

Capacity Building Needs of Employment-Ready Graduates of Senior Secondary Schools in Cricket (*Acheta Domestica*) Production Enterprise for Self-Reliance in Benue State, Nigeria

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Abstract: This study determined capacity building of employment- ready graduates of senior secondary schools in cricket production enterprise for self-reliance in Benue state, Nigeria. Three research questions were answered and three hypotheses tested for the study. Survey research design was used for the study. The population for the study was 87 participants comprising 64 Agricultural Science Teachers and 23 Agricultural Extension Agents. All the population was used because it was small and manageable for the researchers to handle. Cricket Production Enterprise Questionnaire (CPEQ) was validated by three experts and used for data collection. Cronbach Alpha formula was used to determine the reliability of the CPEQ items, which gave a reliability index of 0.86. Three research assistants were trained and involved in the administering and retrieving the CPEQ. Data collected were analyzed using arithmetic mean for answering the research questions and t-test statistic for testing the null hypotheses at 0.05-level of significance. It was found that employment-ready graduates required 15-breeding and feeding operations, 23-harvesting and collection operation and 24-processing and marketing operation. It was recommended among others that National Directorate of Employment (NDE) should use the findings from the study to train-employment-ready graduates of senior secondary schools in Benue state for self-reliance, employment graduates should be given soft loans to encourage commercial cricket production as this will increase their income and senior secondary school teachers should seek more training on cricket production to provide effective training to students in senior secondary schools.

Keywords: *Capacity building, employment-ready graduates, senior secondary schools, cricket, production, enterprise, self-reliance, Benue state.*

Introduction

Capacity building is an effort geared towards improving an individual's level of knowledge, skills and attitude required in a given task. Capacity building according to Idolor, Ifeanyi, Ebireket and Freedman (2022), is the effort geared towards improving the level of knowledge, skills and attitudes possessed by an individual for proficiency in a given task or job. It involves putting capacity in the form of activities that strengthen an organization and help it better fulfill its set mission. Capacity building as explained by Anjov (2015), is the process of developing and strengthening the skills, instincts, abilities and resources that are needed to survive, adapt and thrive the fast changing world of technology. In the context of this study, capacity building is the

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process developing and strengthening the skills, instincts, abilities and resources of employment-ready graduates of senior secondary schools and imparting appropriate knowledge, skills, system, attitude and resources that will enable them effectively and efficiently go into cricket production enterprise for self-reliance.

Secondary school is an educational institution where the second stage of the three schooling periods known as secondary education is usually compulsory up to a specified period. It follows elementary or primary education, and is sometimes followed by university (tertiary) education (National Policy on Education, NPE, 2004). There are different types of secondary school and the language used varies around the world, children usually go to secondary school between the age of 11 to 12 years and end between the ages of 16 to 18 years, although there are considerable variations from country to country. Secondary school graduates are those students who have completed their six (6) years in the secondary school and are ready to advance in their studies (NPE, 2004). Employment-ready graduates of senior secondary schools are those individuals that have acquired the basic rudimentary skills they need to be employed in any occupation including cricket production for self-reliance.

Enterprise according to Anjov and Mojekwu (2016) is an activity or project that produces services or produce goods and services. There are essentially two types of enterprise, business and social enterprise. Business enterprises are run to make a profit for private individual or group of individuals, which include small businesses. On the other hand, the social enterprise functions to provide services to individuals and groups in the community's especially employment-ready graduates of secondary schools in cricket production in Benue state.

Cricket (*Acheta domestica*) belongs to the kingdom: *Animalia*, Phylum: *Arthropoda*, Class: *Insect*, order: *Orthoptera*, sub-order: *Ensifera*, super-family: *Glylloidea*, family: *Gryllidae laicherting* are insects related to bush crickets, and, more distantly, to grasshoppers (Ayieko et al., 2016). According to Hanboonsong and Durst (2020), the *Gryllidae* have mainly cylindrical bodies, round heads, and long antennae. Behind the head is a smooth, robust pronotum. The abdomen ends in a pair of long cerci (spikes); females have a long, cylindrical ovipositor. The hind legs have enlarged femora (thighs), providing power for jumping. The front wings are adapted as tough, leathery elytra (wing covers), and some crickets chirp by rubbing parts of these together. The hind wings are membranous and folded when not in use for flight; many species, however, are flightless (Thia Agricultural Standard TAS, 2017).

Cricket is a cold blooded insect that live in moist or damp places under logs or rocks. They are omnivorous scavengers that feed on both animal and plant matter. Occasionally, they exhibit or display predatory behavior upon the crippled or weak crickets or when food source is irregular and they reproduce asexually and lay eggs in moist medium. The body of a cricket is divided into three segments: the head, thorax and abdomen, an adult cricket is about 2-3cm in body length and weighs an approximately 1gram (Orinda et al., 2020). Crickets are mainly nocturnal, and are best known for the loud, persistent, chirping song of males trying to attract females, although some species are mute. The singing species have good hearing, via the tympani (eardrums) on the tibiae of the front legs. Crickets are known for their nutritional and economic importance and are found to be high in crude protein content, amino acids, and minerals (GREEiNSECT Project, 2017).

Nutritionally, crickets contains 66.6% Crude Protein (CP), nutritional parameters of cricket by dry weight-Ash 4%, fat 22%, calcium (mg/100g) 132, phosphorus (mg/100g) 957, magnesium (mg/100g) 109, sodium (mg/100g) 435, potassium (mg/100g) 1,127, iron (mg/100g) 6.27, zinc (mg/100g) 21.8, and copper (mg/100g) 2.01 USDA in Orinda, et al., (2020). Crickets are easily

digestible and provide excellent roughage for insectivorous pets as animals in rehabilitation. In addition to their obvious nutritional value, crickets play a vital role in stimulating an animal's natural hunting instincts and improving its quality of life. Crickets are suitable for mass rearing, multiplies quickly and form large populations, have a low risk of zoonotic diseases, have an extremely high feed conversion ratio, and are simple and inexpensive to breed (Mukherjee & Mukherjee, 2022).

Crickets often appear as characters in literature, The Talking Cricket features in Carlo Collodi's 1883 children's book, *The Adventures of Pinocchio*, and in films based on the book. The eponymous insect is central to Charles Dickens's 1845 *The Cricket on the Hearth*, as is the chirping insect in George Selden's 1960 *The Cricket in Times Square*. Crickets are celebrated in poems by William Wordsworth, John Keats, and Du Fu (Van et al., 2013). Van et al. (2013) maintained that crickets are kept as pets in countries from China to Europe, sometimes for cricket fighting. Crickets are efficient at converting their food into body mass, making them a candidate for food production. They are used as food in Southeast Asia, where they are sold deep-fried in markets as snacks. They are also used to feed carnivorous pets and zoo animals. In Brazilian folklore, crickets feature as omens of various events (Van et al., 2013).

Cricket farming is relatively easy to manage, requires little time and few inputs, and produces outputs quickly. The guiding principles for good cricket farming is to produce high-quality edible crickets from healthy insects, using management practices that are sustainable from economic, social and environmental perspectives (Hanboonsong & Durst, 2020). According to a cricket seller at Wurukum Market Makurdi, Mrs. Iorpuu, Nguemo, Mbaember said that she has been in the business for more than ten (10) years, and that the effort has been rewarding. Cricket business has been a very rewarding one for me. It is through this business that I have been taking care of my family after my husband retired from the Benue State Civil Service Commission (BSCSC). When asked by the researchers on how much she sales crickets, Mrs. Nguemo, said she sells 1kg of cricket at ₦3, 500, with the aforementioned importance of crickets, employment-ready graduates of senior secondary schools can go into its production for self-reliance.

Purpose of the Study

The purpose of this study was therefore, to determine capacity building needs of employment-ready graduates of senior secondary schools in cricket production enterprise for self-reliance in Benue state, Nigeria. Specifically, the study sought to determine capacity building of employment-ready graduates of senior secondary schools in:

- breeding and feeding operation;
- harvesting and collection operation; and
- processing and marketing operation

Research Questions

- What are the capacity building needs of employment-ready graduates of senior secondary schools in cricket breeding and feeding operation?
- What are the capacity building needs of employment-ready graduates of senior secondary schools in cricket harvesting and collection operation?
- What are the capacity building needs of employment-ready graduates of senior secondary schools in cricket processing and marketing operation?

Hypotheses

The following null hypotheses were formulated for the study and tested at 0.05 level of significance.

- **H₀₁:** There is no significant difference in the mean ratings of Agricultural Science Teachers and Agricultural Extension Agents on capacity building needs of employment-ready graduates of senior secondary schools in cricket breeding and feeding operation.
- **H₀₂:** There is no significant difference in the mean ratings of Agricultural Science Teachers and Agricultural Extension agents on capacity building needs of employment-ready graduates of senior secondary schools in cricket harvesting and collection operation.
- **H₀₃:** There is no significant difference in the mean ratings of Agricultural Science Teachers and Agricultural Extension Agents on capacity building needs of employment-ready graduates of senior secondary schools in cricket processing and marketing operation.

Methodology

Three research questions were answered and three hypotheses tested at 0.05 level of significance for the study. The survey research design was used for this study. The design was considered appropriate because the views of a representative of the respondents were obtained using a questionnaire and the findings were generalized upon the entire population. The study was carried out in Benue state. The population of the study was 87 respondents comprising 64 Agricultural Science Teachers and 23 Agricultural Extension Agents. The opinions of employment-ready graduates were not sought because the researchers wanted to build their capacity and it is the teachers and extension agents who are in a better position to provide the needed information on them and not employment-ready graduates themselves. All the population was used because it was small and manageable for the researchers to handle. An instrument titled: *Cricket Production Enterprise Questionnaire (CPEQ)* was structured by the researchers from literature reviewed and used for data collection. The questionnaire had part A and B. Part A was used to obtain information on personal data of the respondents. Part B was divided into 3 sections of breeding and feeding operations, harvesting and collection operation, and post-harvesting and processing operation with different response options. Each of the response options had a corresponding value of 4, 3, 2 and 1 respectively. The draft copies of the questionnaire were given to three experts; one from the Department of Animal Production, one from the Department of Vocational Agriculture and Technology Education and one from the Department of Agricultural Extension, all from the Joseph Sarwuan Tarka University Makurdi. Thirty copies of CPEQ were administered to agricultural science teachers and agricultural extension agents in Benue state and used to establish the reliability of CPEQ items, which gave a reliability coefficient of 0.86, indicating that the items were reliable for the study.

Three research assistants who were familiar with the three Agricultural Education Zones in the state were trained on how to administer and retrieve copies of the questionnaire from the respondents (Agricultural Science Teachers and Agricultural Extension Agents). Eighty-seven copies of the questionnaire were administered to the respondents and collected immediately after checking the items. The data was collected analyzed using arithmetic mean and standard deviation to answer the research questions and t-test statistic to test the null hypotheses at 0.05 level of significance. The average mean of 2.50 was used for decision-making, any item with a mean of 2.50 or above was regarded as a capacity-building item that is required while any capacity building item with a mean of less than 2.50 was regarded as not required. Any item whose standard deviation is between 0.00 and 1.98; indicated that the respondents were not far from the mean and

the opinion of one another. The hypotheses of no significant difference were upheld for any item whose t-calculated value was less than the t-table value of 1.98 level of significance and at 85 degree of freedom.

Results

The results for the study were obtained from the research questions answered and hypotheses tested through data collected and analyzed.

The data for answering research questions and testing hypotheses are presented in Table 1 to 3

Research Question 1

What are the capacity buildings of employment-ready graduates of senior secondary schools in cricket breeding and feeding operation?

Hypotheses 1

There is no significant difference in the mean ratings of Agricultural Science Teachers and Agricultural Extension Agents on capacity building of employment-ready graduates of senior secondary schools in cricket breeding and feeding operation.

Table 1: Mean Ratings and Standard Deviation of the Responses of Agricultural Science Teachers and Agricultural Extension Officers on Breeding and Feeding Operations Employment-ready Graduates of Senior Secondary Schools in Benue state (N= 87)

S/N	Item Statement (s)	Mean	SD	t-cal	Remarks; Ho
1.	Breed crickets in concrete cylinder or concrete black pen at the temperature of 20 °C or 28 °C – 30 °C	3.35	.93	.92	R, NS
2.	Breed in 80cm in diameter and 50cm high or 1.2 x 2.4 x 0.6 black pen	3.29	.95	.64	R, NS
3.	Use mosquito net to keep crickets in and predators out	3.32	.99	.50	R, NS
4.	Attach tape stripes to the top of the breeding container to prevent crickets to walk over edge	3.59	.73	.70	R, NS
5.	After male crickets stridulate, place bowls containing mixture of husk and sand and place in the breeding enclosure	3.41	.88	.63	R, NS
6.	Move bowls after 7-14days of egg laying to another breeding tank for incubation and hatching	3.59	.73	.55	R, NS
7.	Established new calories	3.44	.77	.66	R, NS
8.	Hatch about 7-10days in a stable temperature	3.41	.88	.39	R, NS
9.	Repeat reproduction cycle one to three generation	3.35	.99	.76	R, NS
10.	Make bedding from a layer of rice husks	3.24	1.06	.88	
11.	Feed crickets with commercial high protein animal feed(chicken feed) with 14 or 21% protein content)	3.24	1.03	.86	R, NS
12.	Feed crickets with 21% protein feed after hatching until 20 days old.	3.50	.88	.69	R, NS
13.	Feed crickets subsequently with 14 and 21% protein feed until harvesting at 45 days old.	3.71	.71	.97	R, NS
14.	Replace high protein feed with vegetables such as pumpkins, cassava leaves, morning glory leaves and watermelons a few days before harvesting	3.32	1.02	.86	R, NS
15.	Water source should always be filled and water replaced when it becomes dirty.	3.35	.93	.75	R, NS

Key: X=Mean, SD=Standard Deviation, t-cal, t=calculated, R= Required, NS= Not Significant

Data in Table 1 showed that the mean responses of the respondents on the 15-items ranged from 3.24 to 3.71, which were within the benchmark of 2.5 and above. This indicated that all the respondents (Agricultural Science Teachers and Agricultural Extension Agents) required all the 15-items on breeding and feeding operation. The standard deviation of all the 15-items on breeding and feeding operations ranged from .71 to 1.03, which indicated that the responses of the respondents were close to the mean and one another in their responses. The Table also showed that the 15-items had their P-value ranged from .39 to .92 and were greater than the alpha-value of 0.05. This implies that there was no statistical significant difference in the mean responses of

Agricultural Science Teachers and Agricultural Extension Agents on breeding and feeding operations of employment-ready graduates of senior secondary schools in Benue state. Therefore, the hypotheses of no significant difference in the mean responses of the respondents on harvesting and collection operations of employment-ready graduates of senior secondary schools in Benue state was not rejected.

Hypotheses 2

There is no significant difference in the mean ratings of Agricultural Science Teachers and Agricultural Extension Agents on capacity building needs of employment-ready graduates of senior secondary schools in cricket harvesting and collection operation.

Table 2: Mean Ratings and Standard Deviation of the Responses of Agricultural Science Teachers and Agricultural Extension Officers on Harvesting and Collection Operations Employment-ready Graduates of Senior Secondary Schools in Benue state (N= 87)

S/N	Item Statement (s)	Mean	SD	t-cal	Remarks; Ho
1.	Collect crickets after mating occurs (between 40 to 45days of the lifecycle in normal climate condition)	3.26	1.01	.59	R, NS
2.	Harvest crickets by lifting the egg cartons out of the container	3.32	.99	.76	R, NS
3.	Shake the crickets into a container	3.44	.84	.97	R, NS
4.	Refill the container after breeding containers are completely emptied	3.35	.90	.79	R, NS
5.	Keep the re-filled cricket containers back in safe enclosed place.	3.50	.88	.78	R, NS
6.	Harvest cricket at 30 to 45days after breeding and subsequent laying of eggs in nestling bowls.	3.29	.95	.92	R, NS
7.	Remove feed trays and water sources	3.38	.91	.73	R, NS
8.	Dismantle the central row of egg tray blinds	3.26	1.01	.45	R, NS
9.	Shake the crickets into a large collecting basins and remove the pen	3.36	.87	.67	R, NS
10.	Dismantle the blinds progressively around the edge of the pen.	3.35	.90	.87	R, NS
11.	Harvest crickets using triangular-shaped net or plastic bag	3.50	.81	.78	R, NS
12.	Harvest cricket and bag alive immediately and sell to buyers	3.26	.98	.94	R, NS
13.	Cool crickets by placing them in ice boxes or using layers of ice over the bags before transporting them from the farm	3.62	.73	.89	R, NS
14.	Boil crickets for 5minutes to sterilize them	3.48	.90	.76	R, NS
15.	Bag crickets in various sizes of plastic bags for transport	3.37	.96	.58	R, NS
16.	Surround the bagged crickets with ice packs and layers of ice between the bags during transportation.	3.41	.88	.64	R, NS
17.	Freeze crickets after boiling and store them in bags in cold storage before transporting to the market	3.44	.77	.83	R, NS
18.	Empty the cardboard egg tray blinds after crickets harvest	3.53	.73	.86	R, NS
19.	Sweep the floor and walls of the pens with a broom and brush to collect the dry faecal matter waste, left over feed and other waste material	3.44	.84	.84	R, NS
20.	Brush cardboard egg trays used for the cricket blinds.	3.35	.90	.81	R, NS
21.	Allow air to sun-dry the pens	3.53	.88	.83	R, NS
22.	Sterilize the egg trays used for the cricket blinds.	3.44	.88	.85	R, NS
23.	Clean feeding containers and water dispensers thoroughly with water and allow air-dry in the sun or heat treat.	3.65	.72	.64	R, NS

Key: X=Mean, SD=Standard Deviation, t-cal, t=calculated, R= Required, NS= Not Significant

Data in Table 2 showed that the mean responses of the respondents on the 23-items ranged from 3.26 to 3.65, which were within the benchmark of 2.5 and above. This indicated that all the respondents (Agricultural Science Teachers and Agricultural Extension Agents) required the 23-items on harvesting and collection operation. The standard deviation of the 23-items on harvesting and collection operations ranged from .72 to 1.01, which indicated that the responses of the respondents were close to the mean and one another in their responses. The Table also showed that the 5-items had their P-value ranged from .58 to .94, and were greater than the alpha-value of 0.05.

This implied that there was no statistical significant difference in the mean responses of Agricultural Science Teachers and Agricultural Extension Agents on harvesting and collection operation of employment-ready graduates of senior secondary schools in Benue state. Therefore, the hypotheses of no significant difference in the mean responses of the respondents on harvesting and collection operations of employment-ready graduates of senior secondary schools in Benue state was not rejected.

Hypotheses 3

There is no significant difference in the mean ratings of Agricultural Science Teachers and Agricultural Extension Agents on capacity building needs of employment-ready graduates of senior secondary schools in cricket processing and marketing operation.

Table 3: Mean Ratings and Standard Deviation of the Responses of Agricultural Science Teachers and Agricultural Extension Officers on Processing and Marketing Operations Employment-Ready Graduates of Senior Secondary Schools in Benue state (N= 87)

S/N	Item Statement(s)	Mean	SD	t-cal	Remarks; Ho
Processing Operation					
1.	Process quickly for consumption	3.53	.77	.88	R, NS
2.	Process at the cricket farm	3.62	.84	.79	R, NS
3.	Process through a cooperative of farmers (small scale or wholesaler enterprise).	3.35	.96	.62	R, NS
4.	Wash crickets in clean water without adding substance	3.50	.88	.50	R, NS
5.	Boil crickets in clean water for about seven minutes	3.59			
			.77	.58	R, NS
6.	Wash again in cold water.	3.53	.77	.70	R, NS
7.	Package crickets in plastic bags for longer preservation.	3.41	.91	.64	R, NS
8.	Weigh crickets to know their sizes.	3.50	.81	.39	R, NS
9.	Store crickets in cold room on ice or in cool units.	3.71	.71	.96	R, NS
10.	Store crickets in plastic bags or plastic tanks	3.74	.65	.94	R, NS
11.	Store crickets on ice temporary for 2-3 days	3.50	.85	.86	R, NS
12.	Store crickets for long-term with -18 to -20 °C which last up to a year.	3.41	.88	.86	R, NS
Marketing Operation					
13.	Advertise cricket to attract buyers	3.41	.88	.53	R, NS
14.	Fix appropriate prices based on their sizes	3.50	.77	.47	R, NS
15.	Sale crickets to buyers at farm gate or market	3.53	.88	.44	R, NS
16.	Transport crickets to buyers at door step	3.53	.88	.94	R, NS
17.	Provide good storage for crickets at farm gate or market				
		3.41	.91	.39	R, NS
18.	Open a sales book record for cricket sales	3.53	.88	.49	R, NS
19.	Record data on personnel management	3.50	.77	.64	R, NS
20.	Record cricket breed	3.47	.88	.70	R, NS
21.	Record production lot	3.65	.77	.77	R, NS
22.	Record farm management practices like feed and yield	3.35	.90	.63	R, NS
23.	Record disease control and treatments such as use of veterinary drugs and chemicals	3.65	.72	.55	R, NS
24.	Keep all the records for expansion of the business.	3.62	.73	.69	R, NS

Key: X=Mean, SD=Standard Deviation, t-cal, t=calculated, R= Required, NS= Not Significant

Data in Table 3 showed that the mean responses of the respondents on the 24-items ranged from 3.41 to 3.74, which were within the benchmark of 2.5 and above. This indicated that all the respondents (Agricultural Science Teachers and Agricultural Extension Agents) required all the 12-items on processing and marketing operations. The standard deviation of the 12-items on processing and marketing operations ranged from .72 to .96, which indicated that the responses of the respondents were close to the mean and one another in their responses. The Table also showed that the 12-items had their P-value ranged from .39 to .96 and were greater than the alpha-value of 0.05. This implied that there was no statistical significant difference in the mean responses of Agricultural Science Teachers and Agricultural Extension Agents on processing and marketing

operation of employment-ready graduates of senior secondary schools in Benue state. Therefore, the hypotheses of no significant difference in the mean responses of the respondents on processing and marketing operations of employment-ready graduates of senior secondary schools in Benue state was not rejected.

Discussion of Findings

Results in this study in Table 1 revealed that employment-ready graduates of senior secondary schools required 15-cricket production skills in breeding and feeding operations, because the respondents had mean rating for all items of 2.50 and above. They expressed their mean levels of performance of the cricket production skills, such that all the 12-items were rated between 3.24 – 3.71. Above confirmed that all identified cricket production skills were deemed important and required by employment-ready graduates in senior secondary schools in Benue state and so should be incorporated into senior secondary curriculum for other secondary school students to acquire the knowledge before graduation. This is in consonance of Obue (2013) in a study on competencies required by secondary school graduates on breeding, feeding and rearing of snail in Delta state where the skills in breeding include; identify the breeding season for snail, set up the breeding pen for snail, provide enough space for breeding stock among others and for feeding; identify types of feed for snail, identify sources of feed, provide water at all times, expose the snails to high intensity occasionally among others.

The result of this study in Table 2 showed that employment-ready graduates of senior secondary schools required 23-skills in collection and harvesting operations. *The collection skills are:* collect crickets after mating occurs (between 40 to 45 days of the lifecycle in normal climate condition), harvest crickets by lifting the egg cartons out of the container; shake the crickets into a container, refill the containers after breeding containers are completely emptied, keep the refilled cricket containers back in safe enclosed place. *The harvesting skills area:* harvest cricket at 30 to 45 days after breeding and subsequent laying of eggs in nestling bowls, remove feed trays and water sources, dismantle the central row of egg tray blinds, shake the crickets into a large collecting basins and remove the pens, dismantle the blinds progressively around the edge of the pens, harvest cricket using triangular-shaped net or plastic bag, harvest crickets and bag alive immediately and sell to buyers, cool crickets by placing them in ice boxes or using layers of ice over the bags before transporting them from the farm, boil crickets for 5 minutes to sterilize them, bag crickets in various sizes of plastic bags for transport, surround the bagged crickets with ice packs and layers of ice between the bags during transportation, empty the cardboard egg tray blinds after cricket harvest, sweep the floor and walls of the pens with broom and brush to collect the dry faecal matter waste, left over feed and other waste materials, brush cardboard egg trays used for the cricket blinds, allow air to sun-dry the pens, sterilize the egg trays used for the cricket blinds and clean feeding containers and water dispensers thoroughly with water and allow air-dry in the sun or heat treat. This study is corroborated by the findings of Asnath, Hotnida and Andika (2016); in a study on management practices in cricket farming, where skills in cricket farming include; prepare cages, cleaning of cages, collect crickets after mating, harvest crickets by lifting the egg cartons out of the containers, and feeding of newly hatched crickets among others.

The result of this study in Table 3 indicated that employment-ready graduates of senior secondary schools required 24-skills in processing and marketing operations. The processing and marketing skills are- *processing:* process quickly for consumption, process on the cricket farm, process through a cooperative of farmers (small scale or whole sale enterprises), wash crickets in clean water without adding substance, boil crickets in clean water for about seven minutes, wash again

in cold water, package crickets in plastic bags for longer preservation, weigh crickets to know their sizes, store crickets in cold room on ice or in cool units, store crickets in plastic bags or plastic tanks, store crickets in ice temporary for 2-8 days, and store crickets for long-term with -18 to -20 °C which last for up to a year. For *marketing*: advertise crickets to attract buyers, fix appropriate prices based on their sizes, sale crickets to buyers at farm gate or market, transport crickets to buyers at door step, provide good storage for crickets at farm gate or market, open a sales book record for cricket sales, record data on personnel management, record cricket breed, record production lot, record farm management practices like feed and yield, record disease control treatments such as use of veterinary drugs and chemicals and keep all records for expansion of the business. This study is agreement with the findings of Mukherjee and Mukherjee (2022); on small-scale breeding and harvesting of house cricket (*Acheta domesticus*) where they both outlined the skills in processing and marketing to include: processing: process quickly for consumption, and process on the cricket farm among others. For *marketing*: advertise crickets to attract buyers, fix appropriate prices based on their sizes, sale crickets to buyers at farm gate or market, transport crickets to buyers at door step, and provide good storage for crickets at farm gate or market among others.

Conclusion

The study established that employment-ready graduates of senior secondary schools in Benue state required 15-skills in breeding and feeding of crickets, 23-skills in harvesting and collection of crickets and 24-skills in processing and marketing of crickets.

Recommendation

Based on the results of the study, it was recommended that;

- National Directorate of Employment (NDE) should use the findings from the study to train employment-ready graduates of senior secondary schools in Benue state.
- Employment-ready graduates should be given soft loans to encourage commercial cricket production, as this will increase their income.
- Senior secondary school teachers should seek for more training on cricket production to provide effective teaching to students in senior secondary schools.
- Agricultural extension agents are advised to package all the 62-skills in cricket production into training manuals for employment-ready graduates in senior secondary schools and other persons willing to go into cricket production; and
- Skills acquisition centres should organize regular training for employment-ready graduates and other interested persons going into cricket production.

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