of the study was 78 farmers but only 69 questionnaires were returned. During data cleaning 3 more questionnaires were found incomplete making the response rate 84.6% which was well above the acceptable level of 75%.

General characteristics

The first specific objective of the study focused on the general characteristics (age, level of education among youths, marital status, family size and religion) of rabbit farmers and their likely influence on rabbit production.

Distribution of the number of rabbits owned and the rabbit farmer's age.

Table 1. Distribution of number of rabbits owned and the rabbit farmers' age.

<i>Distribution of farmer's</i>			<i>number of rabbits</i>	
	<i>Number of farmer's</i>	<i>percentage %</i>	<i>Average</i>	<i>Std Dev</i>
<i>Farmers' age</i>				
18 – 35 years	16	24.2	1.69	
Above 35 years	50	75.8	1.78	
minimum	19	maximum	40	20.25

Source: **Primary Data**, 2022

Since the standard deviation (20.25) lies within the range of the minimum (19) age and maximum (40) age, it meets the measures of central tendency

Distribution of rabbit's farmers and their education level

The poll additionally revealed that rabbit farmers have a fairly substantial educational background because 56.1% of them have completed at least a secondary school.

Because it is a region where tea is grown, which implies that most homes are close to public universities, the wages of most homeowners are high and consistent enough to cover school expenses.

Although there is almost any difference between the three categories, it seems that education level has little bearing on the number of rabbits retained.

Table 2. Distribution of rabbit's farmers and their education level

<i>Distribution of farmers</i>	<i>number of rabbits</i>		
<i>Number of farmer's</i>	<i>percentage %</i>	<i>average</i>	<i>Std Dev</i>

<i>Education level</i>				
<i>Primary level</i>	21	31.8	1.67	.658
<i>Secondary level</i>	37	56.1	1.78	.750
<i>Tertiary level</i>	8	12.1	1.88	.991

Source: **Primary Data**, 2022

Number of rabbits owned and gender of household

In the study 92.4% of the households were headed by men, since the choice of household activities is mainly determined by men, their view on rabbit farming is likely to be an important determinant of whether or not the household engage in rabbit farming.

Table 3 shows the distribution of number of rabbits owned and gender of household head

<i>Distribution farmers</i>			<i>number of rabbits</i>	
	<i>Number of farmer's</i>	<i>percentage %</i>	<i>average</i>	<i>Std Dev</i>
<i>Household head.</i>				
<i>Men headed</i>	61	92.4	1.75	.745
<i>Women headed</i>	5	7.6	1.80	.837

Source: **Primary Data**, 2022

Number of rabbits owned and the size of the family

The study showed that majority of families had 2-5 members so the number getting benefits from rabbit farming was more than those targeted, since other family members benefited.

Table 4. Distribution of number of rabbits owned and the size of the family

	<i>Distribution of farmer's</i>		<i>number of rabbits</i>	
	<i>Number of farmer's</i>	<i>percentage %</i>	<i>Average</i>	<i>Std Dev</i>
<i>Family size</i>				
<i>2 members</i>	2	3.1	2.00	1.414
<i>2-5 members</i>	39	60.0	1.72	.724

More than 5 members	25	36.9	1.83	.761
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Source: **Primary Data**, 2022

Number of rabbits owned and the size of the farm

As shown in the table 4 those farmers who have 1 to 3 acres of land within Wakiso district are (53.8%) had the highest mean of 1.80. this is likely to indicate that they have space that is not enough for other enterprises expansion, therefore decided to engage in rabbit farming that requires less space.

Table 5 Distribution of the number of rabbits owned and the size of the farm

Distribution of farmers			Number of rabbits	
	Number of farmers	percentage %	Average	Std Dev
Farm size				
Less than 1 acre	23	35.4	1.70	765
1-3 acre	35	53.8	1.80	719
More than 3 acres	8	10.8	1.57	787

Source: **Primary Data**, 2022

Household

One of the specific objectives focused on the relationship between household income and rabbit farming.

Number of rabbits owned and the source of household income

Table 6: Distribution of the number of rabbits owned and the source of household income

Distribution of the farmer's number of rabbits

Number of farmers'	percentage %	Average	Std Dev

Household monthly income				
<i>Farming activities alone</i>	49	75.4	1.78	.743
<i>Business alone</i>	2	3.1	2.00	1.414
<i>From more than one source mentioned above</i>	10	15.4	1.50	.707

Source: **Primary Data**, 2022

Number of rabbits owned and the level of household income

The analysis gives the distribution of number of rabbits and the level of household income. those who get less than Ushs 10000 were more at 56.9% and they also have a high mean. Those who get between Ushs 10000 and 20000 had a higher mean.

Table 7: Distribution of the number of rabbits owned and the level of household income

	Distribution of farmers		Number of rabbits	
	Number of farmer's	percentage %	Average	Std Dev
Level of income				
< U shs 10000	37	56.9	1.76	.723
U shs 10000 – 20000	25	36.9	1.83	.761
>U shs 20000	4	6.2	1.00	.735

Source: **Primary Data**, 2022

Table 8: Distribution of number of rabbits owned and family members involved in rabbit husbandry

Distribution of farmers		number of rabbits	
Number of farmers	percentage%	Average	std dev

<i>Household members engaged in rabbit</i>				
<i>parents only</i>	23	34.8	1.52	.790
<i>both parents and children in the family</i>	35	53.0	2.00	.686
<i>children in the family only</i>	7	10.6	1.43	.535
<i>farm workers</i>	1	1.5	1.00	-

Source: **Primary Data**, 2022

Readiness to source for rabbit farming information

Generally, in Wakiso community, traditionally adults did not discuss rabbit issues and during the interviews rabbit farmers stated that not many adults would discuss Rabbit farming, rabbit benefits or how to access the information on rabbit farming. The study showed that this had changed since more rabbit farmers were influenced by their neighbors as they searched for information on rabbit farming from them as well as from livestock officer. They also obtained information from media

Table 9: distribution of number of rabbits owned and source of initial rabbit keeping idea to the farmers

	<i>Distribution of farmers</i>		<i>Number of rabbits</i>	
	<i>Number of farmer's</i>	<i>percentage %</i>	<i>Average</i>	<i>Std Dev</i>
<i>Source of initial Rabbit keeping idea</i>				

Neighbors	38	57.6	1.74	.760
Livestock officer	22	33.3	1.77	.752
Media	2	3.0	2.00	1.414
Other sources e.g. churches, group gathering.	3	4.5	1.67	.577

Source: **Primary Data**, 2022

Rabbit farming training and frequency of training

Table 10: Relationship of rabbit farming training attendance and the number of rabbits they own

	<i>Distribution of farmers</i>		<i>Number of rabbits</i>	
	<i>Number of farmer's</i>	<i>percentage %</i>	<i>Average</i>	<i>Std Dev</i>
<i>Have been trained</i>				
Yes	55	81.8	1.81	.702
No	11	18.2	1.50	.905
<i>Number of training</i>				
Never	11	18.2	1.36	.809
Once	8	10.6	1.71	.756
2 – 5 times	24	36.4	1.79	.779
More than 5 times	23	34.8	1.92	.654

Source: **Primary Data**, 2022

Each training took about an hour, since there is some other work to do in 8 hours as daily activities. So, training take place during midday break or when they demand for one.

Rabbit products and their influence to rabbit farming

Table 11: Distribution of responses on the number of rabbits they own and rabbit benefits and products.

<i>Distribution of farmers</i>		<i>Numbers of rabbits</i>		
	<i>Number of farmers</i>	<i>percentage%</i>	<i>Average</i>	<i>std dev</i>
<i>Rabbit benefits and products</i>				
<i>white meat (food) alone</i>	4	6.1	1.00	.000
<i>Manure alone</i>	1	1.5	2.00	-
<i>Income alone</i>	2	3.0	3.00	.000
<i>All of above</i>	52	78.8	1.82	.713
<i>Other benefits (hobby, pets)</i>	7	10.6	1.43	.787

Source: **Primary Data**, 2022

The major goal of the research on the benefits and goods related to rabbits was to determine the extent to which each benefit impacts rabbit farming.

Since 1992, when a producing component for rabbits was incorporated to the Integrated Small Livestock Project, instruction about the benefits and products of rabbits has been ongoing.

From 2000 to 2010 when the United Nations Agriculture and Farm Animals Connection Plan was in place, and from 2011 to 2014 whenever the Rabbit Production Project was started, rabbit agricultural production was encouraged through CIGs (Common Interest Groups). Currently, the Rabbit Production Project is trying to advance rabbit industrial production through able to register groups.

Table 11 below demonstrates this.

Because to the NALEP initiative, which operated from 2000 to 2010, farmers were properly informed about the advantages of using rabbit commodities.

Number of rabbit farmers own and the period they started to rear rabbits

Adoption of rabbit farming had been slow during the period before the year 2000. Introduction of rabbit production program after the year 2000 contributed to the increase in rabbit farmers as well as the number of rabbits they own.

Table 12: Distribution of number of rabbits owned and when they started rabbit farming

	Distribution of farmers		Number of rabbits	
	<i>Number of farmer's</i>	<i>percentage %</i>	<i>Average</i>	<i>Std Dev</i>
<i>Period started to rear rabbits</i>				
<i>Rear rabbits</i>				
<i>Before year 2000</i>	3	4.5	2.00	1.00
<i>Between 2000 – 2010</i>	35	53.0	1.94	.639
<i>After 2010</i>	28	42.4	1.50	.793

Conclusions.

Many details concerning rabbit husbandry in Wakiso district and Buddo sub-county have been disclosed by the investigation.

Knowledge is now more accessible than it was in the past, when extension officers (livestock and agricultural) were thought to be the change agents, as shown by table 8, which found that neighboring encouraged more farmers to start raising rabbits.

Government agricultural workers must however bridge the knowledge gaps about rabbit market segments as they make this knowledge available through training courses international markets. For instance, nations with harsh climates require a footwear and hat manufacturing facility to serve their inhabitants and winter vacationers.

Recommendations

As a consequence of federal initiatives in the Wakiso area that encourage the production of rabbits, the results and conclusions from this study indicate that more people are adopting rabbit as a means of nourishment, compost, and income.

Farmers are still lacking information about extra rabbit benefits, which would encourage many more to research and take part in other lucrative markets in order to increase their income.

The government may use the media, particularly local language stations, since the survey found that some producers acquired their original ideas for ferret cultivation from the media.

But, in order to send the right message, it should be proactively to invite upgraded version security professionals to these locations, as when left to media people, there really are gaps or miscommunication published to the masses.

REFERENCES

Abelson, R P. (1988). Conviction, American Physiologist. Physiologist at play

- Ahearn M, Johnson J and Strickland R. (1985). "the distribution of income and wealth of farm operator Households." American Journal of Agricultural Economics. 67: 108794*
- Alabama University. (1989). Nutritional Information. Crossroads Rabbitry, Heflin, AL*
- Andersen P.P., Rajul PL., and Rosegrant M.W. (1999). World food prospects: Critical issues for the early twenty first century Food Policy Report*
- International Food Policy Research Institute Washington, D.C.*
- Borter, D.K. and Bamulangaki, S. (2011) Rabbit production in Uganda, current status and way F Forward Animal Production Division*
- Boninger, D.S., Krosnick J.A, and Berent M.K. (1995) The origins of attitude importance: Self-interest, social identification, and values journal of personality and social psychology, 68: 103-373-226*
- Boskey E., PhD (2009). Socioeconomic status (SES) <http://std.about.com/od/glossary/g/sesgloss>.*
- Sub-Sahara Africa: prospects for the transformation of the agricultural sector*
- Cheek, P.R., (1980). The potential role of the rabbit in meeting world food needs. Journal of applied rabbit research 3 (3)*
- Claire S., (1962). Research methods in social science. Published for the society for psychology study social issues. New York*
- Duncan, R., Shi, Q. and Tyers, R. (2004): Demographic Change and Demand for Food in Australia* Working Papers in Economics and Econometrics No. 441*
- FAO (1982). FAO Expert Consultation on Rural Poultry and Rabbit Production. FAO Production Yearbook 1Rome, FAO.981, Vol. 36. Rome, FAO*
- FAO (2004). The state of Food Insecurity in the World 2004; Monitoring Progress Towards the World Food Summit and Published in 2004 by the Food and Agriculture Organization of the United Nations*
- FAO (2006). The Livestock Report by Animal Production and Health Division.*
- FAOSTAT (2007). Commodity Balances, Livestock and Fish, Primary Equivalent*