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Research Article

Gender Participation in the Production and Marketing of Staple Crops in Sorsogon Province

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Abstract

This study aimed to determine the gender participation in the production and marketing of staple crops. The study made use of the descriptive analysis like summations, averages, frequency counts and percentages. Likewise, Likert's scale was used to determine the extent of participation of male and female respondents.

Rice self-sufficiency and other commodities like corn, banana, sweet potato and cassava and increasing farmers' incomes would be the ultimate aim of any sector in the Philippines. In as much as this is the basic crop, the staple food and the way of life of a great majority of the people.

As this staple crop moves from the production sites to the various marketing intermediaries before reaching the ultimate consumers, marketing activities and functions are performed. But the income derived by farmers and traders from marketing the staple crops depends on how these commodities are produced, managed and marketed, the market structure and market conduct of the industry and both government and non-government interventions in terms of policies and programs. efficient production and marketing system to assist farmers, traders and other industry's stakeholders. This would entail an analysis of the interrelationship among the key industry players performing the various functions in the management and marketing practices.

Results of this study showed that more male respondents in all staple crops producers provide sufficient participation in production and marketing and greatly influenced their cultural management aspects to post harvest activities. The operational problems identified by the rice farmers and other staple crops producers after several years of practice were: insufficient mobility fund, geographic location, high cost of labour and no irrigation or source of water. On the other hand, problems on marketing system includes: season ability of harvest and demand, pricing aspects, product promotion and high transportation cost.

In order to feed the growing population, staple crop production has to be intensified and market incentives be put in place to attract more producers. This study would serve as valuable inputs in planning and setting directions for improving the staple crop marketing systems in the Province for the benefit of the industry in general and its various stakeholders in particular.

Keywords: Gender Participation; Production; Marketing Aspects; Cultural Management Practices

Introduction

Agricultural produce like palay and corn, banana and root crops like cassava and sweet potato cannot be underestimated as these crops are the most economic and nutritional sources of carbohydrates (starch). Which provides energy in the human body, vitamins A, B, C and minerals notably calcium and potassium which is essential for bone development and serve as supplement for the body's nutritional needs aside from it is one of the potentials in creating source of successful livelihood in spite of the existence of other high valued crops.

Unfortunately, while these staple crops are considered important component of a well-balanced diet, its contribution to the national economy is still not substantial. Although, there have been some noticeable increases in agricultural production and per capita incomes, as revealed in the "Performance of Philippine Agriculture, 2007 (DA - BAS), the crop subsector recorded a 2.63% growth during the first six months of 2007. The subsector shared 46.95% in the total agricultural production, poverty is still the major problem. On the other report by Philippine Statistics Office (PAS), this first semester 2015, the poverty incidence is now ranging to 23.6 percent.

The wide variety of locally grown crops offers farmers excellent opportunities to improve their management and marketing system. For instance, simple cultural practices can be adapted that will give plenty of produce. it is also highly possible to market their products in a nearby towns or barangays to lessen post-harvest expenses. But it is sad to state however, that the manner/practice of producing the staple commodity in the rural areas as well as in the city's remains the same or has not improved despite the availability of improved technologies.

The Department of Agriculture (DA) Bicol Regional Agricultural Research and Development and the Collaborating Research Development and Extension Services (CRDES) had identified staple crops to receive priority on research. It pointed out that along with the development of appropriate cultural management and post-harvest technology is expected to mobilize and can be acted upon to a rigid screening/survey of these crops in the province [1].

According to the governments' Social Reform Agenda (RA 8425) poverty alleviation programs should promote ecological balance in the different ecosystems in a way that gives the basic sector a major stake in the use, management, conservation, protection and production of resources. This agenda aims to address the poverty, environmental degradation and social conflicts that continue to plague our mainly agricultural economy. Hochol Lee (1999), in his topic, development of rural women and farmers, revealed that rural women are also given special education programs on home improvement to promote the quality of their rural life. Aside from raising local food and cooking for better nutrition it will also give or generate additional income other than farming. Likewise, various training programs at provincial levels be conducted for women farmers to improve their farm management and production skills including commodity-specific technologies and machine operation.

Since its implementation in 1987, the Accelerated Agricultural Production Project - Research's Outreach Sub-project (AAPP-ROS) has worked towards operationalizing a community-based agriculture and he summed up of two concerns like upgrading the capabilities of the DA researchers and extensionists so that they can become more effective partners of the women farmers in agricultural development and developing social concerns in the farming community for staple food products and to promote a real farmer participation.

Numerous literatures have already been written recognizing the significant contribution of women in the arena of development. In the agriculture sector, for instance, women are not only considered as laborers and as husband's partner in making major farm decisions but also farm managers. However, women's experience as farm managers is not well-explored., the AAPP-ROS since its implementation in 1987, has worked towards operationalizing a community-based agriculture and he summed up on two concerns like upgrading the capabilities of the DA researchers and extensionists so that they can become more effective partners of the women farmers in agricultural development and developing social concerns in the farming community for staple food products and to promote a real farmer participation.

Lumbo and Declaro [2], found out that women do not only contribute to the agricultural labour force but also perform as agricultural managers and decision makers. Women farmers are at the life stage where productivity can be maximized; neglecting their potential is a waste of very important productive resource. They can help generate livelihood options and assume leadership positions in community organizations. The women farmers wish they could improve agricultural productivity and income so that they could also attain better life.

Among the fishing households in Oriental Mindoro, fisher wives often control the marketing of fish and fish products. Although the fisher wives are not generally engaged in fishing, at times, they join with their husbands to help in hauling their catch and cleaning the fishing gears. They also help in sorting the catch and in preparing for wholesaling. They even take care of marketing and vending of fish. Fisher wives contribute to the country's welfare and development by participating in activities in coastal resource management and in teaching their children awareness, concern and care for the environment [3].

With the discovery of women as important actors in the context of development, many private and government agencies are intensifying their efforts to empower women by involving them in development activities. In Los Baños, Laguna, women have almost equal access as men to memberships in People's Organization (POs). Women respondents expressed high level of participation in all phases like planning, decision making, implementation and monitoring and evaluations activities of the PO's. Research Management Centre at UPLB contend that gender issues may not be working in the Philippines since Filipino women these days are becoming powerful. They are now advancing in the fields previously identified as men's alone. Nowadays, women are occupying higher positions both in the government and non-government organizations.

The study on the Gender-Responsiveness of LGUs in the Province of Ilocos Sur have manifested a systematic approach and moving towards advanced stages of gender responsiveness. LGUs need to be transparent, participatory, equitable and gender responsive to achieve good local governance. This makes the LGU more effective through identification of particular needs of its constituencies; more efficient through mobilization and involvement of women in decision making processes and implementation of LGUs programs and projects; and more equitable through provision of equal opportunity for men and women to benefit from the fruits of development in the locality.

As revealed in Dolan's study, the ability of women's success in high value agriculture depends on their ability to engage effectively in marketing in varying degrees and in many different ways. He also reiterated that in sub-Soharan Africa women, market traditional crops such as maize, sorghum, cassava and leafy vegetables, mainly in local markets but not intended for export markets. His findings and the present study used both marketing practices in the local market. Both studies noted the same place of distribution of their crops.

Hill and Vigneri [4] in their ESA Working Paper No. 11 - 08 entitled, "Mainstreaming gender sensitivity in cash crop market supply chains" they reiterated that physical distance from markets is important, but so it has access to transport assets or sources of market information like radios, mobile phones. The present study was comparatively parallel in physical distance from markets while the result of this present study cantered on personal selling.

Based on the report of CropLife International 2007 [5], as stated in module 12; gender in crop agriculture, women and children are often directly or indirectly involved in crop protection and twenty to forty percent of the world's potential crop production is lost annually to weeds pests and diseases. CropLife International 2007, had a certain bearing to the present study in relation to the protecting their crops. Both studies implied that staple crop growers must have appropriate access to information about safe pesticides use that imperils human health and poses an environmental hazard.

Despite evidence that gender - informed approaches are needed to bolster women roles and productivity, they are not a mainstay of development and agricultural programs. This gap persists largely because decision makers continue to regard women as home producers or assistants in farm household and not as farmers and economic agents in their own right. Women clearly have a central role to play on boosting agricultural productivity and economic development in rural communities.

A very simple screening survey of these agricultural commodities in terms of management and marketing practices and involvement of farmer respondents is necessary. These are vital to hurdle the yield barrier holding back staple crops production in the province, thus this study [6-17].

Objectives

General: Determine the gender participation in the production and marketing of staple crops in Sorsogon province.

Specific

1. Determine the profile of farmers in terms of staple crops produced, land area, yield, variety along palay, corn, banana, cassava and sweet potato.
2. Gather data on the management practices of staple crops in terms of land preparation, planting, care and management, harvesting and marketing.
3. Determine the extent of gender participation in the identified aspects of crop production activities in the different farming communities.
4. Identify problems met and lessons learned in the production of staple crops.
5. Propose measure or initiative to enhance gender participation in the production of staple crops.

Methodology

The study covered the fourteen (14) municipalities and one city in the province of Sorsogon. Each study has a different set of respondents through purposive sampling. There are five staple crops included in the study such as rice, corn, banana, cassava and sweet potato.

To achieve the objectives of the study, secondary data like existing survey data, number of farmers/producers of staple crops and output of other researchers, related post and on-going studies and information from published and unpublished reports/documents were gathered. This was supplemented by interviews of various stakeholders in the Department of Agriculture (DA) officials; office of the Provincial Agriculturist (OPAg), rice, corn, banana, cassava and sweet potato producers/farmers with regards to their cultural management practices and roles in the industry, marketing activities and cost incurred.

Farm production, volume of palay and how that staple crops was marketed, milled, volume of rice traded, pricing, marketing costs, marketing channels, marketing practices, factors affecting the trading aspects, problems encountered and measures to be undertaken are likewise important data needed from the various respondents. Descriptive analysis like summations, averages, fre-

quency counts and percentages were employed in analysing the various stated indicators. Likert's scale was used to determine the extent of participation of male and female respondents.

Results and Discussions

Profile of the farmers respondents

As shown in table 1, most of the respondents that was interviewed were males (99 or 62%) while there were only 60 or 38% female respondents. The age bracket ranging from 51 - 60 years old has the highest frequency (48 or 31%) out of 156. These findings provide a concrete data that most staple crop growers are relatively old and most of them were 51 - 60 years old. As to their educational attainment, most of the respondents acquired elementary and high school education (43 or 29% and 38 or 25%), respectively and with only one college graduate interviewed. In terms of source of income, respondents depend mostly on their primary income (109 or 80%). Majority of the respondents (81 or 56%) were classified under the leasehold tenancy and only (56 or 39 %) owned their farms but. This indicates that there could be some landowners in the surveyed area, but still the majority of the staple crop's producers remain landless. Under this condition increase production of staple crops has been an important livelihood activity in the Province and that share tenancy system was still common in the area.

	Respondents		Selected	Respondents	
Selected Characteristics	**Frequency**	**%**	**Characteristics**	**frequency**	**%**
Sex			**Source of Income**		
Male	99	62	Primary	109	80
Female	60	38	Secondary	28	20
Age			**Tenurial Status**		
15 - 20	1	.0064	Tenant	81	56
21 - 30	8	5	Rental	6	4
31 - 40	17	11	Owner	56	39
41 - 50	40	26	Labourer	2	1
51 - 60	48	31			
61 and above	42	27			
Educational Qualification					
Elementary Level	30	20			
Elementary Graduate	43	29			
High School Level	34	23			
High School Graduate	38	25			
College Level	4	3			
College Graduate	1	.0066			

Table 1: Summarizes the selected background characteristics of farmer-respondents.

The above data (Table 2) showed, that most of palay growers (40 or 58% and 30 or 43%) got the highest land area ranging from 6,000 - 10,000 sq. m. but at low yield which ranges from (41 or 41% and above) sacks of rice. However, there were only 29 respondents or 54% and 27 or 49% for cassava and sweet potato raisers, grown the root crops in less than 250 sq. m. Low yield obtained was attributed to weather disturbances which occurred on the duration of the crop growth thus resulted to low grain and root crops yield.

Management practices and extent of participation

In harvest and post-harvest activities, majority of the male respondents engaged in manual method of harvesting rice (98 or 51 %) and more than half of the sweet potato and cassava (45 or 23%; 41 or 21%) growers also practiced manual post-harvest procedures. Those respondents who practiced post-harvest handling, dried their palay by solar drying. Still, the respondents agreed that using a drying machine affords faster processing as compared to manual drying. Highest percentage of the male respondents still

		Land Area					Yield (in sacks)				
Staple Crops	**Less than 250 Sq.m**	**1,000 - 5,000**	**6,000 - 1,000**	**10,000-50,000**	**1 - 5**	**5 - 10**	**11 - 15**	**16 - 20**	**21 - 30**	**31 - 40**	**41 and above**
Palay	16	12	**40**	1	4	5	6	5	21	3	**30**
Corn	11	4	8	4	5	3	4	-	1	-	-
Banana	7	10	10	-	10	8	-	2	-	-	-
Cassava	29	13	12	-	16	12	3	1	-	4	2
Sweet Potato	27	12	15	1	26	11	-	3	-	7	2

Table 2: Staple Crops, land area utilized, and yield obtained.

threshold their palay using mechanical threshing machine. This finding was attested that using the equipment facilitated faster the post-harvest practices and concerns.

The cleaning and grading practices as revealed by more than half of the male respondents used the mechanical method for rice growers, while manual method was adapted by the male root crops growers, respectively. Other post-harvest activities included packaging and marketing. More than half of the male respondents packaged/bagged their palay and the sweet potato and cassava growers used the traditional method of packaging their commodities. Data undertake for corn and banana is limited due to lack of plantation established in the covered areas of survey.

In the case of rice, the marketing system was almost equally performed by the male and female respondents. Producers of palay and root crop growers market their products after harvest either through wholesale for palay, while both by contractual or by retail, respectively were sold by both male and female sweet potato and cassava growers.

Table 3 and 4 shows the management practices and extent of participation of the respondents. Male farmers had more experience in adapting secondary tillage for rice (77) while other farmers used the primary tillage for rice (35), sweet potato (38) and cassava (41), respectively. This implied that no obvious problems that occurs in terms of preparing the land for all staple crops. This also shows that having one or two ploughings is their strategies in having a good characteristic of land preparation.

As regards to crop establishment, majority (113) of the male farmers had a greater acceptance in using the manual method of planting both for rice and cassava (106) and (66) for the male farmer, this explains that the traditional method of planting practices exists and continuously practice despite the presence of local fabricators and agricultural machinery industry (Provincial RTDs, 2010 report).

In terms of delivery and source of irrigation water, majority (93) and (81) of the rice farmers depend both on rain for irrigating the rice farms while the sweet potato (42) and (39) for cassava,

Management Practices	**Rice**	**Corn**	**Banana**	**Sweet Potato**	**Cassava**
1. Land Preparation					
a. Zero/No tillage		2	19	5	4
b. Primary Tillage	35	16	11	38	41
c. Secondary Tillage	77	14		10	10
d. Others	6	3		8	8
2. Planting Practices					
a. Manual	106	30	28	50	66
b. Mechanical	1				
c. Direct		29	18	43	61
d. Transplanting	91		2		
e. Broadcasting	4				
f. Dibbling					
g. In ridge		3	1	1	7
h.Drill				4	2
i. In mound				14	5
3. Water Management					
a. Daily watering	7			1	
b. Twice a day					
c. Every other day					
d. Weekly	5				
e. Others (Rain)	93	33	23	49	
(Free Flowing)					
4. Source of Irrigation					
a. Drip irrigation	1				
b. Water Pump	5				
c. Irrigation canal	22				
d. Well	3	2			
e. River	9			2	2
f. Other (Rain)	81	5	15	39	34
(Spring)					

Table 3: Management practices in the production of staple crops.

Management Practices	Male				Female			
	4	3	2	1	4	3	2	1
1. Land Preparation								
a. Zero/No tillage	10		3					3
b. Primary Tillage	50		10	11	3	13	12	22
c. Secondary Tillage	54	1	11	8	5	7	7	28
d. Others	23							3
2. Planting Practices								
a. Manual	113	17	14	10	31	35	12	45
b. Mechanical	1							
c. Direct	49	19		27	13	14	24	
d. Transplanting	44	7		14	12	8	20	
e. Broadcasting	4			2				
f. Dibbling	2			2				
g. In ridge	4			3				
h. Drill	3	1		7				
i. In mound	13	1		3	4			
3. Water Management								
a. Daily watering	7							1
b. Twice a day								
c. Every other day								
d. Weekly	5							
e. Others (Rain)	10		1		3	1		2
(Free Flowing)	3							
4. Source of Irrigation								
a. Drip irrigation								
b. Water Pump	3							
c. Irrigation canal	13							
d. Well			1	1				
e. River	6		1					
f. Other (Rain)	14			1				
(Spring)	1							

Table 4: Extent of participation in the production of staple crops.

respectively. This reveals the fact that an irrigation system is still not reaching the poor marginal farmers and only very few encountered insufficient access to irrigation water, thus scarcity of water became a problem.

The common weed management practices by rice farmers (44) and (39), sweet potato producers (26) and (23) identified by male respondents led to limited weeding operation both on vegetative and reproductive stage. Whereas, cassava got only (23), respectively. In terms of fertilizer usage, farmer respondents used very limited amount of compost as organic fertilizer (8) for banana, sweet potato and cassava. While majority (70) and (61) rice farmers applied greater amount of synthetic (urea and complete) fertilizer, respectively. These results may have led to the non-adoption of organic fertilizer; thus, these could be one of the factors that may result in reduction of yield and farmers preference on the use of inorganic fertilizer.

More than half (56), (41), (38) and (31; 30) of the male (28) farmer respondents were knowledgeable on alternative rice pest management strategies with using almost all synthetic pesticides as the common techniques the farmers were familiar with. While unavailability of organic pesticides or maybe lack of technical knowledge or maybe farmers are unaware of the use of organic pesticides, so farmers failed to use it. This also implied that majority of the farmer respondents are not fully aware on pest management technique.

Marketing practices and extent of participation

Product categories

Among the product categories, both male and female (26 or 44 %) and (20 or 56%) categorized their produced for sweet potato and cassava as medium. On the product choice of rice seed, it was categorized based on high productivity or yield as revealed by rice farmers respondents (35 and 30). This efficient marketing system of farmers shows that performance of this aspect is already improving.

Pricing

A small percentage of the respondents of male (19 or 53%) rice growers had better results in price determination (26 or 60%). However, all other areas determined their pricing of commodities almost equally through value-based pricing of their staple crops (15 or 24% for rice; 11 or 18% for banana; 20 or 32% for sweet potato and 14 or 22% for cassava) as revealed by male and female, respectively. Respondents who performed this activity is an indication of their awareness of the marketing aspects.

For male and female respondents for sweet potato and cassava growers, both had a higher regard in giving discounts when the customers buy in bulk. Unlike for rice, corn and banana, it is not worth noting due to the low results as revealed in the valued crops that it would need a higher technical assistance, so it will not become a contributing factor to the drops in total production.

Place of distribution

As to the place of distribution of staple crops, findings showed that male (18 % or 26%) and female (14 or 27 %) sold their produce sweet potato to the nearby barangays aside from having the highest number for rice where it is marketed within the community. This may be attributed to the level of production in the study area and perhaps to evade other postharvest activities. Likewise, other marketing intermediaries in the palay/rice marketing chain include retailers for rice (15 or 11%), banana (10 or 7%), sweet potato (22 or 16%), and cassava (19 or 14%) through trucks or motor transport and including hauling the rice grains.

Packaging

For the packaging component, the most preferred by male rice respondents as shown in the great number (98 or 65%) is using a burlap or plastic sacks while for root crops, burlap bags/sacks were used for sweet potato (31or 21%), (28 or 19%) for cassava.

Rice producers, potato and cassava growers had both promote their crops through personal selling. This data resulted to poor demand due to lack of promotional efforts in local market. With regards to the treatment of customers, male and female equally adopts for rice, respectively. While for sweet potato considered the following variables namely:

1. Conforms to customers specification and expectations.
2. Treats every customer with integrity, respect and country.
3. Asks customers opinion to further improve the products
4. Provide customers with accurate information regarding the products with accurate information regarding the products. This explained that staple crop growers had a good qualities/attributes and knowledge in dealing with people or end-users.

Problems met by the farmers in the production of staple crops

The most common problems encountered in land preparation as revealed by almost male are insufficient mobility fund (41 or 27%) followed by geographic location (34 or 22%). Other related problems cited is the high cost of labour, while insufficiency of water or unavailability of source of irrigation was also addressed by some male farmers.

On crop establishment, the problems encountered in the climate condition during planting as experiences by majority of the male (65 or 42%) followed by limited capital (36 or 23%). Limited source of planting materials (24 or 16%) were also reported by producers. Majority of male (71or 46%) respondents cited that insufficient budget is also one of the most common problems aside from climate condition (30 or 19%) and use of tools and equipment (44 or 28%). This finding could partly explain why so many male farmers really suffered for all the staple crops. Furthermore, it means that all of these addressed financial problem in their production aspect.

Problems met by farmers in marketing of staple crops

In marketing products of staple crops encountered, seasonality of harvest were the problems met by both male and female. Raisers identified that rice, sweet potato and cassava need to be attended immediately after harvest because port-harvest activities transpired at an average of 29 days.

As to the market performance, male and female revealed that the pricing aspects for rice is low thus they get income from production. They compelled to accept the lower prices offered by the traders and buyers. The provision in improving the performance of the palay pricing system should be well studied in order to optimize the benefits that would accrue to the farmers, traders and other staple industry stakeholders.

Aside from the usual practice of other post-harvest activities, only very few engaged in promoting their product, thus poor networking was realized. Male respondents, when asked on how to deal with people/customer mentioned that abusive costumer, and seasonality of demand for rice, corn and sweet potato were their problems in marketing their produced. This factor should be given emphasis because prospective clients for sure would welcome this kind of information.

Conclusions

- The male farmers/growers' staple crops gave their best in order to address the delivery of technical services and improved yield.
- Agricultural services and management, harvesting and marketing were pro-active to adapt to these natural conditions especially to the changing climate.
- There were constraints that affected the participation of women in the identified cultural management and practices in the different areas of production of staple crops and it is considered fair in the study areas.
- There were several problems in terms of technical, management and marketing practices faced by growers in the area.

Recommendations

The overall recommendations cited were

- Accelerate the development of the marginalized farmers to come up in providing the needed support to technical; and managerial build-up of staple crop growers until its sustainability.
- Strengthen the institutional capacities of LGUs in organizing and monitoring the activities of palay and root crops growers.
- A collaborative approach and synergistic efforts from the staple crops producers should be adopted in future endeavour of the Province to ensure high production, higher yield and income and detailed results-based activity to the marginalized farmers.
- An efficient marketing scheme of palay and root crops required for better analysis of the marketing system, to aid farmers, traders and other industry stakeholders to improve their performance. This will also serve as inputs in planning and setting directions for the development of the industry.

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