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Zootechnical Characteristics of Snail Farming in Bimodal Raining Forest Agro Ecological Area of Cameroon

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ABSTRACT

Snail is an important source of animal protein in many parts of West and Central Africa. In Cameroon the main production zone is South west Region. This study was therefore aimed to investigate the production parameter that can explain this fact. Percentage response and frequency distribution were used to collect information regarding the zootechnical characteristics of snail farming in the area. Multi stage random sampling technique was used to select 40 farmers from five subdivisions (16 from Buea, 12 from Limbe II, 8 from Muyuka, 2 from Limbe I and 2 from Tiko). Information for the study was collected from primary and secondary sources. Results reveal that trench pens are the major housing systems in the area (45.87%). Farmers mostly reared *Archachatina marginata* (69%) under the semi intensive production system (98.00%). Only 35.63% of the farmers are trained in snail farming practices. Snails are fed with natural feed (leaves, fruits and tubers) and household waste supplement in form of concentrate supply in 5.87% only and to a lesser extend calcium (1.14%). Moreover, animals are fed on daily basis (40.56%) particularly in the morning (36.60%). Water is provided to animal by 54.52% of the farmers anyhow, those who did served watered their animals on a daily basis (16.03%). Farmers desired to continue with snail farming but they faced many challenges amount with pest attack, predators, lack of techniques are the most commonly cited. Thus training should be provided to people engaged in snail farming as it contributes much to the family welfare.

Key words: Snail, management practices, farmers, Fako division, zootechnical

INTRODUCTION

In the forest areas and West Africa particularly Nigeria, Ghana and Ivory Coast, snail meats forms a substantial part of meat diet of the local people and fetches a good price in the open market[1]. According to Ekwochi *et al.*[2] and Kaldjob *et al.*[3] taboos over snail production, consumption and marketing are broken in most places in the worlds. Furthermore, snail meat is a delicacy especially to natives of the South West, Centre and South regions of Cameroon[3]. The snails are either eaten cooked and spiced or with a favorite dish called '*eru*'[4].

The market potentials of snail were inexhaustible. The demand is highly locally and internationally[5]. Exporters as well as consumers demand for snail like gold[6]. The demand for it abroad is more than in Africa. Presently, they cannot meet the local and export

demand of snails. The value of hard currency makes it possible for exporters to source it at all cost, thus making the few available in the market to be quite expensive for an average family to afford. The restaurants and hotels need to be provided with about 5,000 snails every week in sub-Saharan countries as Cameroon[6]. Apart from good markets, restaurants, hotels and individuals, agricultural food festivals are held regularly and snails are often a feature[7,8]. Snail demands from African diaspora represent a biggest market. In fact, United States of America alone imports about U.S $200 million worth of snails annually other countries that import snails are Germany, Belgiun, Netherlands, Canada, Switzerland, Japan Sweden, Australia, Denmark and South Africa[1]. Prospect show that there will be increase demand for the Africa species and will mean bigger market for the products[9]. Despite of the potentials and advantages of snail farming, participation of famers in its production is steel marginal[10,11]. This can be attributed to lack of awareness of the economic potentials of this micro-livestock and poor technical practices of existing farmers. This study therefore aimed to describe the zootecnical and economic characteristics of snail farming in Fako division which is the biggest snail farming area in Cameroon.

MATERIAL AND METHODS

Sample selection: A combination of purposive, random sampling technique was adopted for this study. Firstly, Fako division in bimodal rainfall Agro ecological zone was purposively selected due to the predominance of commercial snail farmers in the zone. The second stage involved the random selection of farmers (40) on the list provide by extension services of the ministry of Agriculture. The data were collected from selected farmers using a questionnaire. The researcher administered the questionnaire personally.

Data collection: Data for the study were collected from primary source. The data were collected using structured questionnaire and direct observations. The questionnaire included questions on the: sources of stock, farming system, channels of marketing, constraints of snail farming in the state, cost and returns of snail farming and factors which affect snail production profitability in the area.

Data analysis: The data for this study were analyzed using both descriptive and inferential statistics. Hence, descriptive statistics such as mean distribution and percentages, gross margin analysis and profit function analysis were use via SPSS (21) software.

RESULTS AND DISCUSSION

The herd and production system

Species of snails reared: Muyuka, Limbe I and Tiko recorded 100% of farmers rearing *Archachatina marginata* while Buea and Limbe II registered 86 and 78%, respectively (Fig. 1). Only respondents in Buea (11%) were found to be rearing *Achatina achatina* whereas 14 and 11% of respondents in Buea and Limbe II respectively reared both *A. archatina* and *A. marginata* correspondingly. About 93.0 and 2.0% of the respondents reared *A. marginata* and *A. achatina*, respectively, while about 5.0% reared both species. This implies that the zone of study is dominated by *A. marginata*. This is similar to the findings of Ogunniyi[9] that 98.1% of the species reared is *Archachatina marginata* in Oyo State, Nigeria. Cobbinah *et al.*[1] observed that the most popular edible snails in West Africa are the giant land snails (*A. achatina* and *A. marginata*). This finding however contrast to Chah and Inegbedion[12] and Ahmadu and Ojogho[5] in Delta and Edo States, Nigeria. Respondents' reasons for rearing the two species were based on the fast growth rate, high meat/flesh and high fecundity of these species[12].

Herd size: The herd size of farmers in Fako ranged from 50 to more than 500. Majority (37.30%) of the farmers reared more than 500 snails, second by 27.22% who reared between 400 and 450 snails. This corroborates the findings of Ogogo *et al.*[13] and Ahmadu and Ojogho[5] who found that the majority (61.66 and 36%) of snail farmers in Cross River and Edo States, Nigeria, had a herd size 1600 and 401-700 snails respectively. This work is contrary to that of Obisesan and Oluseun[14] who found that 63% of the snail farmers reared about 259 snails.

Farmers' source of snail: Independently of the subdivision, 31.51, 30.16 and 24.44% of the respondents obtained snails to start their snailery from market, captured in nature (wild) and

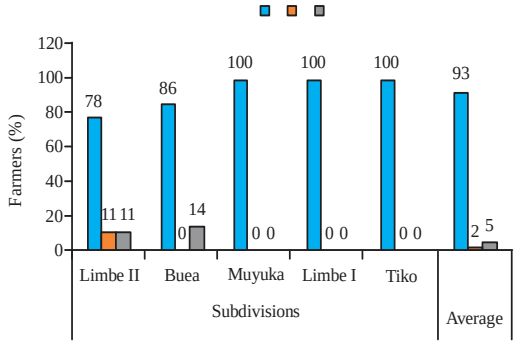

Fig. 1: Distribution of snail farmers according to species reared

Table 1: Distribution of farmers according to herd size and acquisition of animals

Zoo technical Characteristics	Percentage of respondents per subdivision					
	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Herd size						
50 to 100	0	14	0	0	0	2.86
150 to 200	33	14	25	0	0	14.52
201 to 250	33	0	0	0	0	6.67
300 to 350	0	7	50	0	0	11.43
400 to 450	11	0	25	0	100	27.22
>500	22	64	0	100	0	37.30
Farmers' source of snail						
Purchase	22	50	0	50	0	24.44
Gift	11	0	0	0	0	2.22
Purchase and gift	22	0	25	0	0	9.44
Picked from wild	22	29	50	0	50	30.16
Purchase and from wild	11	21	25	50	50	31.51
Purchase, gift and picked from wild	11	0	0	0	0	2.22

from the wild and purchase respectively (Table 1). This implies that most of the snails reared are procured from the wild. There is therefore a need to encourage setting up of parent stock/hatchery units to provide farmers with hatchlings. This will improve production and curtail gathering of snails from the wild. The observation that 30.16% sourced snails from the wild to start up their farms justified the need of snail farming, which who reduce the number of farmers gathering snails from the wild. This result contradicts those of Chah and Inegbedion[12] who observed that in Edo State, Nigeria, 45% of the respondents obtained snails to start their snailery from another snail farm or market and Ogogo *et al.*[13] found that 57.14% of the respondents sourced their breeding stocks from the wild alone while 42.86% sourced their stocks from wild and the market in Cross River State, Nigeria.

Production system: Figure 2 shows that a larger proportion (98%) of the respondents in all five sub divisions of the study area were engaged in semi intensive management while only 2% intensive system of production. This can be explained by the fact that this system prevent snail from escaping and protect them from predators like rats, birds, beetles, snakes, millipedes, mice, lizards and other wild animals. On the whole, the implication of this finding is that snail farmers must have enough financial backing as well as know the pest control measures which are key indicators of successful production. This finding is in tandem to the results of Chah and Inegbedion[12] who observed that Semi intensive system of production was practiced by 40.0% of the farmers in Edo State, Nigeria. This study, however contradicts that of Ezeano[15] who showed that majority (72.2%) of the snail farmers were engaged in intensive management systems while 20 and 7.8% used extensive and semi intensive management systems respectively in Enugu State, Nigeria.

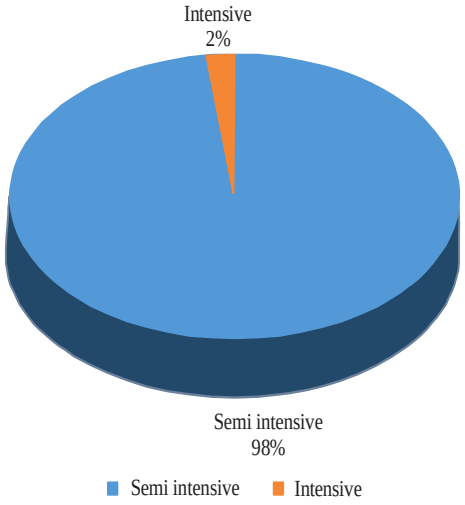

Fig. 2: Distribution of respondents according to production system

Management of the herd

Training in snail farming, type of training acquired and duration: Averagely, most of the respondents (64.37%) had no training compared to the 35.63% who did have (Table 2). This confirms the finding of Ngenwi *et al.*[16] who found that only 28% of farmers received training on snail husbandry in Volta and Great Accra, Ghana and Southwest Region, Cameroon.

A greater number (52.94%) of those not trained said the reason for not being trained is lack of information. The implication of this observation is that information on managerial techniques and improvement of snail production is still very limited to these farmers. Therefore, government extension workers of the MINEPIA should organize seminars, forums and/or workshops to train these farmers. Farmers too

Table 2: Repartition of snail farmers according to training

Zoo technical Characteristics	Percentage of respondent per subdivision					
	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Training in breeding						
Trained	89	14	75	0	0	35.63
Not trained	11	86	25	100	100	64.37
Type of training obtained						
Housing and feeding	11	0	25	0	0	7.22
Housing and reproduction	0	0	25	0	0	5.00
Housing, feeding, reproduction and health	78	14	25	0	0	23.41
No training	11	86	25	100	100	64.37
Duration						
1 to 3	11	7	0	0	0	3.65
4 to 6	11	0	75	0	0	17.22
7 to 9	11	7	0	0	0	3.65
2 weeks to one month	11	0	0	0	0	2.22
More than 2 months	44	0	0	0	0	8.89
None	11	86	25	100	100	64.37
Why not trained						
Lack of information	11	29	25	100	100	52.94
Lack of time	0	14	0	0	0	2.86
Contented with they know	0	29	0	0	0	5.71
Do findings on the internet	0	14	0	0	0	2.86
No reason	89	14	75	0	0	35.63
Type of training desired						
Feeding	0	14	0	0	0	2.86
Feeding and reproduction	0	14	0	0	0	2.86
Reproduction and health	11	0	25	0	0	7.22
Housing, feeding, reproduction, health	11	14	25	50	100	40.07
None	78	57	50	50	0	46.98
Why this training						
For better management	22	43	50	50	100	53.02
None	78	57	50	50	0	46.98

on their part are encouraged to join social groups like Common Initiative Groups (CIGs) which are common in this area.

Nevertheless, of those that are trained, were trained on housing, feeding, reproduction and health, housing and feeding and housing and reproduction respectively. Majority (17.22%) of the training lasted for 4-6 days and 2.22% for two weeks to one month. However not withstanding this fact, many (40.07%) had the desire to be trained on housing, feeding, reproduction and health so as to better manage (53.02%) their snail farms which are the keys factors to enhance snail farming[17,18].

Housing: Among the five subdivisions, only respondents in Buea (14%) said they use oil drums and car tyres each. Only those in Limbe I built mini paddock pens to house their snails (Table 3). However, on average a majority (45.87%) of farmers built raised trench pens (Fig. 3) followed by wire guaze or net fence with 30.56%. This explains why a majority of the farmers engaged in semi intensive management system. This corroborates with the findings of Ogogo *et al.*[19] and Onuigbo[20]

Fig. 3(a-b): Trench pens

Table 3: Distribution of snail farmers according to type of housing

	Percentage of respondents per subdivision					
Modalities	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Housing types						
Wood cages	78	0	25	0	50	30.56
Trench pens	22	57	50	50	50	45.87
Oil drum	0	14	0	0	0	2.86
Old fridges	0	14	25	0	0	7.86
Mini paddock	0	0	0	50	0	10.00
Trench pens and car tyres	0	14	0	0	0	2.86
Have an incubator						
Yes	33	21	0	50	0	20.95
No	67	79	100	50	100	79.05
Separation of snails into different pens based on their size/age						
No	67	79	100	50	100	79.05
Yes	3	21	0	50	0	20.95

Table 4: Distribution of snail farmers according to food items used, feed supplement, type of supplement and feeding system

	Percentage of respondent per subdivision					
Characteristics	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Food items used						
Leaves of plants and fruits	11	29	0	0	0	7.94
Leaves of plants, fruits and tubers	22	29	50	0	50	30.16
Leaves of plants, fruits, tubers and household waste	11	14	25	100	0	30.08
Leaves of plants, fruits and household waste	56	29	25	0	50	31.83
Feed supplement						
Yes	22	14	0	0	0	7.30
No	78	86	100	100	100	92.70
Type of supplement						
Concentrates	22	7	0	0	0	5.87
Calcium	0	7	0	0	0	1.14
None	78	86	100	100	100	92.70
Animal feeding system						
Every day	78	50	25	50	0	40.56
Skip a day feeding	22	36	50	50	0	31.59
Whenever I like	0	14	25	0	100	27.86
Why?						
Nocturnal organisms	22	36	50	0	0	21.59
Labor is hired	11	0	0	0	0	2.22
That is when I am feeding other animals	11	14	0	0	0	5.08
Whenever food is finished	11	0	0	0	0	2.22
Whenever I have time	33	35	50	100	50	47.38
No reason	11	21	25	0	50	21.51

who found that 80 and 44% of the farmers in Akwa Ibom and Enugu States of Nigeria used trench pens but contrary to those of Ogunniyi[9] and Chah and Inegbedion[12] who said most farmers (78 and 43.4%) preferred car tyres and fenced pens for snail production in Edo and Oyo States of Nigeria respectively. Even though most of the farmers in Fako used the aforementioned housing type, a majority (79.05%) of them never had an incubator and thus housed snails of all ages in the same pen (Table 3). This separation is necessary because snails of different sizes/ages have different nutrient and space requirements that should be met for optimum growth. This is similar to the results of Chah and Inegbedion[12] who observed that 51.7% of farmers in Edo State of Nigeria did not separate snails based on size/age while 48.3% did separate.

Feeding and watering

Feeding

Type of feed and supplement used in the snail farms: Farmers indicated that they used a variety of ingredients to feed their snails according to the subdivision consider (Table 4). However, the most commonly used feeding materials were leaves of plants, fruits and household waste (31.83%) and the lowest is the plant leave and fruit. This finding confirms the fact that snail production is a low-cost

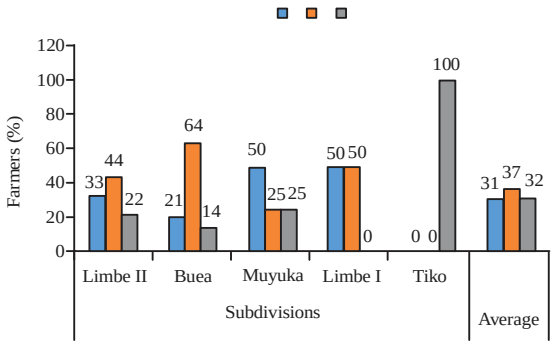

Fig. 4: Percentage of snail farmers according to the time of feeding the animals

operation, making use of locally available feeds at relatively no cost to the farmer. Snails are capable of converting low-quality feed such as green leaves and domestic waste into high-quality animal protein thereby reducing the cost of feeding[9]. This finding contradicts the findings of Chah and Inegbedion[12] who reported that the most commonly used feeding materials were vegetables (71.2 %), leaves of plants (67.8 %) and kitchen wastes (59.3 %) in Edo State, Nigeria.

Data in Table 4 equally shows that a greater proportion (92.70%) of the respondents did not feed the snail with supplement while 7.30% did. Among those that did give supplement, 5.87 and 1.14% of the farmers did feed their snails with concentrated or compounded feed and calcium correspondingly. This disagrees with the findings of Ogogo *et al.*[19] and Ogunniyi[9] who observed that 33 and 17% of the respondents fed their snails with compounded feed in Akwa Ibom and Oyo States of Nigeria respectively.

Animal feeding system, time of feeding and reasons: Seventy eight percent of farmers in Limbe II served feed every while those in Tiko did not (Fig. 4). Again 50% of respondents in Muyuka and Limbe I practiced the skip a day feeding system while those in Tiko did not but rather all (100%) fed the animals whenever they liked to. Averagely, 40.56, 31.59 and 27.86% of the farmers fed their snails every day, skiped a day and whenever they liked respectively (Table 4). This finding is in tandem with those of Chah and Inegbedion[12] and Ogunniyi[9] in Edo and Oyo States of Nigeria respectively but contrast to those of Ogogo *et al.*[13] who said farmers fed their snails twice a week (57.14%) and once a week (42.86%) in Cross River State, Nigeria. However, it is recommended that snail feed be placed into the pens 2 h after sunset and the leftover removed the next day[1].

Time of feeding is illustrated on Fig. 4. As seen on the figure, 50% of farmers in Muyuka and Limbe I, fed their animals in the evening while none in Tiko. Furthermore, the highest number (64%) of respondents who fed their snails early in the morning was from Buea while all in Limbe I fed their animals at any time with none from Muyuka. However, most (36.60%) of the farmers fed their snails in the morning, 32.02 and 30.95% of the respondents fed at any time and evening, respectively. Feeding snails early in the morning may be because of respondent's previous experience/knowledge in rearing of other livestock such as poultry or goats, which requires that they are fed first thing in the morning after observation and cleaning of the animal pens. This findings ties with that of Chah and Inegbedion[12] that 46.6% of the farmers in Edo State, Nigeria, fed their snails early in the morning but contrast with the recommended practices given by Cobbinah *et al.*[1], that the snails should be fed at night due to their nocturnal nature. It is therefore necessary for extension workers to educate the farmers on the proper feeding regime in order to minimize wastage[21].

Entries of Table 4 outline the reasons these farmers gave concerning time of feeding their snails. Most (47.38%) said they feed when they have time and 21.59% of those who fed in the evening said it is because snails are nocturnal organisms.

It appears on Table 5 that 86% of the farmers in Buea placed feed on a material while none in Limbe I did. A greater proportion (58.97%) of the respondents placed feed on bare ground while 41.03% did placed on material. This proved that farmers have inadequate knowledge on the techniques of snail production.

Moreover, the table reveals the material on which feed was placed on. Majority (16.67%) used flat dish, next by 15.08% who used a piece of zinc and 7.86% of the respondents placed on dry plantain leaves.

Furthermore, about sixty two percent of the farmers removed uneaten feed whenever they felt like, 20.95 and 16.59% removed it on a daily basis and every two days correspondingly.

Watering: On Table 6 it appears that a larger proportion (54.52%) of the farmers in Fako did not serve their animals water unlike 45.48% who did. This implies that farmers in this area are not aware of the fact that just like any other domestic livestock, water is indispensable for snails. Thus farmers are encouraged to serve their snail not just water but clean one for maintaining good herd health. This finding is therefore not in support with that of Chah and Inegbedion[12] and Ogunniyi[9] that all the farmers gave snails water in Edo and Oyo States of Nigeria respectively.

Table 5: Distribution of snail farmers according to what feed is placed on and when uneaten feed is removed

	Percentage of respondents per subdivision					
Characteristics	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
What food is placed on						
A material	44	86	25	0	50	41.03
In the pen	56	14	75	100	50	58.97
Type of material						
Flat dish	3	50	0	0	0	16.67
Piece of zinc	11	14	0	0	50	15.08
Piece of wood	0	7	0	0	0	1.43
Dry plantain leaves	0	14	25	0	0	7.86
None	56	14	75	100	50	58.97
When uneaten food removed						
Daily	33	21	0	50	0	20.95
Every 2 days	22	36	25	0	0	16.59
Whenever I feel like	44	43	75	50	100	62.46

Table 6: Repartition of snail farmers according to watering the animals

	Percentage of respondents per Subdivision					
Characteristics	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Serving the snails water						
Yes	67	86	25	50	0	45.48
No	33	14	75	50	100	54.52
If so, how often						
Daily	44	35	0	0	0	16.03
Every 2 days	22	21	25	0	0	13.73
Whenever I feel like	0	29	0	50	0	15.71
None	33	14	75	50	100	54.52

Still from the same Table 6, most (16.03%) of those who served water to their animals did so on a daily basis compared to 13.73% who did so every two days. Thus, farmers in the Fako division are therefore encouraged to water their animals on a daily basis because it must have been soiled as the snails get in and out depositing ground and feces inside.

Health: Limbe II recorded the highest percentage (56) of farmers who attributed the death of their snails to pest (termites) while Muyuka recorded the least (25%) (Table 7). For predators as the cause of death, Muyuka registered the highest number of farmers with 50% while Buea, Limbe I and Tiko recorded zero percent. Furthermore, only Buea (14%) and Limbe II (11%) complained of hot weather as a cause of snail death. Lastly, 57% of respondents in Buea attributed death to unknown causes with only 11% from Limbe II. To generalize, pest were reported by majority (41.83%) of the respondents to be responsible for death of snails, while 38.65 and 14.44% of the respondents attributed death to unknown causes and predators, respectively. This shows that high proportions of deaths were caused by pest and predators. The finding in this study may be attributed to the farmers' lack of knowledge of methods of controlling pests and predators in their farms[22].

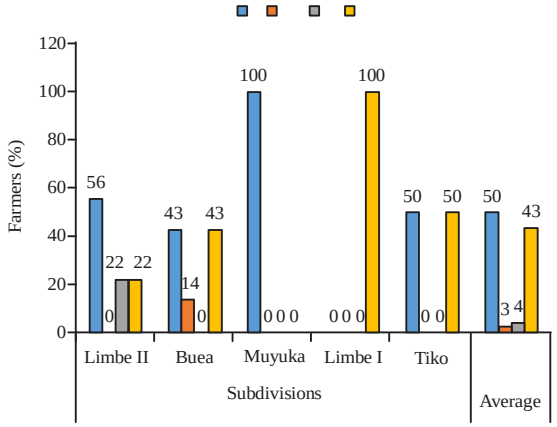

Fig. 5: Distribution of respondents according to time of the year with frequent mortality

Efforts should be made to reduce snail mortality through training of snail farmers on pest/predator control practices. This result confirms those of Ogogo *et al.*[19] and Chah and Inegbedion[12] identified pest infestation as the major (83.9 and 53.5%) constraint of snail farming in Akwa Ibom and Edo States of Nigeria, respectively.

Figure 5 reveals the time of the year with frequent mortality. Majority about 50% of the respondents identified dry season

Table 7: Distribution of snail farmers according to causes of mortality and other aspects

	Percentage of respondents per Subdivision					
Characteristics	Limbell	Buea	Muyuka	Limbe I	Tiko	Average (%)
Causes of sail dead						
Pest (termites)	56	29	25	50	50	41.83
Predators	22	0	50	0	0	14.44
Hot weather	11	14	0	0	0	5.08
Unknown causes	11	57	25	50	50	38.65
Seek for the help of a specialist						
Yes	89	29	50	0	0	33.49
No	11	71	50	100	100	66.51
If so, Which specialist						
Veterinary nurse	56	21	25	0	0	20.40
Snail consultant	11	0	25	0	0	7.22
Zoo technician	11	0	0	0	0	2.22
Agric technician	0	7	0	0	0	1.14
Project sponsors	11	0	0	0	0	2.22
None	11	71	50	100	100	66.51
Frequency of intervention						
Monthly	33	0	0	0	0	6.67
Occasionally	44	21	50	0	0	23.17
Quarterly	11	7	0	0	0	3.65
None	11	71	50	100	100	66.51
Area of intervention						
Housing and feeding	0	7	25	0	0	6.43
Housing, feeding, reproduction and health	89	14	25	0	0	25.63
None	11	79	50	100	100	67.93
If no, why						
Not aware	11	29	50	50	100	47.94
No time	0	0	0	50	0	10.00
No reason	89	29	50	0	0	33.49
Not necessary	0	43	0	0	0	8.57

Table 8: Repartition of snail farmers according to constraints effecting snail production

	Percentage of respondents per subdivision					
Constraints	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Predator	16	26	25	0	0	13.40
Pest attack	22	26	25	50	50	34.60
Lack of finance	11	14	0	0	0	5.00
Climate change	0	14	0	0	0	2.80
Lack of animal supply	0	10	25	0	0	7.00
Lack of techniques	26	0	25	50	0	20.20
unavailability of formulated feed to buy	10	0	0	0	50	12.00
Slow growth rate	15	10	0	0	0	5.00

as the time where mortality is frequent while about 43% had no idea. This may be because pest infestation is high during the dry season and also because the dry season creates unfavorable conditions for snails' survival, especially high temperatures and low humidity. Another reason may be because only 33.49% of the farmers seek for the help of a specialist (Table 7). Majority (20.40%) of these specialists are veterinary nurses working in the various Zootechnical Centres located in the zone of study. The frequency of intervention of these specialists is outlined in Table 7 with occasionally being the most represented (23.17%) and the most area of intervention was housing, feeding, reproduction and health (25.63%).

Moreover, the table shows that majority (47.94%) of those who do not seek the help of specialists is because they are not aware of their existence. As earlier mention, these farmers are encouraged to join CIGs and should equally visit the nearest Zootechnical Center in case they need help.

Constraints and prospect

Constraints: The farmers identified so many challenges to snail production. Following Table 8, pest was identified as the most important (34.60%), followed by lack of techniques (20.20%) and predator (13.40). Ogogo *et al.*[19] and Ndah *et al.*[23] also reported pest attack and predator as one of the constraints to snail production in Akwa Ibom of

Table 9: Distribution of farmers according to prospect of snail farming

	Percentage of respondents per subdivision					
Characteristics	Limbe II	Buea	Muyuka	Limbe I	Tiko	Average (%)
Prospect						
Increase livestock	11	0	0	0	0	2.22
Maintain livestock	11	0	0	0	0	2.22
No longer raising	11	0	0	0	0	2.22
No prospect	67	100	100	100	100	93.00

Nigeria and in the South West Region of Cameroon respectively.

Prospects: Table 9 present the distribution of farmers according to prospect of snail farming.

It appears from the table that only those from Limbe II have the prospects to increase livestock (2.22%), maintain livestock (2.22%) or no longer raising. This may be because of the various difficulties outlined by the farmers. Thus making the future of the other snail farms were unknown[23]. This further explains that snail farming is mostly considered as a secondary or even tertiary activity, part time activity[23,24].

CONCLUSION

Based on the findings of the zootechnical characteristics of snail husbandry carried out in Fako Division, South West Region of Cameroon, it appears that the major management system practiced by snail farmers was semi intensive system with trench pens as the principal housing type. Most of the farmers reared *Archachatina marginata* gotten from purchases and from the wild. Herd size varies from 50 to more than 500. Minority are trained in snail farming. Majority of the respondents fed their snails on a daily basis and particularly in the morning. Farmers should take great care by avoiding or removing of all materials that can cause harms to the snails or attracts pest/predator into the pen. The researcher develop most efficient method for raising snails and selected and supplied initial breeding stock by monitoring reproduction and stocking rates. There is a need for extension units in the study area to organize training workshops and seminars for snail farmers on best practices of snail production. Such workshops and seminars will go a long way to curb most of the problems encountered by the snail farmers.

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