

Competencies Required by National Diploma Graduates of Agriculture for success in Housing and Health Management of Poultry Enterprise in Bauchi State, Nigeria

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Abstract

The study develops competencies required by National Diploma Graduates of agriculture for success in housing and health management of poultry production enterprise in Bauchi State, Nigeria. Survey research design was adopted for the study. The population of the study was 105 respondents (65 poultry managers and 40 instructors). Mean was employed to answer the research questions while t-test statistics was used to test the hypothesis. A structured questionnaire tagged "Competency item Questionnaire in Poultry Production" (CIQPP) was used for data collection. The instrument was validated by three experts for face and content validity. Cronbach Alpha was used to determine the reliability of the instrument and a reliability coefficient of 0.76 was established. Findings from the study revealed that graduates require all the competency items in housing and health management of poultry (chicken) production. It was recommended amongst others that poultry managers should organize regular training for graduates to enhance mastery of these competencies for sustainable development in Bauchi State.

Key words: Graduates of agriculture, poultry production, competencies

Introduction

Colleges of Agriculture are monotechnic institutions established by the Federal Government through the National Board for Technical Education with the mandate to run amongst others National Diploma and Higher National Diploma in Animal production programme. Federal Republic of Nigeria (2004) affirms that mono-technic are single subject technological institutions for specialized programs such as agriculture, fisheries, forestry, surveying, amongst others. National Board for Technical Education (2005) has laid down standards of skills and competencies to be attained by diploma of colleges of agriculture through evolving curricula for existing programs especially poultry production as an integral part of animal production. The skills and competencies acquired by diploma graduates enable them to be enterprising and self-reliant.

The teaching of agricultural education dates as far back as existence of mankind. Agriculture in the opinion of Nwabuisi and Ekele (2002) is the art, science and business of systematic production of useful plants and animals for man's use through concerted human efforts. Man needed to transfer the knowledge and skills he had in agriculture to his off springs. As a science, agriculture is the application of basic scientific plants and animals, and better production of livestock's and crops for the use of man. The concept of agriculture as a science extends beyond the farm as it may also be conducted in the laboratory, classroom or and any other enabling environment. As a business, agriculture is the production and management of crops and livestock products for the use of man, and the disposal of these products by marketing. Mordern agriculture thus requires competent personnel's to adopt skill-based management techniques for its success.

In the opinion of Rinder and Dooley (2002), a successful agricultural education graduate draws on a variety of academic field, knowledge base and contextual applications to achieve occupational goal. The authors assert that graduates will rely on a unique bundle of knowledge, skills and attitudes that are acquired and strengthened through life experiences and education. Mordern poultry production requires competency on the part of graduates for management and marketing of poultry birds. Omole, Fapohunda, Osayomi and Ajayi (2006) stated that poultry production refers to the domesticated feathered birds that are reared for meat, feathers and

eggs. It includes chicken, ducks, geese, guinea fowls, and turkey. In the context of this study, emphasis is on chicken as the most common reared domesticated birds in Bauchi State. Nwachukwu (2006) viewed competency as requirements that describe what the graduate of agriculture must demonstrate for successful completion of a programme. The author identified three areas of competencies in which graduates can be observed. Performance based competencies in which the learner demonstrate that he can do rather than just know, cognitive based competencies that relates to the intellectual skills and abilities that are expected of the learner, consequences based competencies, in which the learner is required to cause or bring about a change Ekele (2011) submitted that competency based education emphasis competencies required for successful entry into employment. In poultry production (animal production), graduates requires necessary knowledge, skills and attitudes to enhance their productive potentials. Ely in Olaosebikan (2007) explained that competencies are essential knowledge and skills obtainable in a profession or occupation and those which the professional in that field must possess and be able to demonstrate at optimal level of functioning. In this study, competencies relate to learning that involves demonstration of knowledge, skill and attitudes required in poultry production enterprise. Educational programme depicts real plan of what is to be done which requires manipulation and involve activities performed in vocational technical education. Programme is a structural, integrated teaching and learning arrangement within which learners are offered the opportunities to achieve credit (Roger &Smith, 2006).

However, the researcher observed that the large number of unemployed diploma graduates of agriculture is alarming and has reached a threatening dimension. The majority of these graduates have no source of income despite that one of the objectives of their training in the school was to equip them with competencies that will make them job providers in animal production on graduation. Besides, a few graduates who engaged themselves in animal production such as poultry production could not sustain it due cost of housing and health management. They hired contractors for their poultry house construction and maintenance and veterinary doctors for most health case without any personal trial even for disease prevention in their farm. On further enquiry by the research, it was learnt that the graduates of schools of agriculture in animal production were not exposed to practices in housing due to the fact the school poultry houses had been built neither would the schools administration build poultry houses every now and then to pass the students through the practical operations in house construction. In the same vein, the graduates while in the school, payed less attention in health management because it was believed that animal health care is within the responsibilities of the veterinary students and doctors. This showed that the graduates of schools of Agriculture were actually deficient in housing and health management of poultry from schools where they were trained. It was in bid to fill this deficiency that, this study was geared towards identification of competencies in housing and health management for success in poultry production enterprise in Bauchi State.

Purpose of study

The purpose of the study was to identify competencies required by National Diploma Graduates of agriculture for success in housing and Health management of poultry production enterprise in Bauchi State. Specifically, the study determines the knowledge and skill required by graduate in:

1. providing housing for poultry production
2. health management of poultry (chicken)

Research Questions

Two research questions were formulated to guide the study.

1. What are the competencies required by National Diploma graduates in providing housing for poultry production?
2. What are the knowledge and skills required by ND graduates for health management of poultry (chickens)?

Research Hypotheses

1. There is no significant difference between the mean rating of instructors and poultry managers on competencies required for providing housing for poultry production.
2. There is no significant difference between mean rating of instructors and poultry managers on competencies required for health management of poultry (chicken).

Methods

The study adopted a survey research design. Structured questionnaire was used as instrument to collect data from respondents. The population of interest for the study consisted of 105 respondents made up of two groups namely 65 poultry managers in Bauchi State and 40 instructors from college of agriculture in Bauchi State. Mean was employed to answer the research questions while t-test statistic was used to test the hypotheses. Any items with mean value of 2.50 were considered required. Structured questionnaire containing 18 items and tagged (Competency Item questionnaire in Poultry Production CIQPP) was used for the purpose of collecting data. The instrument was subjected to face and content validity by three experts from University of Agriculture Makurdi and College of Agriculture Yandev, Gboko all in Benue State. The Cronbach Alpha was used to determine the reliability of the instrument and a reliability coefficient of 0.76 was obtained.

Results

The results of the study were obtained from the data presented in table 1 and 2.

Table 1: Mean and t-test analysis of the responses of instructors and poultry managers on competencies required for providing housing for poultry production. N = 105

S/No.	Competency items	\bar{X}_1	\bar{X}_2	\bar{X}_G	t-cal	t-tab	Remark
1	Select a location for poultry home	3.46	2.84	3.15	-1.14	1.96	NS
2	Choose a specific housing management to provide for poultry production.	2.90	3.82	3.36	-0.39	1.96	NS
3	Select a durable and quality material for building poultry house.	3.55	2.79	3.17	-0.08	1.96	NS
4	Construct a concrete and solid foundation for poultry house.	3.26	3.60	3.93	-5.56	1.96	NS
5	Construct the wall with bricks and wood.	3.20	2.74	3.47	0.75	1.96	NS
6	Raise the height of the wall up by 5-6 meters for proper ventilation	3.56	2.72	3.14	1.49	1.96	NS
7	Support the roof with concrete pillars.	3.74	2.80	3.27	-0.32	1.96	NS
8	Provide foot bath at the entrance of the poultry house.	3.73	2.70	3.21	0.32	1.96	NS
9	Construct a gutter to convey water out of the poultry house.	3.60	2.78	3.15	0.34	1.96	NS
10	Erect a gate at the entrance and install all perforated wire around the poultry house.	3.61	2.92	3.26	0.56	1.96	NS

NS = Not Significant

Data presented in Table 1 revealed that the respondents agreed that all the item competencies; providing foot bath, construct a gutter, Erect a gate at the entrance, Raise the height of the wall, construct the wall with bricks, select a durable and quality material, select a location and choose a specific housing management are required by graduates. The data further revealed that all the ten items had their calculated t-values ranged from -1.14 to 0.56 which were less than t-table value of 1.96 (two tailed test) at $p < 0.05$ level of significance and at 102 degree of freedom This indicated that there was no significant difference in the mean ratings of the responses of instructors and poultry managers on all the ten items. Therefore, the null hypothesis of no significant difference in the mean ratings of responses of instructors and poultry managers on all the items was upheld. This implies that all the competencies are required by graduates for success in poultry production.

Table 2: Mean and t-test analysis of the responses of instructors and poultry managers on competencies required for health management of poultry (chickens). N = 105

S/No.	Competency items	\bar{X}_1	\bar{X}_2	XG	t-cal	t-tab	Remark
1	Invite a veterinary doctor in case of disease outbreak on the farm	3.60	2.60	3.10	2.41	1.96	S
2	Carry out good sanitation in poultry farm	3.58	2.61	3.09	2.61	1.96	S
3	Avoid indiscriminate use of antibiotics in poultry farm	3.60	2.75	3.17	0.94	1.96	NS
4	Remove dead chicks from poultry farm daily	3.43	2.56	2.99	0.32	1.96	NS
5	Vaccinate all chicks against potential diseases	3.67	2.54	3.10	1.79	1.96	NS
6	Provide food near and a set of lab coat for both poultry visitors and attendants	3.62	2.50	3.06	1.55	1.96	NS
7	Carry out routine check on poultry house for diseases symptoms	3.65	2.61	3.13	2.81	1.96	S
8	Bury dead chicks to avoid infections.	3.60	2.52	3.06	1.30	1.96	NS

NS = Not Significant

Data presented in Table 2 revealed that all the items on health management of poultry had their mean (XG) value above 2.50 and that respondents agreed to all item competencies (invite a veterinary doctor, carry out good sanitation, Avoid indiscriminate use of antibiotics, remove dead chicks from poultry farm, vaccinate all chicks, provide food and a set of lab coat, carry out routine checks on poultry house and bury dead chicks) This showed that graduates require all the competencies for success in poultry production enterprise. The data in Table 2 further revealed that items 1, 2 and 7 had their t- calculated value ranged from 2.14 to 2.81 which was greater than t-table value of 1.96 (two tailed test) at $p < 0.05$ level of significance at 102 degree of freedom. This revealed that significant difference exists on these items and hence, the null hypothesis of no significant difference on these items was rejected. Table 2 also showed that items 3, 4, 5 and 8 had their calculated t- values range from 0.94 to 1.30 which were less than t-table value of 1.96 at $p < 0.05$ levels of significance at 102 degree of freedom. This indicated that there was no significant difference in the mean ratings of the responses of instructors and poultry managers. Therefore, the null hypothesis of no significant difference for these items was upheld.

Discussion of Results

The findings of the study in Table 1 revealed that 10 competency items are required by National Diploma graduate for success in poultry production enterprise. These findings were in consonance with the view of Oluyemi & Roberts (2007). The authors asserts that suitable location for poultry house in selected, decision made on the type of housing management and select a durable and cost effective material for building house for poultry. The findings were also in line with the observation of Iwena (2008) who said that poultry house should be constructed with solid foundation, support the roof with concrete pillars and provide footbath at the entrance of the poultry house. The findings on the hypothesis revealed that there was no significant difference in the mean ratings of the responses of the two groups of respondents (instructors and poultry managers) on the (10) ten competency items required by graduates in providing housing for poultry production. The findings of the study in table 2 revealed that all 8 competency items are required by graduates in health management of poultry (chickens). These findings were in agreement with the views of Olaitan and Omomia (2006). The authors found out that there is a need for a veterinary doctor when there is a disease outbreak and that good sanitation in poultry house need to be maintained. The author also opines that all birds must be vaccinated against disease outbreak. The findings also agree with the view of Onwuegbuna (2004) who said that indiscriminate use of antibiotics on poultry farm should be avoided and that dead chicks must be removed from poultry pen daily. Hunter (1996) also supports the findings that foot wear and lab coat for poultry attendants must be provided and that dead chicks must be buried to avoid further infections. Findings on the hypothesis revealed that there was no significant difference in the mean ratings of the responses of two groups of respondents on 5 (five) competency items required by graduates in health management of poultry chickens.

Conclusion

Competencies identified in the study and as rated by respondents are required by National Diploma Graduates in order to function effectively on poultry production enterprise. Although the researcher found out in the course of study that the graduate themselves were not directly implicated for the dearth of competencies required for success in poultry production, it becomes important for stake holders to impart these skills to graduate for functionality. It is expected that adequately planned competency based programme for the graduates will equip graduates with the knowledge and skill to transform the poultry industry for sustainable development in Bauchi State.

Recommendations

The following recommendations were made based on the findings of the study.

1. Poultry managers should organize regular training for graduates of National Diploma in agriculture to increase their competency in providing adequate house for poultry production.
2. Instructors in colleges of agriculture should teach and train potential ND graduates of agriculture how to prevent occurrence of disease outbreak in poultry rather than resorting to cure after the incidence.
3. Poultry managers should organize work shop for graduates of ND in agriculture on the need to for routine daily sanitation in poultry house.
4. Instructors in colleges of agriculture should practically demonstrate to ND students before graduation how to avoid indiscriminate use of antibiotics in poultry farm.
5. Ministry of agriculture through extension agents should organize workshop on the need and gains of establishing poultry farm for self reliance.

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Competencies Required by National Diploma Graduates of Agriculture by Ekele

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