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Scope and Common Diseases of Rural Poultry Production by Rural Women in Selected Villages of Kwara State, Nigeria

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Abstract: This study was carried out to determine the scope of poultry production by rural women and common diseases associated it in selected Local Government Areas of Kwara State, Nigeria. Specifically, the study examined various parameters of poultry production, the time of the year that diseases were most observed, the rate of mortality associated with various diseases and level of vaccination of birds in those villages. One hundred and twenty (120) women involved in rural poultry production were randomly sampled from four (4) villages in Kwara State, Nigeria. Interview schedule was used to elicit information for the study. The data were analyzed and presented as frequency counts and percentages. It was discovered that rural poultry production was still at the subsistent level. The highest percentage of the women involved in rural poultry production had 1-10 bird(s) per species (59.13, 71.43 and 57.14% for chicken, duck and guinea fowl respectively). A larger percentage of chicken (76.72%) hatched between 1-10 bird(s) per laying period while ducks hatched more birds than chicken during each laying period (65% hatched between 11 and 20 birds). Guinea fowls had almost an even spread of the number of birds hatched per laying period across the flock size ranges considered. The common diseases observed by the respondents include Newcastle disease, fowl pox, coccidiosis and infectious bursal disease. The time of the year that diseases were prevalent was between September and December. Newcastle disease was indicated as the disease that resulted in the highest in mortality rate. Majority of the respondents had never vaccinated their birds and very few have ever contacted veterinary services (5-10%), except at Share (63.33%). It is therefore recommended that knowledge of rural women on poultry production should be improved. It is therefore recommended that awareness campaign should be conducted in the villages on how they can increase their rural poultry productivity, alerting them of the causes of various diseases and the available remedy.

Key words: Scope, disease, rural women, poultry

INTRODUCTION

Poultry raising is a popular activity among rural women in most countries. In fact, women have been reported to be the predominant owners of rural poultry (Okitoi *et al*., 2007). Rural family poultry are reared on a small-scale within a limited area in the backyards of village households, with the number of birds ranging from 1-10. Birds are raised mostly in a scavenging system. They eat anything edible available in the backyard like insects, farm and domestic wastes, leaves, etc. They move in and around the compound of household like any other family member and rest wherever they find a place, most especially perching on trees at night (Atunbi and Sonaiya, 1994). More than 65 percent of tribal families have poultry in small flocks of 4-5 birds per household in low-input/low-output husbandry conditions.

Family poultry production systems which are practiced in Low-Income Food-Deficit Countries (LIFDCs) have been previously described by various workers (Bessei, 1987; Aini, 1990; Gueye and Bessei, 1996; Kitalyi, 1998; Branckaert and Gueye, 2000; Gueye, 1998; Gueye and van't Hooft, 2002). Birds, kept under these husbandry systems are subject to high mortality resulting from accidents, predation or diseases (Dipeolu *et al*., 1998). Family poultry is still very important in LIFDCs. However, the high incidence of diseases is one of the major constraints to smallholder poultry production systems. Newcastle disease, the most serious epizootic poultry disease in most LIFDCs, occurs every year and kills an average of 70-80% of the unvaccinated rural family poultry flock (Chabeuf, 1990; Gueye, 2002). ADP (1992) reported in its monthly review meeting that scarcity and non availability of drugs for meeting common animal diseases are serious problems, especially in the rural areas.

Women in many developing countries are involved in rural poultry production. Poultry diseases can become epidemic in villages because there are few, if any,

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veterinarians. Also, access to support services by women despite their major contribution in care and management activities is being denied. This study was therefore aimed at identifying the scope of rural poultry production and common diseases associated with such as observed by women in selected villages in Kwara State, Nigeria.

MATERIALS AND METHODS

Out of the sixteen Local Government Areas (LGAs) in Kwara State, Nigeria, four were chosen for this study, namely Ilorin East, Moro, Asa and Ifelodun. From each LGA, a village was chosen based on the involvement of their women in poultry production. Random sampling was used to obtain the sample size of 120 respondents (Table 1). A total number of 30 women were randomly selected in each of the villages for the purpose of this study. A well structured questionnaire was used to obtain information from the women; however, interview schedule was conducted for those who were illiterates. The data were subjected to statistical analysis and the results presented as percentages.

Table 1: Distribution of respondents by local government and village

Local government area	Village	No. of women interviewed
Ilorin East	Oke-Oyi	30
Moro	Bode Saadu	30
Asa	Afon	30
Ifelodun	Share	30
Total		120

RESULTS AND DISCUSSION

The study revealed that rural poultry production is still at the subsistence level (Table 2). The larger percentage of the women involved in poultry production kept few number of birds i.e. between 1-10 birds (59.13, 71.43 and 57.14% for chicken, duck and guinea fowl respectively). This is a normal observation in rural communities engaged in rural poultry production. Moreover, more women engaged in the rearing of chicken (115 women) than duck (21 women) and guinea fowl (7 women), probably as a result of their perceived ease of raising up chicken indigenously compared to other types of birds and it may also be as a result of social values attached to various types of birds.

Table 3 shows that both chicken and duck hatched between 1 and 20 birds. The percentage of chicken that hatched between 1-10 birds per laying period was 76.7% while those that hatched between 11-20 was 23.28%. Ducks hatched more birds than chicken during each laying period. The percentage ranged between 65% for 11-20 birds and 35% for 1-10 birds respectively. Guinea fowl is a kind of bird that is unpredictable and can lay a large number of eggs or few.

Table 2: Distribution of poultry according to the number kept by the rural women

Flock size range	Frequency	%
Chicken		
1-10	68	59.13
11-20	32	27.83
21-30	7	6.09
31-40	6	5.23
41-50	2	1.74
Duck		
1-10	15	71.43
11-20	4	19.05
21-30	-	-
31-40	2	9.72
41-50	-	-
Guinea fowl		
1-10	4	57.14
11-20	1	14.29
21-30	1	14.29
31-40	1	14.29
41-50	-	-

Table 3: Number of offsprings hatched per bird during laying periods

Number of offsprings	Frequency	%
Chicken		
1-10	89	76.72
11-20	27	23.28
21-30	-	-
31-40	-	-
41-50	-	-
Duck		
1-10	7	35.00
11-20	13	65.00
21-30	-	-
31-40	-	-
41-50	-	-
Guinea fowl		
1-10	2	28.57
11-20	2	28.57
21-30	2	28.57
31-40	1	14.29
41-50	-	-

As observed in Table 4, a good percentage of the respondents indicated that their ducks (70%) and guinea fowls (85.71%) produced above 30 offsprings annually while a larger percentage of chicken (59.13%) produced below 30 offsprings annually. This shows that duck and guinea fowl are much more productive than chicken. Most of the women (43.59%) indicated that the number of their chicken which survived to adulthood ranged from 11-20 (Table 5). On the other hand, duck had a sizeable number of birds surviving to adulthood, with the flock size range of 41-50 birds, as indicated by 33.33% of the respondents. Guinea fowl was not included because most of respondents claimed to eat the eggs rather than allowing them to hatch into birds.

The common diseases observed by the respondents in their flock include Newcastle disease, fowl pox, coccidiosis and infectious bursal disease (Table 6).

However, Newcastle disease was the most prevalent in all the villages, followed by coccidiosis and then infectious bursal disease. This supports the report of other workers from various countries in Africa that Newcastle disease is the most devastating disease of rural poultry (Bell *et al*., 1990; Bourzat and Saunders, 1990; Chrysostome *et al*., 1995; Yongolo, 1996). Major factors associated with the transmission of Newcastle disease in rural poultry are exposure to the natural environment (including wild fauna), flocks of various ages and susceptible new hatches (Chabeuf, 1990; Olabode *et al*., 1992) and contact through either exchange of live chickens and products or movement between households and villages.

The women indicated that most of the diseases occurred all year round, with highest incidence around September to December which falls within the dry season (Table 7). This was the time when high rate of mortality was experienced among the birds. Newcastle disease was indicated as the most prevalent during this period while fowl pox appeared to be the most prevalent during the wet season. Coccidiosis could occur during the wet season or any other time of the year.

A larger percentage of the women in Share had vaccinated their birds compared to the three other villages (Table 8). This may be as a result of their higher level of education. Our previous study in these villages revealed that the women in Share have a higher level of education than those in the three other villages (Ogunlade and Adebayo, 2009). On the overall however, majority of the women had never vaccinated their birds (Table 8). Despite this, some of the women admitted the use of preventive resources or some forms of medication for their birds. They usually treat the diseases with drugs used in the treatment of related disease conditions in humans. Antibiotics, fresh red pepper, etc., are examples of medications used. In spite of all these efforts, it appears that culling is the most widely practiced treatment.

Table 4: Number of offsprings per bird per year

Number of offsprings	Frequency	%
Chicken		
1-10	3	2.61
11-20	20	17.39
21-30	45	39.13
31-40	36	31.30
41-50	11	9.57
Duck		
1-10	-	-
11-20	3	15.00
21-30	3	15.00
31-40	4	20.00
41-50	10	50.00
Guinea fowl		
1-10	-	-
11-20	-	-
21-30	-	-
31-40	1	14.29
41-50	6	85.71

Table 5: Number of offsprings surviving to adult birds

Number of offsprings	Frequency	%
Chicken		
1-10	23	19.66
11-20	51	43.59
21-30	28	23.93
31-40	11	9.02
41-50	4	3.42
Duck		
1-10	1	5.56
11-20	3	16.67
21-30	3	16.67
31-40	5	27.78
41-50	6	33.33

Table 6: Common poultry diseases observed by the rural women

	Share		Oke-oyi		Bode Saadu		Afon	
Common diseases	F	%	F	%	F	%	F	%
Newcastle disease	30	100.00	30	100.00	30	100.00	30	100.00
Fowl pox	5	16.67	7	23.33	6	20.00	1	3.33
Coccidiosis	2	6.67	18	60.00	16	54.44	29	96.67
Infectious bursal disease	5	16.67	7	23.33	5	16.67	23	76.67

Table 7: Period of the year when diseases were most observed by the women

	Share		Oke-oyi		Bode Saadu		Afon	
Period of the year	F	%	F	%	F	%	F	%
Jan-April	4	13.33	1	3.33	-	-	6	20.00
May-Aug	-	-	5	16.67	2	6.67	1	3.33
Sept-Dec	26	86.67	24	80.00	28	93.33	23	76.67

Table 8: Percentage of women that have vaccinated their birds

	Share		Oke-oyi		Bode Saadu		Afon	
Response	F	%	F	%	F	%	F	%
Yes	19	63.33	1	3.33	3	10	2	6.67
No	11	36.67	29	96.66	27	90	28	93.33

Conclusion and Recommendation: With the current economic situation, there is no doubt that rural poultry production will continue to play a dominant role in the supply of poultry meat. Results of this study showed that the number of birds raised by households is such that none of the households can be described as a commercial poultry production entity. The results also showed that the four villages have the potential for increased rural poultry production. The major constraints to rural poultry production in these villages are diseases which span both the dry and wet seasons. It is therefore recommended that awareness campaign should be conducted in the villages alerting them of the causes of these diseases and the available remedy. Vaccines should also be made available to this rural women and veterinary personnel provided to assist in the treatment of these diseases.

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