

PERCEPTIONS OF CONSTRAINTS AFFECTING RABBIT PRODUCTION IN AKWA IBOM STATE, NIGERIA

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ABSTRACT

Akpabio, I. A., Udousung, I. J. and Umoh, E E. 2007. Perceptions of constraints affecting rabbit production in Akwa Ibom State, Nigeria. Nigerian Journal of Agriculture Food and Environment. 4:(1-4):58 - 62

This paper examines the perceptions of rabbit farmers and livestock researchers/ livestock production specialists on constraints militating against rabbit production in Akwa Ibom State of Nigeria. Findings revealed low market demand (due to lack of awareness) as the most important constraining factor. A positive but non-significant relationship was also found to exist in the perceptions of the two groups of stakeholders. Recommendations are proffered to ameliorate the constraining factors to rabbit production in the state, including the need to embark on education and public enlightenment in order to induce the populace to recognize rabbit meat as an important and affordable protein source. A forum should also be instituted to aid livestock farmers', extension agents and livestock specialists meet regularly to exchange views on a wide variety of issues affecting rabbit production in the study area.

Keywords: Akwa-Ibom Agricultural Development Project, livestock extension agents, livestock researchers, rabbit farmers

INTRODUCTION

Time was, when rabbit was regarded as an unconventional livestock, which could not be counted among the more than 60 animal species which contribute to man's daily needs of food, shelter and energy. Of recent, however, it has been realized that some of the so-called unconventional livestock have various advantages, including: easy feeding and management, and suitability for the landless and small holder farmers within the household (Vietmeyer 1984). This has led to an increasing intensified focus on rabbit production. According to Spore (2007) and Soyebó (2006), rabbit production has the potential to improve on the diet and income of many poor households, due to its high growth and fecundity rate and low investment and labour costs. The authors surmised that rabbits produce high quality, palatable, low cholesterol meat, which can be substituted for chicken meat. Rabbit production takes up little space and can be maintained on garden and kitchen wastes and can provide supplemental income for the family. In this wise, rabbit production is regarded as ideal for the urban/rural poor and the landless (FGN/UNDP 1997). All the aforementioned attributes led the FAO to regard rabbit production as an indispensable component in its bid to fight hunger and malnutrition recipe to fight hunger and malnutrition. (Prathap and Ponnusamy 2007).

Soyebó (2006) quoted FAO statistics to the effect that as from 2000, the meat requirements of one-third of the human population would be satisfied by the supply of pork, poultry and rabbit meat. The Egyptian Rabbit Science Association, estimated global rabbit production at about 1.5 million metric tonnes per year. However, only 18% of the world's production of rabbit meat takes place in developing countries (ERSA 2002). A situation therefore arises whereby countries desperately seeking cheap animal protein sources are unable to produce enough to meet their needs. Nigeria has been placed in the league of countries which produce between 20,000 – 90,000 metric tonnes of rabbit meat per annum (ERSA 2002). The situation is worse in Akwa-Ibom State of Nigeria where Umoh (1994) posited that rabbit production remains the fastest means of making animal protein available to the people. Records from the Livestock Unit of the Akwa Ibom Agricultural Development Programme (AKADEP) revealed that in 1988, rabbit production made up an estimated 0.04% of the total livestock population in the state. The Nigerian Livestock Survey Report (1992) did not find rabbit production in the state worthy of mention on a commercial scale. However, as at 1997, 321 rabbit farmers were registered by the AKADEP, but by 2006, only 75 rabbit farmers were officially registered.

Against the above detailed background, it became pertinent to identify reasons for the dwindling status of rabbit production in Akwa Ibom State of Nigeria. In essence, the study had the following specific objectives: (i) To identify the socio-economic characteristics of rabbit farmers' and livestock specialists in the study area; and (ii) To determine constraints militating against rabbit production in the study area. A hypothesis was also tested, to determine the strength

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of relationship between the perceptions of both rabbit farmers' and livestock specialists', on constraints affecting rabbit production in the study area.

MATERIALS AND METHODS

The population for the study consisted of all the rabbit farmers registered with the AKADEP and all the livestock researchers and livestock production specialists, with both the AKADEP and the University of Uyo. Random sampling procedure was utilized to select 35 rabbit farmers and 25 livestock specialists for the study. Two sets of structured questionnaire schedules were utilized for the study, one for rabbit farmers, and the other for livestock specialists. Instrument validation was through face-validity (by a professor of animal husbandry) while reliability was ensured by test-retest method, which gave a correlation coefficient of 0.80.

To determine respondents' perceptions on constraints affecting rabbit production in the study area, 11 constraint items were identified through interaction with respondents, who were thereafter required to rank the constraints in a decreasing order of intensity. The highest constraint was ranked "1" while the lowest constraint was ranked "11". The spearman rho rank-order correlation was utilized to test the hypothesis.

RESULTS AND DISCUSSION

Socio-Economic Characteristics of Respondents

A summary of the socio-economic characteristics of rabbit farmers, as shown on Table 1 revealed that about 68.6% rabbit farms were ran by male producers, 71.4% rabbit farmers were married, while the modal age group ranged between 21 – 40 years, covering 62.9% respondents. Indications therefore are that rabbit production in Akwa Ibom State is controlled by the relatively youthful segment of the population.

All the respondents had acquired, at least, a form of formal education. Secondary and post secondary school leavers however made up a respective 48.6% and 42.9% of respondents. It may therefore be inferred that most rabbit farmers are formally educated.

With reference to rabbit production experience, a relative majority (57%) of respondents had been involved in the enterprise for about five years, and the Chinchilla breed of rabbits was relatively most popular as breeding stock. Other farmers (64.4%) were major procurement sources, while most of the marketing activities were directed at individual customers, who utilized such for table meat.

Rabbit farmers were revealed to be mainly civil servants (47.2%) and farmers (39.1%). A related finding revealed that a larger proportion of the Civil Servants were agricultural and allied staff of the State Ministry of Agriculture and the Agricultural Development Programme in the state. A majority (74.3%) of respondents were involved in a part-time (mainly subsistence) form of rabbit production, a majority (73.1%) managed stock sizes of less than 20 rabbits, while extension advice was mainly sought from more experienced rabbit producers (45.4%) respondents and livestock researchers (32.2% respondents).

With regard to source of capital for rabbit production, 82.9% respondents utilized personal savings for this activity. Also, about 73.1% respondents claimed to earn about a quarter (¼) of their total yearly income from rabbit production, although more than 92.3% respondents did not keep farm records. It is obvious that rabbit production is not a thriving or popular enterprise in the study area.

With reference to the socio-economic characteristics of livestock researchers it was revealed that 60% were male, 55% were in the 31-50 years age range, while 70% were married. All the researchers were graduates of tertiary institutions, 40% of whom had acquired professional experience spanning between 5-10 years, while 20% had acquired professional experience spanning more than 15 years.

Constraints Affecting Rabbit Production

As indicated in table 2, the three most pressing constraints, as ranked by rabbit farmers in a decreasing order of importance were: "low market demand" (94.29%), "superstitious beliefs" (88.57%) and "high cost of feed and vaccines" (82.86%). "Inadequate extension advice" (74.29%) was ranked 4th, while "cannibalism among the flock" was the least ranked constraint.

On the part of the livestock specialists, the three most serious constraints, ranked in a decreasing order of intensity were: "low market demand" (92%); poor quality parent stock (84%); constant disease outbreak and sudden death" and "inadequate extension advice" (80% respectively). Superstitious beliefs were the least ranked constraint.

The most serious constraint as ranked by farmers and livestock specialists is the low market demand for rabbit and its products. Findings from the field revealed that this situation arises from two main sources: (a) Public lack of awareness of the potential value of rabbit meat over more conventional meat sources and (b) the psychological feeling of rabbit being regarded as a giant rat. Other reasons given by respondents included the relatively high unit price of rabbit, put at between ₦800.00 - ₦1,000.00, when weighed against its size, while among the educated populace, rabbit meat is perceived as being too fatty.

Superstitious beliefs was ranked second by the farmers but surprisingly ranked least (11th) by the specialists. This constraint arises from the customary belief that the rat (especially house rat) brings bad luck and should therefore not be eaten. On the other hand, the specialists do not see this as a problem, since according to them, "rural dwellers hunt bush rat for meat".

Table 1: Socio-economic characteristics of rabbit farmers n = 35

S/N	Variables	%	S/N	Variables	%
1	Sex		9	Benefits derived	
	Male	(68.6)		Income	(23.6)
	Female	(31.4)		Table meet	(45.5)
2	Marital status			Both	(30.9)
	Married	(71.4)	10	Major occupation	
	Single	(28.6)		Farming(crop livestock)	(39.1)
3	Age range (years)			Civil servants teacher	(47.2)
	21- 40	(62.9)		Others (traders,artisans)	(13.7)
	41 – 46	(22.9)	11	Intensity of production	
	> 60	(14.2)		Full time(mainly commercial)	
4	Educational qualification			Part time(mainly subsistence)	(25.7)
	Primary school	(8.5)			(74.3)
	Secondary school	(48.6)	12	Source of capital	
	Post secondary institution	(42.9)		Personal saving	(82.9)
5	Experience in Rabbit Production (years)			Loan	(5.7)
	< 1	(11.4)		Credit thrift (etibe)	(11.4)
	1 – 5	(57.1)	13	Major source of disposal	
	> 5	(31.5)		Consumer direct middlemen	(85.1)
6	Popular Rabbit breeds				(14.9)
	Chinchilla	(36.2)	14	Size of herd	
	Duroc	(24.1)		Less than 20	(73.1)
	New Zealand	(21.2)		More than 20	(26.9)
	Various Combinations	(18.5)	15	Record keeping	
7	Major procurement sources			Yes	(7.70)
	Other farmers	(64.4)		No	(92.30)
	Markets	(-)	16	Proportion of total yearly income from rabbit production	
	Agricultural agencies (Ministry of Agriculture & Agric. Devt. Prog.)	(35.6)		None	(15.4)
8	Contact with rabbit production specialists			About 1 4	(73.1)
	Vet. Doctors	(22.4)		About 1 2	(11.5)
	Livestock researchers	(32.2)			
	Experienced Rabbit farmers	(45.4)			

The specialists ranked "poor quality parent stock" which they explained as the prevalence of old spent stock over more modern improved breeds (as the second most pressing constraint). This item was however lowly ranked (7th) by the farmers – possibly due to ignorance. The specialists hold poor parent stock as being responsible for most problems facing rabbit industry in the state, including: low litter size, infertility of the buck, disease problems and poor growth rates. It is consequently believed that the introduction of improved breeds, for cross breeding with local breeds, will improve the level of rabbit production.

On the issue of "constant disease out-break and sudden death" ranked (3rd) by specialists and (5th) by farmers, prevalent diseases mentioned include: mange and coccidiosis. Farmers believe that the afore-mentioned diseases affect rabbits because of their delicate nature, which necessitates their needing more intensive care than even day old chicks, in order to avoid sudden deaths. On the issue of inadequate extension advice: ranked (3rd) by specialists and (4th) by farmers; it is believed that the AKADEP needs to expend more efforts on the introduction of improved rabbit breeds as well as on raising the level of awareness of the populace as to the numerous advantages derivable from rabbit production.

The farmers ranked "high cost of feed and vaccines" as the (3rd) most pressing constraint. High cost of feed may be attributed to the reason that many rabbit farmers reside in urban areas and which make it difficult for them to procure forage to feed their livestock, especially during the dry season. Though the specialists did not perceive high cost of feed and vaccines as an important issue, they however revealed that rabbit reared only on forages may not perform as well as those reared with a combination of forage and compounded feeds. This therefore gives credence to the voice of the farmers, because formulated feeds are costly to procure. On high cost of vaccines, the farmers contend that mange is not easily cured with oil and sulphur, as normally recommended. An effective alternative drug (ivomec) is said to be as costly as ₦6,000.00 per 50ml bottle. Another drug (embacin) used as a coccidiostat is also said to be very costly. In essence, farmers may not be willing to expend scarce resources on a seemingly non-lucrative venture.

Table 2: Respondents' perceptions on constraints affecting rabbit production in Akwa Ibom State, Nigeria

Constraints	Rabbit Farmers			Livestock Specialists		
	Freq.	Percent	Rank	Freq.	Percent	Rank
i) Poor quality parent stock	17	48.57	7	21	84.0	2
ii) Constant disease outbreak and sudden death	19	54.29	5	20	80.0	3.5
iii) Cannibalism among the flock	12	34.29	11	14	56.0	9
iv) Pseudo-pregnancy of the doe	17	48.57	7	17	68.0	6
v) Infertility of the buck	13	37.14	10	12	48.0	10
vi) Low litter size	17	48.57	7	19	76.0	5
vii) Inadequate extension advice	26	74.29	4	20	80.0	3.5
viii) High cost of feed and vaccines	29	82.86	3	15	60.0	7.5
ix) Poor growth rate	15	42.86	9	15	60.0	7.5
x) Low market demand	33	94.29	1	23	92.0	1
xi) Superstitious beliefs	31	88.57	2	7	28.0	11

Spearman rho (Rs) coefficient = 0.36. Not significant = 0.05 level

In summary, apart from 'infertility of the buck' (48%) superstitious beliefs" (28%) and 'cannibalism among the flock' (56%); the specialists perceived all the remaining problems as of utmost importance, as they were rated 60% and above. For the farmers however, only four constraints scored more than 60% each. The remaining constraints were all scored less than 50% each.

The spearman rho Rank-Order Correlation showed that a positive but non-significant relationship existed between rabbit farmers and specialists, in their different perceptions of constraints affecting rabbit production in Akwa Ibom State. Indications therefore are that there is a need for greater technical interaction between these two important groups of individuals who directly control rabbit production in the state.

CONCLUSION AND RECOMMENDATIONS

Rabbit production has the potential of becoming both an important means of securing livelihood and providing animal protein amongst the rural and urban populace of Akwa Ibom State. To achieve these ends however, some constraints adversely affecting rabbit production would have to be ameliorated. The following recommendations therefore seem pertinent.

1. Much education and public enlightenment is needed to induce the populace to recognize rabbit meat as an important and affordable protein source. The onus of public enlightenment lies on the extension service of the Akwa Ibom State Agricultural Development Project (AKADEP). The effect could be achieved through the underlisted means: (a) Increased emphasis on improved rabbit production practices on their weekly sponsored radio programme "The Farmer". (b) Sponsorship of jingles on the State Radio and Television Services network. These jingles should focus on the qualities of rabbit meat and also endeavour to break some negative myths surrounding the raising of rabbit.

- (c) The Fortnightly Training (FNTs) and Monthly Technological Review Meetings (MTRMs) of the AKADEP should focus more on rabbit production, so as to produce field level extension agents who are more adept in the knowledge of rabbit production.
2. The Ministry of Agriculture (MOA) and the AKADEP should institute a forum whereby livestock farmers', extension agents and livestock specialists, would meet regularly to exchange views on a wide variety of issues, including: innovations in livestock production; integration of indigenous livestock production methods; and means of ameliorating constraints adversely affecting livestock production in the state.
 3. Finally, rabbit farmers should be encouraged to organize themselves into functional associations or groups through which they can present a common front to enable them easily "access" the government and its agencies and thereby "pull down" services beneficial to their enterprise".

REFERENCES

- Egyptian Rabbit Science Association (ERSA)** 2002 3rd Scientific Conference on rabbit production in hot climates 8 – 11 Oct. Hurgadien, Egypt Retrieved 29th December, 2007 from <http://pan-am.uniserve.com/jpg003803.htm>
- Federal Government of Nigeria (FGN)/United Nations Development Programme (UNDP)** 1997 *Management Guide on Rabbit Production* FGN/UNDP 8pp.
- Nigerian Livestock Survey Report** 1992 Vol. IV *Urban Reports and Commercially Managed Livestock Survey Report* p 8
- Prathap, D P and Ponnusamy, K A** 2007 Factors influencing the attitude of farmers of Tamil Nadu, India towards rabbit farming *Livestock Research for Rural Development* 19 (6) 51 – 54
- Soyebo, K O** 2006 Constraints against widespread rabbit keeping among households in Osun and Oyo states. Implications for family economic empowerment. *Journal of Applied Sciences Research*. 2(12) 1244 - 1247
- Spore,** 2007 Rearing rabbits *Family Farming: The future of the world*_Spore vol. 131, October, p. 6 CTA. The Netherlands.
- Umoh, J E** 1994 Livestock and Poultry Production (in) S. W. Petters, E. R. Iwok and O. E. Uya (eds): *Akwa Ibom – The Land of Promise – A Compendium* Gabumo Publishing Co. Ltd., Lagos – pp. 191 – 198
- Vietmeyer, N** 1984 Livestock for the landless *Ceres* No. 98 No 17 (2) 43 – 46