

Agricultural Information Needs of Rural Women Farmers in Nkonkobe Municipality: The Extension Challenge

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Abstract

Access to agricultural information is vital for improving food security at the village level. This study accessed the agricultural information needs of women farmers in Nkonkobe Municipality of the Amathole District, Eastern Cape Province, South Africa. Data was obtained from 118 households. The women farmers were identified from four villages using the snowball sampling technique. Findings revealed that backyard gardening (87.2%; n = 103) was common in addition to the rearing of indigenous chicken (65.2%; n = 77) to complement food security. Most (80.5%; n = 95) were confronted with weed problems after applying cow dung as manure. There was a high report (70.3%; n = 83) of insect attack on leaves of cabbage, spinach and carrot, while seed dormancy was low (24.58; n = 29). Problems of fowls' theft (66.95%; n = 49) and fowl predators (40.68%; n = 48) were common. More than average (54.2%; n = 64) depends on friends, neighbors and farmers' colleagues for agricultural information but the majority (99.1%; n = 117) preferred extension workers coupled with farm demonstration for agricultural information. The study identified the importance of farmer-to-farmer model of technology transfer among farmers. It is recommended that farmer-to-farmer model could further be investigated to complement efforts of the extension services towards providing agricultural information to the smallholder farmers.

Keywords: agricultural information, rural women farmers, extension services, needs

1. Introduction

Women farmers play a significant role in the food security of households. In sub-Saharan Africa, women do about 80% of the farm labor (Bill and Melinda Gates Foundation, 2012). Banji and Okuade (2005) attributed 60% of the farm labor force to women who produce 80% of food and earn 10% of the monetary income but own just 1% of the farm assets. The report of FAO (2011) indicated that if women had the same access to productive resources as men, they could increase yields on their farms by 20-30%, lifting 100-150 million out of hunger. Furthermore, FAO (2011) reported that equal access to the resources by both male and female farmers will increase the total agricultural output in the developing countries by 2.5-4%, thereby contributing to both food security and economic growth. Thus, any effort designed to improve South Africa's agriculture generally and the lives of its smallholder farmers in particular must take cognizance of women's roles in livelihoods and food security

Information, according to Belkin and Pao (1989), is the product that emanates from processing, manipulating and organizing data in a way that creates value to the knowledge of the person receiving it. Though Stanley (1990) likened information as one of the basic necessities of life after air, water, food, and shelter, Rezvanfar et al. (2007) indicated that information is needed because of its significant effects on the living activities of man. Mudukuti and Miller (2002) suggested that in the information age, dissemination of information and applying this information in the process of agricultural production will play a significant role in the development of farm settlements. In farming entrepreneurs, Doss (1999) showed that access to appropriate information has had significant impact on agricultural productivity. In the same vein, the United Nations (UN) (2002), FAO (2004),

IFPRI (2004) and Des Castello and Braun (2006) concluded that achieving sustainable agricultural development is less based on material inputs but rather on the available knowledge and information appropriate for sharing with the farmers.

South African Agricultural Research Development (SARD, 2007) reported that there has been a steady decline in the number of rural inhabitants from 44.9% in 1996 to 42.5% in 2001 because of economic and declining agricultural opportunities in urban and rural areas respectively. The situation implies that the rural communities require information on various facets of rural livelihoods that will enhance opportunities and reduce vulnerabilities. In this regard, appropriate and scientifically researched information is needed on some of the challenges militating against good farming techniques, pest and disease control in crops and livestock, impact of climate change, storage and market hints. Appropriate agricultural information is, therefore, necessary towards helping the farmers, who are mostly the women, to satisfy their needs. However, the inequality in the distribution of resources between men and women has been linked with production inefficiency, yet interventions targeting smallholder farmers often fail to redress a women's lack of access to, and control of, important agricultural resources (Quisumbing & Pandolfelli, 2008). Whereas, access to reliable and adequate agricultural information by women farmers could address many of their needs and aspirations and enhance production efficiency and market accessibility.

Nkonkobe Municipality has been identified as having the challenges of poverty, high unemployment rate, and poor agricultural production (Vengayi, 2009). Breaking the poverty cycle requires identifying factors militating against achieving food security and improved livelihoods among the smallholder women farmers who constitute larger percentages of rural dwellers. Most of the rural women from disadvantaged areas are using their backyards to grow crops and farm livestock in order to feed their families and the community. As little as the land size of backyard gardening may be, farmers still require agricultural information that will enhance efficient and effective utilization of the land, manage soil and water, control pests and diseases and help solve other problems emanating from the farm. Unfortunately, there is scanty information pertaining to the agricultural information needs of women farmers that could be used to design appropriate extension intervention in the municipality. This study attempts to provide answers to the following questions:

- a. What are the agricultural information needs of the women farmers in Nkonkobe Municipality?
- b. What are the information seeking behavioral patterns of these women farmers that add value to their farming activities?
- c. What role do extension workers play in the dissemination of agricultural information to these women farmers?

1.1 Purpose of the Study

This study was designed to investigate the agricultural information needs of the women farmers in Nkonkobe Municipality, Eastern Cape Province, South Africa.

1.2 The Specific Objectives

- a. Describe the demographic characteristics and agricultural information needs of the women farmers in the Nkonkobe Municipality (NM).
- b. Determine the agricultural information seeking behavioral patterns of women farmers.
- d. Identify channels most preferred for seeking agricultural information by the rural women farmers.
- e. Determine the relevance of the obtained agricultural information towards improving agricultural productivity.

2. Methodology

Nkonkobe Municipality was established in 2000 with an estimated total population of 131 071 and 28 259 households (Global Insight, 2008). The local municipality is made up of 21 wards. According to Global Insight (2008), approximately 74% of people living within the municipal area are indigent with the majority of the population residing in both villages and in urban settlements. Urbanization is mainly concentrated in Alice and Fort Beaufort. The ratio of urbanization (Urban/rural) has improved from 4:1 in 2001 to 2:6 in 2008 (Global Insight, 2008).

The target population consisted of women farmers from ward twelve of Nkonkobe Municipality. Ward twelve is made up of nine villages comprising Ngcothoyi, Magaleni, Bergplaas, Msobomvu, Woburn, Taylor, Melani, Skhutswana, and Lower Gqumashe. Four villages were randomly selected that included Lower Gqumashe,

Taylor, Melani and Woburn. A total of 144 copies of questionnaires was administered, but data were received and analyzed from a sample of 118 women farmers which represent 81.9 % of usable questionnaires. Data was collected using the snowball technique.

2.1 Validity and Reliability

The instrument was field-tested for content and face validity by an expert in Information and Communication in the Department of Communication, University of Fort Hare. The instrument was pre-tested at Hala village for reliability and validation. The internal consistency reliability result was 0.79 using the Cronbach's coefficient.

The instrument for analysis was made up of two parts. Part A addressed the demographic characteristics of the women farmers that elicited information on age, marital status, level of education, source of income, size of households and main farming occupation. Part B of the questionnaire elicited information on the types of agricultural information needs that will enhance agricultural productivity, most desired channels for seeking information, information-seeking behavioral pattern, ways that the agricultural information could benefit the farmers, sourcing information, the solution obtained from the sourced channels and steps taken on the problems. The structured interview schedule was used for collecting relevant quantitative data from the sampled respondents.

The data collected were analyzed using the SPSS version 20. The descriptive statistics tools used include frequency counts, percentages and means.

3. Results and Discussion

Table 1. Socioeconomic characteristics of respondents in the study area N = 118

Age	Frequency	%
25-35	9	7.6
36-45	36	30.5
46-55	46	39.0
56-65	23	19.5
66-75	4	3.4
Total	118	100.0
Marital status		
Single	43	36.4
Married	35	29.7
Divorced	12	10.2
Widow/widower	28	23.7
Total	118	100.0
Number in household		
2-3	48	40.7
4-5	57	48.3
6-7	13	11.0
Total	118	100.0
Education		
Primary	3	2.5
Some secondary	103	87.3
Completed grade 10	9	7.6
Completed grade 12	3	2.5
Total	118	100.0
Source of income		
Salary	46	39.0
Pension, social grant	55	46.6
Self employed	17	14.4
Total	118	100.0

Source: Field Survey 2012.

The descriptions of the demographic profile of the women farmers described in Table 1 indicate that many of the women farmers fell between age brackets of 46-55 years old (39%), followed by 36-45 years (30.5%), and 56-65 years (19.5%) SD (0.954). The marital status revealed those who are single as (36.4%), married (29.7%), widowed/ widowers (23.7%) and the divorced (10.2%). The number of households was highest for respondents with 4-5 children (48.3%), followed by 2-3 children (40.7%) and 6-7 children (11.0%), SD (0.658). The educational status revealed that the majority (87.3%) had some secondary school education but could not complete grade 10. This is followed by those who completed grades 10 and 12 which are 7.6% and 2.5% respectively. Very few (2.5%) had only primary school education, and SD (0.441). Many of the respondents (46.6%) depend on pension and one form of social grants such as sources of primary income; 39% were earning salaries for jobs ranging from nanny to junior staff and complementing it with farming. This is followed by 14.4% that are self-employed.

Table 2. Farming occupation

	Frequency	%
Livestock	3	2.5
Backyard gardening	22	18.6
Indigenous chickens	12	10.2
Livestock and backyard garden	16	13.6
Backyard garden and indigenous chickens	62	52.5
Livestock, backyard garden and indigenous chickens	3	2.5
Total	118	100.0

Source: Field Survey 2012.

Table 2 indicates that backyard gardening (87.2%; n = 103) was a common farming practice. A substantial number (65.2%; n = 77) kept indigenous chicken while livestock (18.6%; n = 22) mainly cattle, pigs, sheep and goat are, also, reared. The rearing of indigenous chicken by women contributes significantly to food security of the rural livelihood, and this finding was, also, reported by Gondwe (2004).

Table 3. Types of agricultural information needed

	Frequency	%
Insects attack on vegetables e.g. Cabbage	83	70.30
Rust of Spinach	37	31.36
Weed control and management, especially when organic manure (Cow dung) was applied	95	80.5
Seed dormancy problem during winter	29	24.58
Sudden death of chicks after hatching	18	15.25
Mice and Giant rat menace	23	19.49
Fowls predator problem	48	40.68
Expensive feeds for the scavenging fowls	53	44.91
Lice and mite problem in fowls	18	15.25
Soil fertility management	32	27.12
Fowl theft	49	66.95
Kid mortality in goats	16	13.56
Diarrhea problem in goat kids	28	23.73

Source: Field survey 2012.

The information needs of the women farmers varied as it was determined by the types of farming enterprises. Table 3 indicates that weed, (80.5%; n = 95) constitute a major challenge especially when cow dung was used as fertilizing materials. Some farmers (27.12%; n = 32) whose soils require replenishing actually made use of cow

dungs that are relatively available and cheap. The major challenge of tackling the growth of undigested weed seeds constitutes menace. Most of the farmers (24.58%; n = 29) that depend on planting seeds of vegetables directly during winter experienced poor and late germination. This could be attributed to the dormant nature of the seeds and the climatic condition prevailing. Sudden death of chicks (15.25%; n = 18), mice and giant rats attack (19.49%; n = 23), lice and mites (15.25%; n = 18), fowl theft (66.95%; n = 49) and fowl predators (40.68%; n = 48) were common problems for the scavenging birds. The report indicates a threat to food security of the resource-poor farmers considering the small number of flocks kept for household consumption. Most (44.91%; n = 53) who gave supplementary feeds complaint about the high cost of feeds for newly hatched chicks with the mother hens in brooding. Artificial brooding is practiced amongst some farmers to reduce predators' attack. Insect pests of vegetables (70.3%; n = 83) constituted another major problem. The farmers reported insects eating the leaves of cabbage, spinach and carrot thereby reducing yield and affecting the quality.

Table 4. Channels used mostly for obtaining Agricultural information

Channels	Frequency	%
Radio	1	0.8
Extension workers	21	17.8
Radio and extension workers	20	16.9
Radio, extension workers and demonstration	29	24.6
Ext workers, practical farm demonstrations and group meetings	9	7.6
Extension and practical farm demonstrations	38	32.2
Total	118	100.0

Source: Field survey 2012.

The information-seeking pattern of the women farmers was chiefly influenced by the technical knowledge of the source coupled with practical farm demonstrations. Table 4 indicates that the importance of extension workers serving as a channel of information was noted with overwhelming responses in all variables when calculated (99.1%; n = 117). The majority of the respondents believed that access to agricultural information through the extension workers supported with farm demonstrations will facilitate their learning thereby improving agricultural productivity.

The yearning for extension workers by the women farmers indicated the need for the government to employ more extension workers while the services of the nongovernmental organizations (NGOs) and private organizations that provide extension services are essential most especially at the village levels.

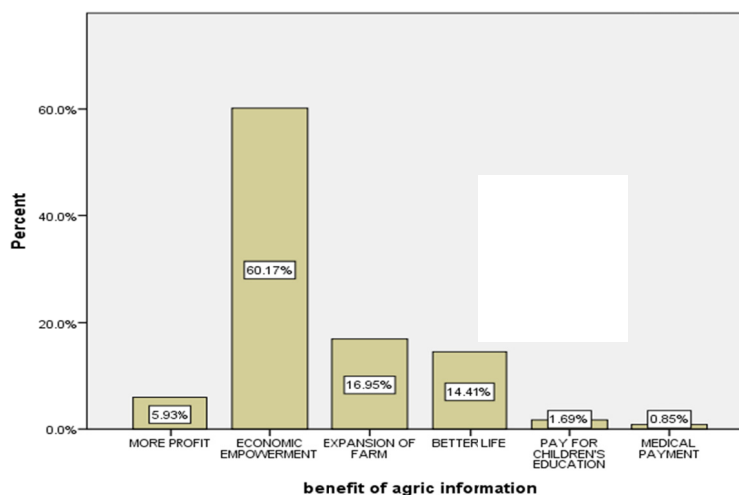


Figure 1. Frequency distribution of benefits of Agricultural information

Figure 1 showed that the majority of the respondents (60.2%) was of the opinion that accessing vital agricultural information will lead to their being economically empowered. This is followed by farm expansion (16.9%) and better life (14.4%). Other variables were believed to have been encompassed within economic empowerment framework. The women farmers believed that economic empowerment is an all embracing economic, social, cultural and political activities that make them to be relevant and recognized in the community. To them, being economically empowered implied that they are able to support their households with nutritious foods, good education, health care, and comfortably perform their social functions.

Table 5. Sources of information used by the respondents

Information sources	Frequency	%
Husband	1	0.8
Friends	30	25.4
Neighbor	27	22.9
Extension agents	8	6.8
Farmers organizations	3	2.5
Cooperative Society	2	1.7
Farmer's colleagues	7	5.9
Nobody	14	11.9
Don't know who to contact	21	17.8
Where I bought inputs	1	0.8
University community engagement	4	3.4
Total	118	100.0

Source: Field survey 2012.

Table 4 showed that the majority of the farmers (54.2% n = 64) depended on friends, neighbors and farmers' colleagues for agricultural information when faced with challenges on the farm. While 17.8% (n = 21) of the women farmers did not know who to contact, 11.9% (n = 14) indicated they have contacted nobody for information, only 6.8% (n = 8) had contact with extension services, and 3.4% (n = 4) sought information from the University community engagement officials. The trend where farmers relied on friends, neighbors and farmers' colleagues were also observed by Yahaya (2002), Tologbonse et al. (2006), Okwu and Dauda (2011), Achugbe and Anie (2011) and Rezvanfar et al. (2007) indicating the strong social dynamics of 'across the fence' contact when in need or facing challenges. The ease or proximity of the source could also be an enabling factor here. The low number of contacts with extension workers may be attributed to the inadequate number of extension workers operating in the municipality. Meanwhile, the findings indicate the importance of farmer-to-farmer extension model in technology dissemination. This model has proven for its potency in filling the extension gap in technology transfer to farmers in Nigeria (Kormawa, Ezedinma, & Singh, 2004). The authors identified that the model narrowed the gap with the technology transfer process among farmers. This was attributed to the participatory role of farmers in testing, watching and circulating information among themselves that ensured adoption. However, the little contact enjoyed by the women farmers from the extension agents and university community engagement yielded positive results.

4. Conclusion and Recommendations

Access to adequate, relevant and reliable agricultural information is an essential factor towards building a strong and virile agricultural foundation. The significant role played by women in food security requires that they receive support towards access to scientific and unbiased agricultural information. Women farmers had been classified to be highly vulnerable due to multiple challenges they faced in the rural setting. The challenges are surmountable if they could access the right types of agricultural information as this will reduce shocks that are inherent in vulnerability context.

This study indicates that most women farmers engaged in backyard farming and indigenous chicken production. They require agricultural information that is proven towards addressing multiple challenges on their farms and

livestock rearing. The study revealed that most farmers relied on their friends and neighbors for agricultural information. It is recommended that further study is needed towards understanding the farmer-to-farmer model of technology transfer that could be used to reach the small scale women farmers in South Africa.

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