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PRODUCTION SKILLS REQUIRED BY SENIOR SECONDARY SCHOOL GRADUATES IN PIG PRODUCTION ENTERPRISE FOR ATTAINMENT OF ZERO HUNGER IN EKITI STATE

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Abstract
The study identified the production skills required by Senior Secondary School graduates in pig production enterprise for attainment of zero hunger in Ekiti State. Five research questions guided the study. The population of the study was 150 made up of 125 teachers of Agricultural Science and 25 Agricultural Extension workers in Agricultural Development programme in the state. There was no sampling, the entire population was involved in the study due to the manageable size of the population. A 54-item questionnaire was developed by the researchers and used for data collection. Four experts validated the instrument Cronbach Alpha (α) method was used to determine the reliability of the instrument and an internal consistency of 0.88 was obtained. The researchers and seven research assistants administered 150 copies of the instrument on the respondents and 132 copies were retrieved, a retrieval rate of 88%. Data collected were analyzed using mean and standard deviation to answer research questions. It was found out that senior secondary school graduates required 11 production skills items in planning for pig production, 9 production skills items in housing management of pigs, 10 production skills items in feeding of pigs, 13 production skills items in health management of pigs and 10 production skills items in marketing of pig and its products. Based on the findings it was recommended that the 53 production skills in pig production enterprise be packaged into training modules to train the senior secondary school graduates at various vocational centers in Ekiti State.

Keywords: Required, Production, Skills, Pig, Pig production Enterprise

Introduction

Pig production is a farming vocation or an enterprise in which pigs are raised for meat (pork) and economic purposes. Agri farming (2024) stated that production involves raising and managing pigs primarily for meat (pork) and money-making purposes. Also, Scispace (2023) refers to pig production as the process of raising and managing pigs for various purposes. Scispace continues that pig production involves the breeding, rearing and management of pigs to produce meat (pork), manure and other by-products. Moreover, Wikipedia (2024) stated that pig production is a branch of animal husbandry that involves raising and breeding of domestic pigs for food (pork, bacon, ham, gammon) and skins, and that pigs are amenable to different farming system such as intensive commercial, commercial free-range and extensive farming (being allowed to wander around villages) or kept in a simple pen outside the owner's house. Pig production in this study is a vocation or farming enterprise that involves rearing or management of pigs to market weight in which senior Secondary School graduate could be trained to acquire production skills.

Production skills according to Enterprise and Development glossary in Lawal et al (2017) are group of proficiency, dexterity and facilities identified for their application to work those results in the creation of goods and services. Similarly, Afribarry.com (2024) stated that production skills are basic elements in maintaining the production capacity of an organization, it is required to harness the human, material, money and assets of a production firm and

stay on top of the business. Afribarry (2024) further identified the following production skills for success in a production firm. Ability to: pay attention to details on operate and control equipment; work well with others; be flexible to a change; work with one's hand; observe and record events and to communicate effectively. Production skills in this study are various skills involved in the rearing and management of pigs to market weight in which senior Secondary School graduates needed training.

Pigs according to Neal (2014) are monagastrics animal that adapt to both rural and urban conditions. Pigs are very easy to manage because they roam during the day searching for food and come back home at night. They can be tethered and kept or housed in the make shift pens behind human dwelling. Neal (2024) stated further that Pigs are highly prolific producing 25-30 piglets in a year with the first farrowing at the age of 12 months. Pigs are resistant to disease and easy to manage animal, rearing pigs with feed stuff materials available in the environment can lead to income generation and provision of animal protein for the attainment of zero hunger. Pig production enterprise could be embarked upon by Senior Secondary School graduates if they were well trained to acquire skills and establish in it as a vocation.

Vocation as explained by America Psychological Association (2018) is an occupation or profession to which one is particularly suited, especially one involving a sense of mission or calling. Collins (2023) describes vocation as an occupation to which people are suited, trained or qualified. Vocation in the context of this study is the pig production enterprise. Vocational Training therefore according to Olaitan (2020) is a type of work training giving to individuals who probably are out of school or not privileged to go to school, but interested in acquiring some job skills for work in a particular vocation. Vocational Training in relation to this study is the training in pig production that should be given to Senior Secondary Schools graduate to acquire skills in profitable pig production for the attainment of zero hunger in Ekiti State.

Senior Secondary school graduates in Ekiti State are young boys and girls within age bracket (16-23) years who came out of Senior Secondary Schools and were unable to gain admission to tertiary institutions nor gainfully employed in any profitable work. The researchers observed a heavy turn-out of these Secondary School graduates year after year, leading to their high concentration in cities, towns and villages in Ekiti State and there is no tangible work for them to do for a living. Due to this, many of the girls are involved in trafficking to other African countries as prostitutes, while many of the boys were involved in yahoo and Yahoo plus in Ekiti State as announced through broadcasting station about three years ago. In order to help these young energetic secondary school graduates to be focused in life and be engaged in profitable activities, it is therefore necessary to determine production skills in pig enterprise required by these senior Secondary School graduates in Pig Production for the attainment of zero hunger in Ekiti State.

The production skills in pig enterprise required by senior Secondary School graduates could be achieved through the teachers of Agricultural science in Senior Secondary Schools who taught some of these secondary school graduates while in school and the Agricultural extension workers that are knowledgeable in Agriculture and saddled with the responsibility of disseminating agricultural information to farmers within the State.

Purpose of the Study

The purpose of this study therefore is to identify the production skills required by Senior Secondary School graduates in Pig Production for attainment of zero hunger in Ekiti State. Specifically, the study sought to:

i. determine planning skills of Senior Secondary School graduates in planning for pig production for attainment of zero hunger;

ii. identify production skills required by Senior Secondary School graduates in housing management of pigs;
iii. ascertain production skills required by senior Secondary School graduates in feeding of pigs;
iv. determine production skills required by Senior Secondary School graduates in health management of pigs; and
v. identify production skills required by Senior Secondary School graduate in marketing of pigs and its products.

Research Questions

1. What are the planning skills in Pig production required by Senior Secondary School graduates for attainment of zero hunger?
2. What are the housing management skills in pig production required by Senior Secondary School graduates?
3. What are the feeding management skills in pig production required by Senior Secondary School graduates for profitable pig enterprise?
4. What are the health management skills in pig production required by Senior Secondary School graduates?
5. What are the marketing skills in pig production required Senior Secondary School graduates for success in pig production enterprise?

Methodology

Descriptive survey design was employed for the study. Oyinlana, *et al.* (2024) stated that descriptive survey research design is to easily collect data on public opinion or existing issues through the use of questionnaire. The design was appropriate for the study because data was collected from a sample of the respondents through the use of questionnaire and the result was used as the general opinion of the entire population. The study was conducted in Ekiti State. The population of the study was 150 made up of 125 Teachers of Agricultural Science in teaching Senior Secondary Schools in Ekiti State and 25 Agricultural Extension Workers working with Agricultural Development Project (ADP) in the State. The entire population was involved in the study. Therefore, there was no sampling due to the manageable size of the population.

A 54-item questionnaire on pig production skills required by senior Secondary School graduates was developed (QPPS) by the researchers and used to collect data for the study. The questionnaire was divided into two sections; section A contained information on the personal data of the respondents while section B contained information on pig production skills. Required by Senior Secondary School graduates. Section B was further divided into 5 parts. Part 1 contained planning skills for Pig production, part 2 contained housing management skills in pig production, part 3 contained feeding management skills of pigs, part 4 contained health management skills of pigs and part5 contained marketing skills in pig production. The (QPPS) had four response options of Highly Required (HR). Moderately Required (MR), Slightly Required (SR) and Not Required (NR) with correspondent values of 4, 3, 2, and 1 respectively.

The instrument (QPPS) was validated by four experts, two of the validators were from Agricultural Education unit in the Department of Science Education, Federal University of Kashere. While the remaining two were from Department of Animal Science in the same University. The suggestion of the validators was taken into consideration to effect necessary correction before producing the final instrument that was used to collect data for the study. The reliability of the instrument was determined using cronbach Alpha (α) method and the internal consistency of 0.88 was obtained. The high value of 0.88 shows that the instrument was highly reliable.

The researchers and seven research assistance administered 150 copies of the questionnaire on the respondents and 116 copies were retrieved from teachers of Agricultural Science while 16 copies were retrieved from Agricultural Extension

Workers, in all 132 copies were retrieved out of 150 copies given a retrieval rate of 88% which was appropriate for the study. Mean and Standard Deviation were involved in analyzing data collected for study to answer the research questions. The cutoff point was 2.50; therefore, any item with the mean of the value of 2.50 and above was regarded as required, while any item with a mean value below 2.50 was regarded as not required.

Results

Research Question 1

What are the planning skills in Pig production required by Senior Secondary School graduates for attainment of zero hunger?

Result of the answer to Research Question 1 are presented in Table 1.

Table 1

Mean Ratings of The Responses of Agricultural Science Teachers and Agricultural Extension Workers on Planning Skills for Pig Production Required by Senior Secondary School Graduates (N = 132)

S/N	Planning Skill Items in Pig Production Enterprise	$\bar{x}$	SD	Remark
1.	Formulate specific objectives for pig production	3.11	0.74	RQ
2.	Review the objective of Pig production based on charges in market demand and supply	3.03	0.85	RQ
3.	Draw up programme plan for Pig production	3.07	0.85	RQ
4.	Decide where to locate the piggery	3.29	0.93	RQ
5.	Procure inputs for Pig production	2.96	0.63	RQ
6.	Identify suitable management required for Pig production	3.02	0.96	RQ
7.	Identify relevant personnel to assist in Pig production	3.21	0.71	RQ
8.	Prepare budget for Pig product	3.36	0.91	RQ
9.	Identify the breeds OF Pigs to rear	3.50	0.88	RQ
10.	Identify market for Pig produce and products	2.88	0.99	RQ
11.	Identify various records to keep in Pig production	3.10	0.75	RQ

Key: Mean ($\bar{x}$), Standard Deviation (SD), RQ = Required, NRQ = Not Required

Table 1 revealed that the mean values of the respondents on planning skills for Pig production range from 2.88 to 3.50 and were above the cutoff point of 2.50. This indicated that both the Agricultural Science Teachers and Extension Workers agreed that the Senor Secondary School graduates required the 11 items in planning for Pig production. It was further revealed in table 1 that the Standard deviation of the 11 items in planning for Pig production ranges from 0.63 to 0.99 and were low, this indicated that the respondents were not too far from the mean and from one another in their responses

Research Question 2

What are the housing management skills in pig production required by Senior Secondary School graduates?

Result of the answer to Research Question 2 are presented in Table 2.

Table 2
Mean Ratings of the Responses of Agricultural Science Teachers and Agricultural Extension Workers on Housing Management Skills in Pigs Production Required by Senior Secondary School Graduates (N = 132)

S/N	Housing Management Skill Items in Pig Production	$\bar{x}$	SD	Remark
1.	Clean troughs regularly for sanitary purposes	3.19	0.83	RQ
2.	Provide proper spacing for weaned piglets	3.17	0.68	RQ
3.	Provide play areas for pigs in the Pen	2.92	0.89	RQ
4.	Clear and remove dungs and waste from the pen on daily basis	3.23	0.78	RQ
5.	Make available in the pen both feeding and water troughs	3.41	0.71	RQ
6.	Protect boars by fencing the areas for play	3.40	0.68	RQ
7.	Construct a very strong pens for the boars	3.22	0.76	RQ
8.	Provide adequate ventilation for growers	3.08	0.87	RQ
9.	Keep appropriate number of growers in each pen	3.27	0.78	RQ

Key: Mean ($\bar{x}$), Standard Deviation (SD), RQ = Required, NRQ = Not Required

Table 2 revealed that the mean values of the respondents (Teachers and Extension Workers) on housing management skill in Pig production ranges from 2.92 to 3.41.50 and were above the cut off points of 2.50. This implies that both the Agricultural Science Teachers and Extension Workers agreed that the Senior Secondary School graduates require the nine skill items in housing management of pigs. It was also revealed in table 2 that the Standard deviation of the 9 items in housing management of Pigs ranges from 0.68 to 0.89 and were low, this indicated that the respondents were not too far from the mean and from one another in their responses.

Research Question 3
What are the feeding management skills in pig production required by Senior Secondary School graduates for profitable pig enterprise?

Result to answer Research Question 3 are presented in Table 3.

Table 3
Mean Ratings of the Responses of Agricultural Science Teachers and Agricultural Extension Workers on Feeding Management Skills in Pigs Production Required by Senior Secondary School Graduates (N = 132)

S/N	Feeding Management Skill Items in Pig Production	$\bar{x}$	SD	Remark
	Ability to:			
1.	Include antibiotics in weaners and growers' rations	3.60	0.64	RQ
2.	Provide protein and concentrate diet to the growers	3.41	0.71	RQ
3.	Provide fresh cool drinking water to Pigs on regular basis	3.66	0.57	RQ
4.	Give 2.70kg of concentrate feed daily to sows	3.79	0.47	RQ
5.	Supplement feeding of Pigs with household waste	3.17	0.76	RQ
6.	Provide 2.30kg of balanced ration for boars less than 15 months of age	3.20	0.84	RQ
7.	Feed boars on individual basis in the pen	3.63	0.65	RQ
8.	Feed boars 2 times daily for body building	3.51	0.72	RQ
9.	Feed finishers more than 15 months with 3.0kg	3.70	0.58	RQ
10.	Provide bulky feed ingredients like vegetables as roughages to finishers and fatteners	3.56	0.70	RQ

Key: Mean ($\bar{x}$), Standard Deviation (SD), RQ = Required, NRQ = Not Required

Table 3 revealed that the mean values of the respondents on the feeding management skills in pig production ranges from 3.17 to 3.79 and were above the cut-off

points of 2.50. This indicated that both the Agricultural Science Teachers and Extension Workers agreed that the Senior Secondary School graduates required the tens skill items in feeding of Pigs. It was revealed in table 3 that the Standard deviation of the 10 items in feeding of Pigs ranges from 0.47 to 0.84 and were low, this implies that the respondents were not too far from the mean and from one another in their responses.

Research Question 4

Determine production skills required by Senior Secondary School graduates in health management of pigs.

Result to answer Research Question 4 are presented in Table 4.

Table 4

Mean Ratings of the Responses of Agricultural Science Teachers and Agricultural Extension Workers on Health Management Skills in Pigs production Required by Senior Secondary School Graduates (N = 132)

S/N	Health Management Skill Items in Pig Production	$\bar{x}$	SD	Remark
1.	Purchase healthy weaned Pigs from reputable sources	3.30	0.79	RQ
2.	Keep newly purchase weaned pigs three weeks away from other Pigs	3.32	0.72	RQ
3.	Maintain adequate sanitation in pigs pen and its environment to prevent ill-health	3.25	0.69	RQ
4.	Place foot dips at the entrance of the pig pens	2.96	0.91	RQ
5.	Protect feed and water from contaminants	3.09	0.74	RQ
6.	De-worm pigs regularly	2.90	0.88	RQ
7.	Disinfect disease infected premises with appropriate chemical	3.17	0.75	RQ
8.	Identify any common pest and disease of pigs	2.75	0.95	RQ
9.	Eradicate pigs pest such as ticks, lies and flies	3.31	0.76	RQ
10.	Observe pigs closely to identify any symptoms	3.32	0.84	RQ
11.	Diagnose pig diseases for proper treatment	3.65	0.59	RQ
12.	Isolate and treat sick pig at veterinary centre	3.21	0.72	RQ
13.	Dispose any dead pig to prevent further infections	2.23	0.65	NRQ
14.	Keep proper records of health management of pigs	3.61	0.65	RQ

Key: Mean ($\bar{x}$), Standard Deviation (SD), RQ = Required, NRQ = Not Required

Table 4 shows that the mean values of the respondents on items 1 to 12 and 14 ranges from 2.75 to 3.65 and were above the cut-off points of 2.50. This indicated that both the Agricultural Science Teachers and Extension Workers agreed that the Senior Secondary School graduates require the 13 health management skill items in pig production. But Table 4 revealed that item 13 had a mean value of 2.23 and was below the cut-off points of 2.50, this indicated that both Agricultural Science Teachers and Extension workers agreed that Senior Secondary School graduates did not require this health management skill in pig production. Table 4 further revealed that the standard deviation of all the 14 items ranges from 0.59 to o.95 and were low, this indicated that the respondents were not too far from the mean and from one another in their responses.

Research Question 5

What are the marketing skills in pig production required Senior Secondary School graduates for success in pig production enterprise?

Result to answer Research Question 5 are presented in Table 5.

Table 5

Mean Ratings of the Responses of Agricultural Science Teachers and Agricultural Extension Workers on Marketing Management Skills in Pigs production require by Senior Secondary School Graduates (N = 132)

S/N	Marketing Management Skill Items in Pig Production	$\bar{x}$	SD	Remark
1.	Determine market weight o pigs by weighing regularly	3.60	0.63	RQ
2.	Locate market for pigs and its products	3.64	0.64	RQ
3.	Advertise pig and its product to promote patronage	2.91	0.91	RQ
4.	Fix prices for different grades of pigs and its products	2.91	0.93	RQ
5.	Negotiate for highest bidders in the sales of pigs and its products	2.96	0.63	RQ
6.	Package pigs and its products for markets	3.61	0.67	RQ
7.	Select means of transporting pigs and its products to customers	3.39	0.84	RQ
8.	Distribute pigs and its products to customers at their base	3.21	0.72	RQ
9.	Sale pigs and its products at maximum profits	3.09	0.74	RQ
10.	Keep records of sales of pigs and its products	2.96	0.91	RQ

Key: Mean ($\bar{x}$), Standard Deviation (SD), RQ = Required, NRQ = Not Required

Table 5 revealed that the mean values of the respondents on all the 10 items ranges from 2.57 to 3.64 and were above the cut-off points of 2.50. This indicated that both the Agricultural Science Teachers and Extension Workers (respondents) agreed that the Senior Secondary School graduates require the 10 skill items in marketing management of pigs and its products. Table 5 also revealed that the Standard deviation of all 10 items ranges from 0.63 to 0.99 and were low, this implies that the respondents were not too far from the mean and from one another in their responses.

Discussion of Findings

The findings of this study revealed that both Agricultural Science Teachers and Extension Workers agreed that the Senior Secondary School Graduates require 11 skill items in planning for pig production, 9 housing management skill items in pig production, 10 skill items in feeding of pigs, 13 skill items in health management of pigs, and 10 skill items in marketing of pigs and its products. The findings of this study are in agreement with the findings of Oyegbami and Fagbamigbe (2024) in a study carried out on Agripreneurial competencies needed by undergraduates in Sorghum production for sustainable food security in Biu Local government Area of Borno State Nigeria where it was found out that the undergraduates needed 14 Agripreneurial competencies in pre-planting and planting operations of sorghum production, 12 Agripreneurial competencies in post planting operations of Sorghum production and 19 Agripreneurial competencies in harvesting and marketing of operations of Sorghum produce. Also, the findings of this study on production skills required by senior Secondary School graduates in pig production was in consonance with the findings of Asogwa et al (2020) in a study carried out on Bio-security measures required for increasing pig survivability for food security and economic recovery in Abia state where it was found out that both the pig farmers and Extension workers agreed that 13 Bio-security isolation measures, 8 bio-security traffic control measures, 11 Bio-security sanitation measures and 9 Bio-security pest control measures were required for increasing pig survivability for food security in Abia State.

Moreover, the findings of this study was in conformity with the findings of Agbo, *et al.* (2020) in a study carried out on capacity building needs of Agricultural Science teachers in teaching Broiler production in Secondary schools for economic recovery in Benue State where it was found out that teachers of Agricultural Science required capacity building in teaching 17 items in housing, 17 items in

brooding, 15 items in management of feed and feeding and 20 items in management broiler production in Benue State for economic recovery. The findings of this study corroborated with the findings of Hassan and Usman (2020) in study carried out on competency training needs of carpentry and joinery trade teachers for improvisation of instructional material where it was found out that teachers of carpentry and joinery needed 5 competency training in planning and designing of improvised instructional material, 5 constructing improvised instructional material and 5 utilization of improvised instructional materials skills.

Conclusion and Recommendation

In a Ekiti State, there is heavy turnout of Senior Secondary School graduates year after year which has led to a heavy concentration of these young energetic boys and girls in cities, towns and villages of the state as many of them could not get admission to tertiary institutions neither were they employed in any profitable work. Due to the idleness of these Senior Secondary School graduates, they become instruments to perpetrate all forms of evil in the state. But these young people could be helped to be focused in life and be engaged in profitable activities through pig production enterprise for attainment of zero hunger in the state. Agricultural Science Teachers and Agricultural Extension workers therefore agreed that these Senior Secondary School graduates required Vocational Training in pig production identified by this study.

It was recommended based on the findings of this study that the identified 53 pig production skills be packaged into training modules by the government for training of the Senior Secondary School graduates in pig production at the various Vocational centres in the State.

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