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WOMEN IN THE ADOPTION OF RICE-BASED FARMING TECHNOLOGIES IN REGION III, PHILIPPINES

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Abstract

Rice-farming is a critical area where gender issues need critical analysis. Examining and enhancing women rice farmers' level of access to and control of resources and benefits of production are needed in the goal of empowering them in order to lessen their marginalization... The project aimed to assess the role of women as well as men in rice-based farming technologies in selected communities in Region III. The project made use of a descriptive method of research wherein a total of 395 respondents were interviewed from the seven provinces of Region III. A questionnaire was formulated and used for collecting data. Results showed that majority of the male spouse respondents are head of the family except for Pampanga with 50-50 % male-female spouse family headship and are members of farmers' organizations with the majority of the male occupying top positions in the organization while female occupy Secretary, Treasurer and Bookkeeper positions. Respondents were classified under the low-income but not poor cluster. Fund sourcing for farm operations was mostly done by both male and female spouse except when fund is sourced as loan from external sources. Most of the respondents adopted rice-rice-rice cropping pattern which is a mutual male-female decision, however, the decision on what to plant after rice is done by the male-spouse and generally, the source of labor in all rice cultural management activities is male, whether from the family or hired. On the other hand, women had more access to technical information in general and perform other farm related jobs such as providing food (55%) and paying hired labor (44%). The decision to sell produce mostly done by both female and male spouse except selling all produce in excess for family use which is decided by the male spouse.

Keywords: Women Empowerment, Rice Farming Technologies, Region III, Philippines.

INTRODUCTION

Rice is the dominant staple food for South and Southeast Asia, except in northwestern India and Pakistan where rice is a commercial crop. The annual total harvested area for rice is about 43 million hectares or 28% of the world's total for Southeast Asia and 58 million hectares or 38% of the world's total for South Asia. Including China, approximately 90% of the world's rice is produced and consumed in Asia. In the Philippines, it is the most important crop as it is the staple of majority of the Filipinos. The central plains of Region III is considered the rice granary of the country.

In the Philippines, poor rural women play important roles in rice-based farming systems as unpaid family workers, hired laborers, income earners, savers of expenditures and major caretakers of family health and nutrition (IRRI, 1988). Moreover, FAO (2004) reported that rural women play an important traditional role in rice production such as planting, weeding, harvesting, processing and rice post-harvest activities. The proportion of economically active

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female to total female population ranged from 15-81% within Southeast Asia; 49-98% in South Asia. In other Asian countries, 69% of the total female population was engaged in agriculture. In Thailand and Vietnam, the proportion of female and male engaged in agriculture is almost equal. However, in Cambodia, Lao PDR, Sri Lanka, India, Bhutan, Nepal, Bangladesh, Nepal, Pakistan and China, the number of women employed in agriculture as a percentage of the economically active population is higher than that of men. It is evident that those countries, which are low and medium achievers in human development and gender related development, have larger share of women in agriculture. Southeast countries such as Bangladesh, India, Pakistan and Nepal region are poor performers of human and gender development. High human development does not necessarily translate to an equal share of benefits of men and women. Persisting indifference to rural women's contribution to agriculture and the constraints on women's access to productive resources might impede achieving food security goals (FAO, 2004).

The future of rice farming depends greatly on the awareness of men and women's work in rice farming. The contribution of women farmers and their enormous presence and future potential needs to be recognized and acknowledged. Many authors including Moser (1993), Mosse (1993), and Taylor (1999) have recognized women's triple roles in development as meeting their strategic and practical gender needs.

On the other hand, women have major constraints for participation in agriculture as reported by several researchers such as: 1) unequal land rights, 2) limited access to use of resources, 3) lack of equipment and appropriate technology, 4) limited contact with agricultural extension, 5) lack of access to credit, and 6) lower level of education. However, just giving women the same access as men to agricultural resources could increase production on women's farms in developing countries by 20 to 30 percent (FAO, 2011).

Information available is in a global perspective. Identifying and understanding the constraints to women participation in rice production in the regional context will contribute to the existing information available that may help in crafting intervention programs towards empowering women by contributing to agriculture and food security.

METHODOLOGY

A. Place and Scope of Study

The study was conducted in the seven provinces of Region III from December 1, 2018 to July 31, 2019. Data was collected from the six provinces which include Zambales, Bataan, Pampanga, Tarlac, Nueva Ecija, Pampanga and Aurora.

The study is limited to the description of female and male spouse's extent of participation on decision-making in the adoption rice farming practices and in the cultural management aspects of rice-based farming system. It also identified training interventions that may be conducted to help empower women as necessary.

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B. Research Method and Selection of Respondents

Descriptive method of research was employed in this study. Respondents were randomly selected using Slovin's formula from which 395 were identified from the target municipalities in seven provinces of the region. The respondents were selected from the list of rice farmers available in the respective DA-MA Office. The distribution of respondents by province are as follows:

Aurora	-	23
Bataan	-	17
Bulacan	-	58
Nueva Ecija	-	239
Pampanga	-	21
Tarlac	-	23
Zambales	-	14
Total		**395**

C. Data Gathering and Analysis

Information was generated through face to face interview and the use of secondary data. Data gathered were validated through key informant interviews in selected municipalities. The unstructuredd questionnaire was used in key informant interviews while e structured questionnaire was developed for face-to-face face interview of respondents. The developed questionnaire was validated with 10 faculty staff and 5 farmer cooperators of the university's extension program.

The questionnaire consisted of five parts: Part I contained the Profile of the Respondents, Part II focused on the Economic Characteristics of the Respondents' Farm Household, Part III included Female and Male Spouse's Participation in the Adoption of Rice-based Farming Technologies, Part IV contained the Role of Male and Female in the Distribution of Produce, and Part V was the Proposed Intervention.

The data collected was organized and analyzed using Frequency Counts, Percentages and Arithmetic Mean.

RESULTS AND DISCUSSION

I. Socio-Demographic Profile of Male and Female Respondents

As a whole, male and female farmer-respondents were almost equal in number (55%: 45% M:F), the larger majority are married (83%) and mostly elementary and high school graduates (Table 1). Educational profile of the farmers decides the relative exposure of the farmer to latest technologies. Farmers need a basic level of education to understand and read relevant news, rules and notices which can affect productivity significantly. The average years of schooling

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for sample farmers were 7.54 years. Out of the total sample farmers 41.39% of the farmers had higher secondary education, 29.44% had only primary school education, 19.44% were illiterates and 9.72% were graduates as depicted in Table 1. The male- dominated respondents in Bulacan and Nueva Ecija was balanced by the higher number of female in other provinces with all female in the Zambales area. The respondents' mean age of 53.89 with youngest and oldest of 24 from Aurora province and 79 years from the province of Nueva Ecija, respectively, across provinces represent the economically active member of the human resource of the country. The findings of Palis (2020) indicate that the overall average age of farmer respondents was 53 years, with Iloilo farmers significantly older than farmers from Agusan del Norte and Isabela. In India, the average age of farmers is 46 years old (Samarpitha, Vasudev and Suhasini, 2017). Overall, male farmers (70%) exceeded women farmers (30%) and they were mostly married (85%). The average household size was five and the average number of children was four.

Table 1: Distribution of Male and Female Respondents According to Sex, Age, Civil Status and Educational Attainment by Province

1. Sex	**Aurora**	**Bataan**	**Bulacan**	**Nueva Ecija**	**Pampanga**	**Tarlac**	**Zambales**	**Total**	**%**
Male	5	3	40	162	1	6	0	217	54.94
Female	18	14	18	77	20	17	14	178	45.06
LGBT	0	0	0	0	0	0	0	0	0
Total	23	17	58	239	21	23	14	395	100
Age Range	24-69	38-70	30-73	26-79	37-76	36-70	40-64		
2. Mean Age	49.9	58.41	55.5	52	55.52	52.17	53.72	53.89	
3. Civil Status	**Aurora**	**Bataan**	**Bulacan**	**Nueva Ecija**	**Pampanga**	**Tarlac**	**Zambales**	**Total**	**%**
	f	f	f	f	f	f	f		
Single	1	3	4	16	1	3	1	29	7.34
Married	20	11	49	207	14	17	11	329	83.29
Separated	2	0	0	7	1	0	1	11	2.78
Widow/er	0	3	5	9	5	3	1	26	6.58
Grand Total								395	100
4. Educational Attainment	**Aurora**	**Bataan**	**Bulacan**	**Nueva Ecija**	**Pampanga**	**Tarlac**	**Zambales**	**Total**	**%**
Levels	f	f	f	f	f	f	f		
Elementary	7	9	18	130	8	4	5	181	45.82
High School	5	3	23	72	2	7	8	120	30.38
College	8	4	13	30	10	11	1	77	19.49
Graduate Studies	2	1	2	0	1	1	0	7	1.77
TESDA	1	0	2	7	0	0	0	10	2.53
Grand Total								395	100

Most of the respondents speak Tagalog and Ilocano although they also speak their own dialects in the province like Kapampangan and Zambal that are distinct in Pampanga and Zambales provinces, respectively. Generally, Region III is Tagalog-Ilocano speaking region in the country. The average household size consists of 3 to 6 members in the family with the male

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spouse generally considered by respondents as head except for Pampanga where the respondents claim 50-50% F-M leadership in the household. Head of the family as defined in this study follows the commonly understood definition by family members to describe an authority within their lineage, the position of which is dominated by male in the traditional Filipino home.

Table 2: Male and Female-Respondents' Positions in Organizations

Position	Total (Male)		Total (Female)		Total	%
	f	%	f	%		
BOD	11	61.11	7	38.89	18	100
Chairperson	12	57.14	9	42.86	21	100
President	7	53.85	6	46.15	13	100
Vice President	7	77.78	2	22.22	9	100
Manager	3	50	3	50	6	100
Sec.	4	26.67	11	73.33	15	100
Auditor	7	70	3	30	10	100
Treasurer	2	22.22	7	77.78	9	100
Member	87	56.13	68	43.87	155	100
Book Keeper	0	0	1	100	1	100
Sector Head	1	33.33	2	66.67	3	100
Adviser	0	0	1	100	1	100

Trainings Attended and Training Providers

Both male and female respondents said they have attended trainings in agriculture particularly, Rice FFS by the majority, but no training on gender sensitivity. Most of the trainings attended across the seven provinces of Region III were sponsored by DA-ATI, TESDA and Private organization and few by SUC's.

Table 3: Trainings Attended by Respondents and Training Providers

Sponsor	Aurora	Bataan	Bulacan	Nueva Ecija	Pampanga	Tarlac	Zambales	Total	%
	f	f	f	f	f	f	f		
DA-ATI	20	14	48	158	13	10	12	275	98.21
Tesda	1	0	0	0	0	0	0	1	0.36
Private Organization	2	0	0	1	0	0	0	3	1.07
SUC	1	0	0	0	0	0	0	1	0.36
Total								280	100

II. Economic Characteristics of Family Household

Average Annual Gross Income

While some of the rice farmers belong to the high income group, majority (61%) of the respondents belong to the lower bracket with less than PHP100,000 to 300,000 annual gross income (mean=16,666/month) for both female and male (Table 5). This coincides with the data of the Philippine Statistics Office that the average income of farmers (farm, off-farm, and non-farm) would be around P100,000 a year. This makes the typical Filipino farmer earn below the

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poverty line of P108,800 in 2015. According to the Philippine Income classes (2017) income of <9,500 is considered poor; income between 9,520-19,040 as low income but not poor; 19,040-38,080 lower middle income; between 38,080-66,640 middle income class; 66,640-114,240 upper middle income. Rice farmers in Region III are generally classified under the low income but not poor cluster.

Crop farming provides the major source of income for both the female and male respondents with rice production as the main source. Farming related employment includes income from farming as hired labor in transplanting and related jobs. Non-farm income are those that are derived from tricycle operation, sari-sari store retailing and construction work among others. During the face to face interview, there were some women who said they were into small scale processing (e.g. ginger tea in Bataan) to augment their income from rice farming. While attending training in agriculture, they promote their products among the participants and training facilitators.

Table 4: Estimated Annual Household Income

Household income	Male respondent		Female respondent	
(Thousand Pesos)	Total F	%	Total F	%
>1M	15	7.39	4	2.31
901-1M	3	1.48	3	1.73
801-900	6	2.96	4	2.31
701-800	10	4.93	2	1.16
601-700	3	1.48	3	1.73
501-600	13	6.4	8	4.62
401-500	17	8.37	12	6.94
301-400	12	5.91	17	9.83
201-300	34	16.75	23	13.29
101-200	40	19.7	48	27.75
<100	50	24.63	49	28.32
Total	203	100	173	100
Mean Income:	Php 361,270.46		Php 250,757.91	

Respondents' Source of Income

Respondents	Crop Farming		Animal raising		Fishing		Farming-related Employment		Non-Farm Income	
	f	%	f	%	f	%	f	%	f	%
Male	305	64.76	85	57.43	4	66.67	11	52.39	95	50.8
Female	166	35.26	63	42.57	2	33.33	10	47.62	92	49.2
Total	471	100	148	100	6	100	21	100	187	100

2. Farm Resources

a) Landholding and Tenurial Status of Respondents

Farmers' landholding ranges from less than 0.5 hectare to more than 10 hectares with majority having 0.6-2.0 ha. Whether owned, leased or tenanted across provinces in the region (Table 8). Farm tenurial status may have implication on the management given by farmers to the farm. Owned farms may be given preferential attention compared to leased or tenanted (sharing

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scheme) because the farmer is assured of the benefits in the long run.

Table 5: Land Tenurial Status

Area (Ha.)	Owned	Leased/Rented	Tenanted	Other Arrangements
10.01 & Above	5	2	0	1
8.01- 10.0	5	0	1	0
6.01-8.0	6	2	2	0
4.01-6.0	12	3	1	0
2.01-4.0	40	10	14	3
0.6-2.0	200	36	25	7
0.5 & less	23	5	1	0

Table 6: Distribution of Equipment or Farm Implements Among Respondents in the different Provinces of Region 3

Implement/ Equipment	Aurora	Bataan	Bulacan	Nueva Ecija	Pampanga	Tarlac	Zambales	Total	%
	f	f	f	f	f	f	f		
a. Combine Harvester-Thresher	4	1	1	42	5	0	0	53	8.09
b. Tractor/Hand tractor	12	9	36	69	12	5	0	143	21.83
c. Reaper	0	1	1	8	1	0	0	11	1.68
d. Irrigation Pump	5	7	31	52	17	11	2	125	19.08
e. Knapsack Sprayer	14	12	38	77	17	12	8	178	27.18
f. Moldboard Plow	2	4	4	19	8	2	7	46	7.02
g. Harrow	2	4	3	16	8	2	3	38	5.8
h. Carabao (Draft Animal)	4	5	7	22	6	5	5	54	8.24
i. Others	0	0	2	3	2	0	0	7	1.07
Total								655	100

c. Ownership and Utilization of Farm Implements

In general, both male and female spouses claim ownership of farm implements. If not, it is more of the male who owns them than the female (Table 10). Ownership as understood by respondents do not necessarily refer to legal document or under whose name the specific equipment was acquired.

During the face to face interview, it was gleaned from the women respondents that legal ownership of farm equipment is not an issue in the household. In small scale rice-based farming systems that predominate in Southeast Asia, where husbands and wives work together in the same fields and agricultural inputs are a family's most important source of income, there is little to no opportunity for such inequities to emerge (Akter, et. al., 2017) in such case, the issue of joint decision making power in the purchase, use and control of farm assets become irrelevant.

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Table 7: Female and Male Spouse Ownership of Farm Implements

Farm Implements	Male Spouse		Female Spouse		Both Spouse		Total	%
	f	%	f	%	f	%		
a. Combine Harvester-Thresher	8	32.00	6	24.00	11	44.00	25	100
b. Tractor/Hand tractor	57	46.34	11	8.94	55	44.72	123	100
c. Reaper	0	0.00	0	0.00	1	100.00	1	100
d. Irrigation Pump	52	49.52	12	11.43	41	39.05	105	100
e. Sprayer	52	41.27	15	11.90	59	46.83	126	100
f. plow	21	42.86	6	12.24	22	44.90	49	100
g. Harrow	22	51.16	4	9.30	17	39.53	43	100
h. Carabao (Draft Animal)	13	34.21	2	5.26	23	60.53	38	100
i. Others	3	60.00	1	20.00	1	20.00	5	100

In terms of utilization, it is the male spouse that dominates (80-100%) use of all the implements and rarely that women are involved (Table 11). Women who handle equipment were encountered in Aurora and Nueva Ecija. These are the women who shows masculinity in the aspect of farming. A separated wife also has to learn the job in using farm implements to reduce the expense of hiring an operator.

If the farmer does not have the necessary equipment, they resort to hiring and this is generally decided by the male spouse (Table 12).

Table 8: Male and Female in the Use of Farm Implement

Farm Implement	Male Spouse		Total	%
	f	%		
a. Combine Harvester-Thresher	19	90.48	21	100
b. Tractor/Hand tractor	103	96.26	107	100
c. Reaper	2	100.00	2	100
d. Irrigation Pump	85	94.44	90	100
e. Sprayer	119	95.97	124	100
f. plow	34	91.89	37	100
g. Harrow	27	90.00	30	100
h. Carabao (Draft Animal)	33	94.29	35	100
i. Others	3	100	3	100

Table 9: Male and Female Spouse in the Hiring of Farm Implements

Farm Implements	Male Spouse		Female Spouse		Total	%
	f	%	f	%		
a. Combine Harvester-Thresher	14	87.50	2	12.50	16	100
b. Tractor/Hand tractor	24	92.31	2	7.69	26	100
c. Reaper	7	100.00	0	0.00	7	100
d. Irrigation Pump	20	90.91	2	9.09	22	100
e. Sprayer	31	88.57	4	11.43	35	100
f. plow	11	84.62	2	15.38	13	100
g. Harrow	10	83.33	2	16.67	12	100
h. Carabao (Draft Animal)	10	100.00	0	0.00	10	100
i. Others	1	100.00	0	0.00	1	100

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d. Access to Financial Sources

There can be two major sources of funds for financing farm operations, capital from the family and loan from external funding institutions and other lending entities. In both cases, both the male and female spouse have major contributions in sourcing fund except for loan that are sourced from others, such as relatives, in which most of the male spouse are responsible (Table 13).

Table 10: Sourcing Fund for Farm Operations and Management

	Male Spouse		Female Spouse		Both Female & Male Spouse		Other Household member			
Sources of Fund	**f**	**%**	**f**	**%**	**f**	**%**	**f**	**%**	**Total**	**%**
1. Family	13	14.29	11	12.09	48	52.75	19	20.88	91	100
2. Loan										
a. Bank	15	35.71	6	14.29	20	47.62	1	2.38	42	100
b. Takalanan	7	22.58	8	25.81	16	51.61	0	0	31	100
c. Harvester owner	3	50	0	0	3	50	0	0	6	100
d. Thresher owner	1	50	0	0	1	50	0	0	2	100
e. Other Sources	19	59.38	6	18.75	7	21.88	0	0	32	100
Total	58	14.68	31	7.85	95	24.05	20	5.06	204	51.65

III. Women and Men in the Adoption of Rice-based Farming Technologies

Decision-making on the Cropping Pattern to Adopt and Access to Technology

The cropping pattern adopted by majority (57%) of the respondents is rice-rice-rice followed rice-rice-corn/vegetables (44%), rice corn, and rice-vegetable-onion by few others. Rice as the first crop is almost dictated by the climate (Type 1) in the region having two distinct wet (June to September) and dry (October to May) seasons.

What to plant after rice is decided generally by the male spouse. This deviates from the report of Akter et al., (2017) that in the Philippines, all rice farming decisions are jointly made by husbands and wives. It may be noted the studies were conducted in two different geographical locations in the country, Infanta in Southern Tagalog and Region 3.

The reasons given why majority of the males decide about farm related matters across the seven provinces in the region are: 1) female decides on homemaking and home related matters not farming 51.65%; 2) female spouse lacks farming technical know-how (46.84); 3) farming is the responsibility of the male spouse being the head of the family (43.80%); 4) female spouse has no experience and relevant training in farming (40.51%).

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Table 11: Sources of Technology Adopted by Male and Female Rice Farmer-Respondents

Item	Aurora	Bataan	Bulacan	Nueva Ecija	Pampanga	Tarlac	Zambales	Total	%
	f	f	f	f	f	f	f		
1. FFS Farming	12		46	145	2	9	12	226	57.22
2. Technology Guide For Rice, Vegetable and Other Crops	5		45	111		3	10	174	44.05
3. Old practice	17		44	186	3	5	14	269	68.1
4. Training Conducted by DA	12		48	150	3	2	12	227	57.47
5. Agricultural Extension Worker	2		42	125		4	2	175	44.3
6. Radio program on Agriculture	1		26	67		2	1	97	24.56
7. YouTube Video Clips	1		8	31				40	10.13
8. Others	1		9	13				23	5.82

Majority of rice farmers (68%) have stuck to old practice in terms of technologies in rice-based farming followed by technologies learned from trainings conducted by the Department of Agriculture (57.47%), particularly, Rice FFS (57%) and from Agricultural Extension Workers (44.30 %). Reading materials such as Technology guides for rice, vegetables and other crops are also important sources of information for some of the farmers. Access of these technologies in terms of attendance to trainings is equitable for both male and female spouse. In the recently conducted trainings on GST cum Livelihood Development for rice farmers in three provinces of the region, 60% is women participation in Bataan, 37% in Tarlac and 33% in Zambales. Available literature also indicates women participation in this aspect. As reported, "Men in Thailand and in the Philippines prefer to work in the field and are not very interested in attending trainings or meetings. However, they listen to the information conveyed by their wives. One female farmer in Thailand said, "While my husband is in the field, I attend the trainings to learn about new techniques and cropping practices. Afterwards, I discuss this with my husband and we implement these new methods in the field (Akter et al., 2017).

Male and Female in the Cultural Management of Rice

The male is the major source of labor in all the activities of rice production from land preparation to drying and storing of produce (Table 15), be it done by the family or hired for the purpose. It may be noted that hiring rate is the same for both the women and men.

In a report by Women in Rice Farming System, "In 1990's poor rural women play important roles in rice-based farming systems as unpaid family workers, hired laborers, income earners, savers of expenditures and major caretakers of family health and nutrition. Also, women contribute significantly in activities that can be sources of independent income such as non-rice crops after rice in rain fed areas, raise animals and in tending home gardens and urban

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periphery vegetable gardens". There is observed changing roles of women in agriculture from the 1990's to present, from that of unpaid labor in the 1990's to partners in the decision- making process of farming and accessing information that can be used in improving farm productivity. As one female training participant in Bataan said, "we are the silent heroes in farming because we provide backstop to our male husbands in terms of food preparation, home and child care and management to accessing information for our farm use".

Table 12: Male and Female in the Cultural Management Practices for Rice

Activities	Labor																
	Family									Hired							
	Male		Female		Both Spouse		Others		Total	Male		Female		Both Spouse		Others		Total
	f	%	f	%	f	%	f	%		f	%	f	%	f	%	f	%	
Land Preparation																		
Plowing	30	**90.9**	0	0	1	3.03	2	6.06	**33**	40	**90.9**	0	0	4	9.09	0	0	**44**
Harrowing	27	**90**	1	3.33	1	3.33	1	3.33	**30**	40	**85.1**	0	0	5	10.6	2	4.26	**47**
Furrowing	26	**92.9**	1	3.57	1	3.57	0	0	**28**	41	**89.1**	0	0	4	8.7	1	2.17	**46**
Cultural Management Practices																		
Seedling Production	27	**93.1**	1	3.45	1	3.45	0	0	**29**	15	**65.2**	0	0	6	26.1	2	8.7	**23**
Planting																		
Direct Seeding	20	**76.9**	3	11.5	1	3.85	2	7.69	**26**	11	**68.8**	0	0	4	25	1	6.25	**16**
Transplanting	22	**84.6**	2	7.69	1	3.85	1	3.85	**26**	16	**47.1**	3	8.82	15	44.1	0	0	**34**
Fertilizer Application																		
Basal	24	**77.4**	0	0	7	22.6	0	0	**31**	25	**86.2**	1	3.45	3	10.3	0	0	**29**
Side Dress	15	**68.2**	0	0	6	27.3	1	4.55	**22**	23	**82.1**	0	0	5	17.9	0	0	**28**
Top Dress	17	**77.3**	1	4.55	3	13.6	1	4.55	**22**	20	**80**	0	0	4	16	1	4	**25**
Watering /Irrigating	26	**89.7**	0	0	2	6.9	1	3.45	**29**	16	**80**	1	5	3	15	0	0	**20**
Cultivating	23	**88.5**	0	0	3	11.5	0	0	**26**	34	**85**	0	0	5	12.5	1	2.5	**40**
Pest and Diseases Management	32	**94.1**	1	2.94	0	0	1	2.94	**34**	19	**54.3**	11	31.4	5	14.3	0	0	**35**
Harvesting	18	**72**	4	16	1	4	2	8	**25**	21	**51.2**	4	9.76	14	34.1	2	4.88	**41**
Hauling and Threshing	15	**51.7**	5	17.2	7	24.1	2	6.9	**29**	13	**46.4**	6	21.4	7	25	2	7.14	**28**
Drying & Storing	13	**59.1**	4	18.2	5	22.7	0	0	**22**	15	**62.5**	6	25	3	12.5	0	0	**24**
Others	1	**100**	0	0	0	0	0	0	**1**	0	0	0	0	0	0	0	0	**0**

Labor Rate: Same rate applies for male and female regardless of the activity.

As in the work in cultural management practices for rice, other aspects of farm management are also male dominated except for providing food and paying hired workers which is done by majority of women in both the hired and family labor source (Table 16).

Table 13: Participation of Women in Other Farm Management Aspects

Tasks	Male		Female		Both Spouse		Total	Hired Male		Hired Female		Total
	f	%	f	%	f	%		f	%	f	%	
Scouting Farm Worker	125	69.44	33	18.33	22	12.22	180	16	100.00	0	0.00	16
Transplanting	186	77.50	27	11.25	27	11.25	240	13	92.86	1	7.14	14
Harvesting	184	77.97	25	10.59	27	11.44	236	13	100.00	0	0.00	13
Drying	165	76.04	31	14.29	21	9.68	217	9	100.00	0	0.00	9
Providing Food	67	28.39	127	**53.81**	42	17.80	236	4	66.67	2	33.33	6
Paying Hired Worker	81	34.62	104	**44.44**	49	20.94	234	3	75.00	**1**	25.00	4
Establishing linkage with input Supplier and market Outlet	129	59.45	49	22.58	39	17.97	217	4	66.67	2	33.33	6
Others	13	68.42	4	21.05	2	10.53	19	0	0.00	0	0.00	0

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IV. Women and Men in the Distribution of Produce

To sell or not to sell palay and other produce is a decision that is generally made by both the male and female spouse. Where to sell however, is more of a decision of the male spouse and majority of them chose rice traders for the sale of their palay.

The decision on the manner of disposal is done by both, except selling all in excess the amount for family supply which is decided by most of the male spouse (Table 17).

Table 14: Men and Women in the Disposal of Produce

Manner of Disposal	Decision-Maker					
	Male Spouse	Female Spouse	Both (male & female)	Others	Total	%
	f	f	f	f		
1. Sell all produce	22	8	30	1	61	19.68
2. Sell all in excess the amount for family supply	77	27	54	2	160	51.61
3. Share Produce with relatives	33	10	37	1	81	26.13
4. Others	5	1	2	0	8	2.58
TOTAL					310	100

CONCLUSION

The respondents' age range from 24-79 with a mean of 53 years old across the 8 provinces, most are married, generally elementary and high school graduates speaking Tagalog-Ilocano in general. Majority of the male spouse respondents are head of the family except for Pampanga with 50-50 % male-female spouse family headship. Majority are members of farmers' organizations with the majority of the male occupying top positions in the organization. Female occupy Secretary, Treasurer and Bookkeeper positions. Most attended trainings conducted by DA-ATI particularly, Rice FFS. Respondents are generally classified under the low-income but not poor cluster based on 2017 income classification. Majority has 0.6 to 2.0 hectares of land whether owned, leased, or tenanted. Fund sourcing for farm operations and management is mostly done by both male and female spouse except when fund is sourced as loan from external sources. Ownership of farm implements by most is both the male and female spouse but utilization is mostly by male in the family or hired from outside. Most adopted rice-rice-rice cropping pattern which is a mutual male-female decision, however, the decision on what to plant after rice is done by the male-spouse. The major source of technology is training conducted by DA-ATI, particularly, Rice-FFS. Generally, the source of labor in all rice cultural management activities is male, whether from the family or hired. Women has more access to technical information in general and perform other farm related jobs such as providing food (55%) and paying hired labor (44%). The decision to sell produce mostly done by both female and male spouse except selling all produce in excess for family use which is decided by the male spouse. Respondents selected varied training interventions that may help address the seemingly limited participation of women in rice-based farming activities.

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