

Food Chain Activities of Women in an Agrarian Community in Central Nigeria: Implications for Rural Development

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KEYWORDS Food. Activities. Women. Agrarian. Development

ABSTRACT This study was carried out in Otukpo Local Government Area. The purpose was to determine food chain activities of women and implications for women in agriculture. Three hundred respondents randomly selected from the six districts that make up the local government area constituted the sample for the study. Results of the survey showed that women in the area were responsible for many activities in the food chain, including planting, harvesting, weeding, marketing and transportation of farm produce. Major post-harvest processing activities of women were milling, parboiling, pounding, peeling, threshing and grinding. Others were slicing of okro, picking of palm fruits and melon, and crushing of palm kernels. The main storage methods used by the women were smoking, salting, stacking of grains on wooden platform (oda) and storage in barns. Most of the women traveled a distance of less than one kilometer to and from their sources of drinking water. The most important sources of fuel were firewood and kerosene stoves. Field observation revealed that the women were largely responsible for the nutrition and health care of family members, particularly children. Constraints to the food chain activities were inadequate time for farming, too much involvement in domestic activities, poor financial resources and storage facilities. Implications of results of the study for rural development were identified and articulated for policy formulation and implementation.

INTRODUCTION

The significant role, which rural women play in the eradication of malnutrition due to their role in production as well as preparation of food consumed by their families, has been recognized (World Bank, 1980). The linkage between food production and nutrition has lately attracted research attention. It is generally acknowledged that the linkages are mediated through women in their role as managers of household food, nutrition and healthcare (Pinstrup-Anderson, 1984).

Nutritional status pertains to the condition of the individual affected by the intake of foods and the utilization of nutrients. Thus, nutritional status is related to food consumption as well as to the general health-care status.

Food chain is defined as the sequence of events that takes place from the time of food stuff production to its consumption. Wandel's (1984) research on women's food and nutrition-related activities found a positive relationship between the role of women in providing the household food, nutrition and other needs. Women have

made important contributions to rural economies in Africa as agricultural producers, homemakers, mothers, breadwinners, and even as unpaid farm labour on their husband's farms.

According to Bryson (1982), Africa is the region of female farming *par excellence*. In many African countries, especially, south of the Sahara, women are the primary labour force on small farms. They play major roles in hoeing, weeding, transporting, processing, storage and marketing of agricultural products. Different studies have identified and documented the invaluable role of women in agricultural production in various parts of the world. What is not certain, however, is the level of women participation in the various activities in the food chain.

In addition, what can be said to be the nature of the relationship, if any, of food chain activities performed by women and the nutritional status of their families? What processes and factors influence this relationship? Finally, how does the combination of these factors determine the roles of women in agriculture?

Purpose and Objective of the Study

The purpose of the study was to determine

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women's role in food chain activities in Central Nigeria and implications for women in agriculture. Specific objectives of the study were to:

1. Determine how women's work in different segments parts of the food chain affect, food consumption and nutrition of women and children.

2. Describe the factors influencing women's priorities in the choice of work and distribution of food within the household.

3. Identify the problems that hinder high levels of participation of women in some food chain activities.

4. Determine implications of results of the study for the specific activities performed by women in agricultural production, processing, and marketing.

Literature Review

The United Nations International Decade for Women, which was marked in 1985, has helped to stimulate official awareness of the increasing impoverishment of women and of the central role they play in the agricultural economies of Third World countries. Perry (1985) pointed out clearly that while agricultural planners often stereotype women as consumers rather than producers, rural women actually account for more than half of the food produced in the Third World and also play a leading role in the storage and processing of food. He reported that in Africa, women actually account for as much as 80 percent of the food production. Women are the nation builders, probably because they bear the burden of shaping the future of their nations through the raising of children. They also commonly work at least 19 hours a day, with no economic value attached to their labour. Women contribute far more to agricultural production than has been generally recognized. In the Gambia, for example, women produce 84 percent of the rice grown. Bodo (1985) and Enechukwu (1987) reported that women are active as food producers, processors and marketers, in addition to their matrimonial roles such as house-keeping and upbringing of children.

Boud (1974) found that in South Eastern Botswana, household work took up half of the active day of women. Food production is an integral part of the notion of "motherhood" in African countries.

One of the main obstacles in the effort to

improve women's participation in food chain activities and rural development was identified as perennial ignorance of women's role as producers, reproducers and care providers. Three major factors influence women's food chain activities. These include: resources, such as land, equipment and capital; access to knowledge of food chain activities; and organizational power.

Katona-Apte (1983) categorized the socio-cultural factors which link agricultural development to nutritional status to include, increase in cash income resulting in nutritionally desirable expenditure and change in food production which result in less food availability for women and children.

Surveys carried out in Nigeria and Ghana by Richie (1977) showed that women consume a smaller proportion of their food requirements than men. Tommy (1980) also reported that although women generate a major part of rural household labour, they have little control over matters that affect their labour input in paddy rice production.

Women's participation in various agricultural work may have a positive or negative effect on child nutrition, depending on socio-economic conditions. According to Chukwu (1981), women decide what kind of food to prepare for the family, general cleanliness of stored foods, and marketing. He indicated that marketing is usually the responsibility of women. Henn (1983) suggested that failure to recognize women's crucial roles in food production tends to produce interventions in the food sector which can erode traditional farmer's ability to respond to the increasing urban demand for food and thwart their efforts to adequately feed their families.

An analytical framework by Cloud (1985) distinguished between men and women's roles in crop production and related this to overall project efficiency and to equity between the sexes. It was concluded that the projects where women's access to production resources is high have the highest efficiency. It is therefore concluded that both equity and efficiency are best served by projects that take explicit account of men and women's roles in agricultural systems.

METHODOLOGY

Data Collection: Primary data were collected from 300 respondents with a structured questionnaire, whereas secondary data were

obtained from BNARDA and the National population Commission. Data were collected on various activities in the food chain and women's socio-economic characteristics. Data of major domestic activities performed by women in the homes and attendant problems were also determined.

Data Analysis: The completed questionnaire was examined for accuracy and suitability for analysis. Frequencies and percentages of variables were computed.

RESULTS AND DISCUSSION

Most (40.40%) of the respondents were within the active farming age of 25 and 35 years. More than half of them were married (60%) and living with their husbands. About 92 percent of the respondents were natives of the area. The indigenes that have settled in their areas of origin reported that they had free access to land.

Respondents who had no formal education represented 34.33 percent of the sample. Others who had various educational backgrounds were as follows: primary (22.0%) secondary (17.0%), and post-secondary (23.67%).

The relatively high level of illiteracy of the women farmers may influence their rate of adoption of innovations in the food chain. It has been established that 60 percent of the estimated 800 million illiterates in the Third World are women (Perry, 1985). Therefore it is necessary to intensify the education of women to help them better appreciate and adopt modern technology. All farmers, especially women, should be given equal legal status to land, ownership, control and inheritance of property, and non-discriminatory

access to agricultural inputs and services.

Respondents reported that there was a need for primary and secondary schools in their communities, including other social amenities, such as health clinics, electricity, and water supply. Electricity and adequate water supply would save labour in food processing through technology that relies on these amenities. This could result in increased quantity and improved quality of household food availability and intake.

It was found that the years women were engaged in farming as a primary occupation were 16 years and above (46.0%). Those who had spent fewer years in farming were engaged in other activities, such as trading or were still in school. Most of the women had been engaged in farming all their lives.

The major food chain activities that women were involved in included, (Table1) planting (12.06%) harvesting (12.0%) weeding (9.90%), packaging and marketing crops (8.79%). The women in the study area participated in all the activities, except the most physically demanding farm activities, such as bush-clearing and bush burning.

Not many women (5.23%) were involved in transporting livestock to the market and pest control measures (5.68%). The major domestic task performed by women included trekking long distances to haul and market agriculture produce which also increase their burden. The respondents were involved in post-harvest processing of crops, such as threshing, winnowing, milling and drying. They also used various methods for preservation of meat and fish. Whereas 31.65 of the women percent preserved meat by smoking, 69.53 percent applied that method to fish.

Table 1: Major farming activities of women in Otukpo LGA

	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%		
Bush Cleaning	16	4.83	35	9.49	23	8.98	29	7.38	18	6.04	32	9.33	153	7.69
Bush Burning	22	6.65	36	9.76	16	6.23	30	7.63	26	8.72	34	9.91	164	8.24
Packing	28	8.46	22	5.96	30	11.72	36	9.16	25	8.39	34	9.91	175	9.79
Planting	42	12.69	41	11.11	39	15.23	47	11.86	25	8.39	46	13.41	240	12.06
Weeding	29	8.76	42	11.38	22	8.59	42	10.69	31	10.40	31	9.04	197	9.90
Pest Control	15	4.53	29	7.86	9	3.52	21	5.34	21	7.05	18	5.23	113	5.68
Harvesting	43	13.0	37	10.03	34	13.28	45	11.45	39	13.08	41	11.96	239	12.01
Fertilizer Application	20	6.04	23	6.23	8	3.13	36	9.16	21	7.05	21	6.12	129	6.48
Marketing Crops	32	9.67	39	10.57	19	7.42	36	9.16	21	7.05	28	8.16	175	8.79
Livestock Feeding	29	8.76	23	6.23	18	7.03	28	7.12	22	9.06	21	6.12	146	7.34
Transporting Crops from the field	30	9.05	22	5.96	20	7.82	28	7.12	32	16.74	23	6.71	155	7.79
Transporting Livestock	25	7.55	20	5.42	18	7.03	15	3.83	12	4.03	14	4.08	104	5.23
Grand Total	331	100	369	100	256	100	393	100	298	100	343	100	1,990	100

Grains are stored mainly to ensure even supply throughout the year and to preserve the surplus food produced for deficient areas. It also helps to serve as a reserve during times of food scarcity, in addition to being used as seed for the next planting season. The respondents were involved in stacking of grains on platforms (*Oda*) (32.06%), bins (31.85%), they were involved in growing vegetables which they incorporated into their staple diets as a means of enhancing the nutritional quality of the family diet.

The most important problems women encountered in participation in the food chain activities were inadequate time for farming activities (36.60%). This may be due to their high involvement in the household or domestic work and their husbands' farm work which did not allow them enough time for their own farm work. Other problems faced by women included poor financial resources (29.77%), poor storage facilities (22.59%), lack of access to labour (6.65%), low knowledge of innovations (4.39%).

Implications for Rural Development

Major results of the study have implications for rural development and are discussed in this section.

A high level of illiteracy characterized the women who participated in the study. It is incontrovertible that education has a positive influence on the adoption of innovations, which is an important factor of rural development. It has been reported that majority (60%) of the 800 million illiterate people in the Third World are women. The results of this study and the global situation are compelling reasons to intensify efforts to accelerate the education of women if rural development will be accorded the emphasis required to protect the sanctity of the nation, preserve the liberty of the citizenry and facilitate the pursuit of prosperity at all levels.

It was observed that the respondent were involved in all aspects of the food chain, from primary production to meal preparation. Consequently, a recognition of the crucial role of women in agriculture is the first step toward the integration of women in agriculture in rural development. Government, especially extension agencies, the organized private sector and non-governmental organizations need to stimulate sustainable rural development through the

empowerment of women in agriculture group activities.

It was reported that the bulk of the haulage and marketing of agricultural produce were largely the sole responsibilities of women. Head-haulage, the main method of agricultural transportation, is not only inefficient but detrimental to the health and physical development of female members of agrarian such as animal-pulled carts and mechanized barrows, will go a long way in reducing the drudgery of hauling farm produce. As presently done, agricultural produce marketing is fraught with physical constraints and economic in efficiency. Development of agricultural commodity data bank to provide marketing information and standard weights and measures, and capacity building will go a long way in developing the rural economy.

Agriculture produce processing, preservation and storage were reported to be rudimentary, inefficient and unsafe. Development of low-cost, low-input (LOLI) processing, preservation and storage will lead to the production of food varieties, extension of produce shelf-life, diversification of agribusiness, improve food quality as well as facilitate commodity marketing the effect of all this on the rural economy is not difficult to imagine. Rural communities can only get a shot in the arm to release their latent potential.

SUMMARY AND CONCLUSION

An attempt has been made to highlight the food chain activities for women in Otukpo Local Government Area and their implications for family nutrition. The purpose was to identify the specific activities performed by women in agricultural production and how they affect the nutritional status of the family.

The study showed that the major farming activities performed by women were planting (12.06%), harvesting (12.06%), weeding (9.96%), marketing of crops (8.79%), and packing of crops (8.24%). Women were involved in post-harvest processing of food crops, such as milling of rice (28.8%), threshing of guinea corn (35.26%), slicing of okro (39.52%) and picking of palm fruits (27.14%).

The main activities for storage were smoking of meat (31.65%), salting (27.26%), preservation of fish by smoking (69.53%), and stacking of

grains on wooden platform (*Oda*) (32.06%), and storage in barns (31.85%). Most problems encountered by women in food chain activities were inadequate time for farming due to too much domestic activities (36.6%), poor financial resources (29.59%), and poor storage facilities (22.59%).

Since women contributed greatly to agricultural development through their various activities, they should be supported and appreciated by Government and other relevant agencies or non-governmental organisations (NGOs). Consequently, extension programmes should take proper cognizance of the interest of rural women. Modern amenities and health facilities should be provided at the rural areas to enhance the productivities of women farmers. This will enable them contribute more meaningfully to the financial and nutritional well-being of the family.

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