

GENDER ROLE IN RICE VALUE CHAIN, PAKISTAN



A Study carried out by HELVETAS Swiss Intercooperation

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¹ In Pakistan HELVETAS Swiss Intercooperation is known as Intercooperation (IC) since 1982. The registration as HELVETAS Swiss Intercooperation Pakistan is in process after merger of HELVETAS and Intercooperation in Switzerland. In short hereafter referred to as IC/HELVETAS.

Abbreviations

AWD	Alternative Wet Drying
CSR	Corporate Social Responsibility
DSR	Direct Seeded Rice
IC	Intercooperation
FGD	Focus Group Discussion
LHW	Lady Health Worker
PKR	Pakistani Rupees
RPL	Rice Partners Limited
SDC	Swiss Agency for Development and Cooperation
GPFS	Global Programme for Food Security (SDC)
UC	Union Council
WAPRO	Water Productivity Project (Water Efficiency in Rice and Cotton)

1. Summary

In Muridke area of Sheikhupura, a study was conducted to assess role of women in rice value chain. For this purpose, women in traditional labour community and key informants among farmers and RPL staff were interviewed. Two types of areas were selected – the areas where the best practices are being applied, tested and implemented by contracted farmers of RPL, and areas with non RPL clients/farmers who are still attached with the traditional farming technologies.

Women are mainly involved in the transplantation and are the most neglected segment in the rice value chain. They are involved in rice transplantation for approximately 45 days' time span on millions of acres in the province Punjab, Pakistan. There has been enormous pressure; not only for the women transplantation workers to cover the required area but also for all the rice farmers to ensure timely rice transplantation to secure optimum rice yield. This work however poses significant health hazards for the women involved.

With reference to the women's' contribution as transplantation workers, It was found that this task is highly demanding and tough, but on the other hand better paid than other temporary jobs available due to two reasons: There is a shortage of labour for this particular work; and transplanting is a specialised task and not everyone can do this.

By adopting new sowing methods and production technology i.e. DSR, AWD and laser levelling techniques, the nature of labour requirement may change and experts need to work out how women could be involved in rice value chain in the future. In case farmers opt to switch to dry seeding technique, transplanting will come to an end and women will not be needed anymore. However, adoption of DSR will not happen overnight. The transition from current transplanting techniques to the new DSR technique will be gradual. This means that women will not be out of work immediately from the entire rice producing areas. Some of the fields will apply DSR and it is expected that every year some more will join the circle. Women therefore will continue to offer labour and gradually will have time to switch to other options as demand for labour for transplanting diminishes. On the other hand, there is sufficient time to introduce new skills for new occupations, including relatively specialized ones in the industrial units for literate young women. Interviews also reveal that there is a fair chance for women to be engaged in weeding as a new alternative for women's role in the rice value chain.

Rice crop is one part of the household income; and since transplanting will remain in demand during the coming years, it can be deduced that in case women completely lose this source of income in few years, there will be no significant reduction in income for the whole family since this loss may be compensated by new income alternatives, some of which are already in line; i.e. working on brick factories (*Bhattas*), collecting strawberries or peas etc. Also the better margin earned from transplanting is often diverted to fixing their health issues, sometimes due to transplanting itself. Other decent possibilities for additional income generation like crafts and livestock rising may also be evaluated.

Most women interviewed showed a great interest in improving their lives and income but they were especially keen on improving their daughter's lives. They wish to see their girls in high schools for better education and for themselves adult / functional literacy and trainings in other new skills.

The study in 17 villages has shown that the participation of women in decision making is very low and domestic violence is high. Therefore it is recommended that an effective strategy may be defined leading to more economically empowered women in the community. The encouraging aspect noted in all interviews was that the women are used to hard work and are interested in continuing to earn an income, to become functionally educated and seek other sources of income and possibilities.

2. Introduction

2.1 About WAPRO

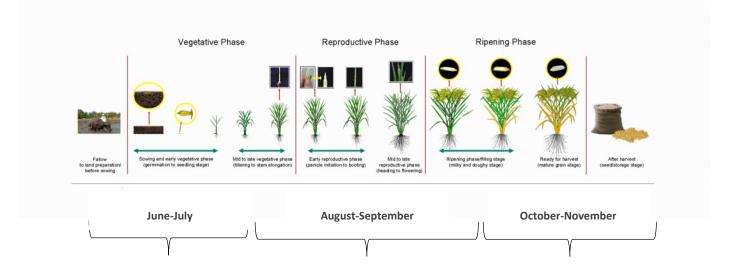
Experts and scientific studies in various science disciplines agree that water and irrigation issues are a key concern for global food security and that potential water conflicts are an essential risk for water scarce regions. Positioned within the Global Programme Food Security of the Swiss Agency for Development and Cooperation (SDC) a multi-sectorial group of actors under the lead of HELVETAS Swiss Intercooperation allied to roll out an innovative approach to address inefficient irrigation practices in smallholder farming for cotton and rice in India, Pakistan, Tajikistan and Kyrgyzstan. The alliance defined as WAPRO is based on the insight that the complexity of water productivity in the field cannot be tackled by individual actors. A more holistic approach is required that can only be achieved by a set of activities that plug together synergistically.

In Pakistan, the WAPRO project addresses enhancement of water use efficiency and food production in rice value chain in the areas of Muridke, District Sheikhupura. Basically the project is based on "3 Ps"; Push, Pull & Policy, which refer to adoption of best water management practices which will result from a combination of effective promotion and outreach in rice value chain (push). The other pillar of the project is the articulation of buyer demand and their support for water-saving and crop diversification (Pull). As a result, smallholders produce more food and gain more income, contributing to reduced water footprints and increased food security. Promoting this approach, sharing best practice and demonstrating impact will influence the Policy, which is the third pillar of the project.

There are four key partners in Pakistan that are worth mention. Rice Partners Limited (RPL) is a lead private sector partner in WAPRO initiative working first-hand with the farmers through their team based in Muridke, district Sheikhupura. RPL is a national supply partner of Mars (owning the renowned rice brand Uncle Ben's Rice). Mars and RPL jointly aim to steer water efficient production of basmati rice in the Punjab area. Scaling-up of this approach to other Rice companies in Pakistan will be facilitated by the Sustainable Rice Platform (SRP). Water stewardship / governance elements will be implemented jointly by the actors facilitated by IC/HELVETAS based in Pakistan.

2.2 Rice value chain-a snapshot

In Pakistan rice is mostly cultivated through seedlings obtained from nurseries. These nurseries are raised during early June and seedlings are transplanted to field in early July. Before transplanting, 5 days are spent in land preparation which is ensured by the 10th of July and transplanting is completed latest by 15th of July. First fertilizer application takes place within first 2 weeks of planting whereas weeding begins within 21 days of crop establishment. Crop harvesting takes place during mid-November when moisture level in the air is between 20-22%. During the crop period, field irrigation continues from July till mid-October. Post-harvest operation in a commercial environment is conducted in the factories on automatic plants.



Rice can also be successfully established using a seed drill in both moist and dry fields. In dry fields, irrigation should begin as soon as possible after sowing. Basal fertilizer can also be added through the seed drill. In perfectly levelled fields, plant establishment rates should be between 40-50% of seed sown. It is assessed that direct seeding increases weeding hassle, which means that direct seeding requires an extra management of weed control.

2.3 The background of Gender study

A baseline assessment was carried out for WAPRO in March, 2015 by IC/HELVETAS in order to identify some pre-defined indicators related to water efficiency in rice crop. It was noted that the introduction of new technologies in rice value chain may contribute to reducing water usage, along with the enhancement of income of the rice farmers. However, as time passed by, it also became clear that it was necessary to study the possible impact of such technologies from the labour's perspective, particularly for women with certain specific roles in the value chain. For this purpose, during the first planning meeting Mars Foods proposed a study to understand the current roles of women in the rice value chain in terms of income and empowerment, and to establish how this role will be impacted both in positive or negative manners by the introduction of new technologies which the project is aiming to implement in the field. This study was conducted by IC/HELVETAS along with RPL team in the field.

2.4 Aims and Objectives of the study

The gender study focused on the following aims and objectives:

- 1. Assess the current roles of gender in rice value chain and analyse how it contributes to the overall productivity of the rice value chain
- 2. Identify the current level of income (of the women) and their percentage share in the total income generated along the rice value chain
- 3. Understand various types of gender related exploitations being observed / experienced at various levels of rice value chain and also, the steps/ measures which could be taken for its mitigation
- 4. Evaluate the change of technology such as transplanting to direct seeding, reduced water application, laser levelling, Alternative Wet Drying (AWD) etc. impact the overall positioning of women in rice value chain and the perception of women workers themselves

- 5. Analyse the current level of empowerment of women and its nature in the rice value chain
- 6. Identify the opportunities in order to increase the contribution of women to total household income and its acceptability from a cultural and religious point of view in the project areas.
- 7. Assess the appropriate interventions for upgrading women roles/positions in the rice value chain.



3 Research Methodology

The study was conducted in District Sheikhupura, the major rice producing area in Pakistan. Two types of areas were selected as a study sample/target area:

- a) Where best practices are being applied, tested and implemented by contracted farmers of RPL.
- b) The non RPL clients/farmers who are still attached with the traditional farming technologies.

In both the areas, the elements of the study were assessed and compared for finding the differences or similarities of gender aspects. To date, RPL is working in 100 villages with 450 clients, the majority of which (73%) are located in Muridke, Ferozwala Sheikhupura and Sheikhupura. The 27% farmers are located in the remaining areas including Narowal Nowshera, Virkan Gujranwala, Kamonke Gujranwala, Pasrur Sialkot, Muzafargarh, Ahmedpur Sial, Jhang, Shorkot and Jhang Gujranwala. Therefore, this particular study was conducted in the three areas including **Muridke Sheikhupura**, **Ferozwala Sheikhupura and Sheikhupura**, where majority of RPL clients exist. Non RPL farmers were also identified and interviewed from the same areas in order to make the activity cost effective and time efficient.

Checklist and guidelines were prepared for the data collection through Focus Group Discussions (FGDs) as a major tool (see Annex 1). Data were also collected by selecting 10% sample randomly from the total RPL clients and 10% sample from the non RPL clients. Semi structured interviews were held with each focus group and were also validated by personal interviews. The data were analysed using descriptive statistics including percentages, means and gross margin analysis.

A total of 90 respondents were taken as the study sample which was further divided into 9 groups with 10 members each for conducting the FDGs. In some of the groups, the participation was above the data collection team's expectation. In total, 320 women including 251 married and 19 widows (age group 22-80), 50 unmarried (12-30) participated in focus group discussions. Women indicated that they never had been provided such an

opportunity to talk about their work and problems encountered in the field. They gathered in large numbers to make sure that they express themselves and are heard.

a. Interviews with Key personnel

In order to further supplement the findings of the FGDs, nine interviews were conducted with key personalities of the areas. The key informant interviews were conducted with six RPL Contract Farmers², one non RPL Farmer and two staff members of RPL (Semi Structure Interview: Annex 2). Keeping ethical obligation, all the FGDs and interviews were started by first taking consent.

b. Sample

The study covered multiple aspects of life of the community, which includes the general data, household income and consumption, education, health and hygiene, economic activity and gender roles in production of rice. The general data were collected from 17 villages (from 8 UCs) where the FGDs were conducted and comprised of 2,702 households. A total 320 women participated. Out of these 320 women none were migrants. They have been living in these areas since many generations. 45% of the FGD respondents were living in houses owned by their men indicating that none of the women owned their house. Which is a general culture in the entire area? With respect to house type, 60% of the respondents in FGDs resided in kacha, 30% in pakka and 30% in semi kacha houses.

No.	Date: 22 February 2016						
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2	Muhammad Shahbaz Ali	Halo KI (Saikhum)					
3	Mehmood Ahmed	Philo Diota					
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1							
2	Musawar Javaid Virk Khairo pur Mallian						
3 Tariq Musood Wagha Khairo pur Mallian		Khairo pur Mallian					
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3 Umer Farooq Saikhum		Saikhum					

c. Study Team

² Contract Farmers are RPL Farmers

	Team 2: Ms. Tehseen (HSIC) & Mr. Usman Butt (RPL)				
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2	Muhammad Abbas	Joyan wala			
3 Gulshad Nabi		Dahraan			
	Team 3: Ms.Samira Qazi (HSIC) & Mr. Arsalan Haider				
1	Shahbaz Ahmed	Mallian Kallan			
2	Safdar Ali	Dheer Ka			
3	Zahid Mahmood	Khori			

4. Results

4.1 Overall situation of the target area

- All the houses are electrified. However households were reportedly affected by power cuts for long hours (18-20 hours a day). The interviewed women stated that in summers the electricity bills goes beyond their paying limits (range PKR 800-20,000). It was assumed that there were some issues related to illegal use of electricity, which causes unrealistic billing for those who have legal connections.
- 80% of the FGD respondents reported to have TV, fan, iron and fridge in their houses.
- 100% of the FGD respondents had simple cell phones (mostly two cell phones in the family).
- 96% of the FGD respondents are Muslims whereas 4% are Christians. The ethnicity of the respondents was Punjabi.
- There were no organised community groups in these villages who could take up the development initiatives for these areas.
- Girls are married at an early age. Nearly 70% of the FGD respondents said that most of the girls are married between ages of 16-20 years. They become mothers to their first child at the ages of 17-21 years. Early births cause several health and social implications and women sounded quite aware of those.

4.2 Household income and consumption

- 100 % of the respondents said that whatever is earned is consumed but still cannot meet their expenses.
- 72% of the respondents reported to have an average (cash) monthly income from PKR 4000-18,000, which was verified during the analysis as well.
- Money is borrowed each month, mainly for meeting the monthly expenses, medical treatments (severe health conditions like pregnancy), travelling to other areas in emergency and paying electricity bills. The average borrowing is around PKR 2000-20,000 in every 2 to 3 months. They mainly borrow from the people belonging to Malik, Dogar casts or any other resourceful persons (e.g. shopkeepers).
- None of the women respondents owned any kind of immovable property.
- Only five women (of different families) out of 320 respondents reported a family ownership of cultivable land (around 2-4 kanal). The cultivable land is entitled in the name of men which is a general culture in the entire area.

All the interviewed women do not receive any specific well defined income that they could report from rice
production. Their work in the rice fields, mainly during transplantation, is not separately compensated.
Their work was included in package of services offered by the entire family on a single acre of rice and is
compensated collectively as a unit. Therefore it is hard to report what is earned by women from uprooting
nursery plants and transplantation.

4.3 Owning livestock

58% of the FGD respondents owned livestock (average 2-4 goats, 1-3 buffaloes, 1-2 cows, and 4-10 hens) and also sold milk and eggs. Nearly 30% of the respondents reported rearing livestock owned by their Maliks / Dogars and get their share upon selling them.

4.4 Education

98% of women and girls respondents wanted to have government education facility in their areas for both girls and boys. In the study areas, only 2% women are educated to the graduate level. 30% girls and 45% boys attend primary education. Only 20% girls and 40% boys attend higher and secondary education from government schools and colleges. Majority of the girls in the FGDs said that their government primary schools are 3-5 km (walking distance) away from their houses. They face problems while walking to school. In summers it is too hot and winters too harsh. There is no transport facility in their villages and if available, they

- Tehmina and Nagina said that our children need education and without education life has no meaning.
- 2. "Education is the key to change our lives. For us education and health are priorities".
- "As a top priority we need a high school for our girls to remove the misery from their lives which we have experienced. We don't want them to be a part of this hand to mouth living".
 "If our children got educated they will get jobs
 - "If our children got educated they will get jobs and be free from the hard labour".

cannot pay the fare. There are private schools in their village but the fees are beyond their limits. In all the villages, women did not discriminate between girls and boys education. They said, "Education is important for both girls and boys as it will bring value to their knowledge and change their status."

40% of the FGD respondents shared the need for adult literacy or non-formal education centres; where they could seek some education to become eligible for working in the factories.

4.5 Health and hygiene condition

Overall health and hygiene condition was marginally satisfactory in the area. There were serious concerns regarding health facilities. Hepatitis and Cholera are among the common problems. The reason behind this issue is use of dirty water. In most of the areas the water is not safe for drinking. 70% of the women respondents said that they were also facing diarrhoea, scabies, allergies, TB, sun stroke, goitre issues. Kidney problems were also reported by 4% of the women. 30% of the respondents were aware of the advantages of boiling water however they felt helpless due to unavailability of gas facility, which prevents them from doing so. In the entire target area no health facility is available.

1 Two women lost their babies while working in the fields (full term babies), as they could not reach the hospital due to distance. 2. *"Whatever we earn during rice sowing is spent* on our illnesses caused by harshness of heat in June and Julv". З. Last year 4-5 people died of Hepatitis and diarrhoea. There is a clinic without a certified doctor 4 "During the entire season, we keep on working; and cannot afford to lav down sick. if we did so, the farmer will find someone else, so we get to work even when we are sick and take rest after transplantation".

Another issue in the area were the pregnant women who had no facility available within the villages; deliveries took place in the City Hospital Sheikhupura with the difficulty to reach on time. During the study, a mortality case was also shared with the team, which took place during transplantation of rice. Sickness during transplantation



People of Dera Islam village face open defecation and no proper disposal of waste

period was also reported in every village; they have to bear the situation and practice self-medication, as no medical service is available in the area. In case of severe need, they have to bear all the expenses that were not covered by the farmer or from any other resource.

Due to extreme weather in the rice transplantation season, women have to face a lot of hardship, because they have to work for 8-12 hours daily for more than 45 days in extreme temperatures in deep mud and heated water. The extreme heat of sun makes women sick, who have to continue with the work in poor health situations without

any medical facility available. They also experience leech bites in the water which cause severe irritation. Generally, they continue their work, until the condition is severely troublesome; in such cases, they have to visit the hospital in Sheikhupura city and spend the hard earned money on their recovery. The women considered this a terrible fact of their life that due to lack of medical facility, whatever money they earn is spent on the treatment (90% of the women reported).

Another common finding in every village was lack of precautionary measures during transplantation. All the respondents said that there is no possibility



Women washing clothes in dirty water, village Saranwala

of adopting precautionary measures, as it will affect the speed of work. They were all of the view that they could only move bare footed in the mud and water, rubber boots would hinder their work.

80% women of the FGDs said that girls are involved in transplantation from the age of 12; before that, small children are not allowed in the fields by the farmers. However little children and babies are also bound to bear the harshness of the season, because young mothers cannot leave them home alone. During these months other young children and the elderly women take care of the infants on the peripheries of the fields.

"In Rice harvesting, we only get grains dropped on the ground. Previously when harvesting was done manually, we used to get a fair quantity for the family, but now with mechanical harvesters, it has become really hard. Spending too much time in collecting grain by grain we hardly collect some rice to feed our children few times. Machines do not leave anything for us".

4.6 Gender roles in rice value chain

All the focus group discussions reveal that women in the target area have a significant role in the rice value chain. They are mainly involved in transplantation of rice that takes around 45 days once a year. According to the women this task is so harsh that it is impossible to be performed by men and this is not connected with division of labour on cultural grounds. The study team also found no traces of this task been performed by men. Each of the FGD and the interviews of the key informants (RPL and non RPL farmers) stated that transplantation is exclusively conducted by women. Men extract seedlings from the nurseries and provide those to women for transplanting. The farmers considered women to be a mandatory option because it is a delicate task which needs a lot of bending during the activity, According to them, only women can do this work, as they can bend for 4-6 hours without complaining aches, whereas men can bend only for 1-2 hours.

In all the FGDs, women stated that in rice value chain they were only involved in the transplantation phase, not in the transport to the market, post harvesting or the sales.

4.7 Current level of income and percentage share of the women

All the respondents said that men are involved in different kinds of daily wage activities related to field labour: construction labour or brick making, average income per household is PKR 5,000 to 18,000, provided that they get work to do on daily basis. In the target area, farming system comprises two crops one after another: wheat and rice. Women are involved in both the crops in the relevant seasons. For rice crop, women are mainly involved in transplantation stage. Previously they also used to collect grains during harvesting season. Now, most of the farmers use mechanical harvesters so women get a little chance to collect grains and receive a little for their family too. In wheat season as well, they get grains after harvesting.

Transplantation takes place once a year during 45 days. Their work is considered to be part of the family income, because the family works together as a unit and gets paid as a whole on per acre basis. The head of the family receives wages for the entire group; customarily a man. The average rate on per acre basis swings between **PKR2700 to PKR4000 per acre with a family of 4 to 6 members working in the field fulltime for two days**; the rate is changed every year. This is why it becomes difficult to draw a distinction line between what is the income earned by women and men in a specific season. During the study, the team analysed that women work in several areas parallel to men which is taken as combined family income, not acknowledged as the income earned by women. Women do not get paid specifically for their tasks in rice production and work as a part of the team which is paid together as a unit.

However since transplantation is relatively well paid, it adds a handsome amount into the household income. It can be deduced that in case women lose their chance to perform transplanting, there may be a change in annual income but not highly significantly *if* this is replaced by other temporary jobs during this period for which the prospects are high. The margins from a relatively better paid job of transplanting are often lost to fixing health issues, sometimes also arriving from transplanting activities. Therefore a net shortfall may be there but not as big as completely losing income from transplanting. Some of the alternatives are already in line; i.e. working in brick kilns (locally called *Bhattas*), collecting strawberries or peas or women's role foreseen in weeding etc.

 Women also work in making bricks which is part of

their livelihoods

According to respondents, nearly half of the total wages of a

family from a unit area of rice field come from transplanting. Therefore share in the family income from rice will

reduce to about half. This also suggests that half of the wages paid by rice farmers are actually earned by women, although not calculated separately due to combined payment practices. If women are excluded from the rice value chain, their share in the household income for a particular season will be significantly reduced, because earning from the transplantation is significant in the household income. However, an encouraging aspect noted during the study was that women are eager to look for alternative sources of income; however the choice of alternative option differed from area to area.

All the FGDs concluded that the men members are the major sources of earning; because they are involved in several earning activities, such as labour and working in the fields in other areas as well. In case of shortage of labour or income, they seek wages in either the nearby villages or Sheikhupura city and even to Sialkot Gujranwala etc. Another source of income found in the target area was wage labour in construction industry, which is sought in the days when no crop requires focused attention.

In some places women earn some money by collecting vegetables i.e. peas, and fruits; i.e. strawberry. According to 70% of the women interviewed, they make approximately PKR100-300 per head from harvesting of vegetables and fruits.

In Hadiala Virkan, a cluster of brick workers were also interviewed. Around 30 women also work in brick kilns for the whole year, except when the rice transplantation season arrives. They said that there will be no significant difference in income, because they will continue working in the brick factories during the rice season as well. On the rice fields they involve every child of the family older than 12 years of age; whereas in bricks kilns the potential is rather low, and younger and weaker children simply cannot do the work. According to women, there will be no loss with the change of technology in rice production and they will keep on working in the brick kilns.

4.8 Gender related exploitations and mitigation measures

The study team tried to explore what gender related exploitations are being experienced at various levels of rice value chain and what steps or measures are being taken for mitigation by the families. It was found that family based working proves more successful as opposed to women or men engaged alone. In 80% of the FGDs, it was found that the women farmers prefer to work in a family protected circle, where no outsider is allowed when the women and girls are working in the fields. The whole family is working on a single acre together and move to the next one when the first one is completed. Working in scattered form in the fields is discouraged in order to especially protect the young girls. However in two villages, there were some incidents of sexual harassment or exploitation by owners of the fields or other influential of the area. Men in the family are alert to prevent such situations. While a family system prevents women from separately identifying their personal earning from the hardship, this system works better for them to avoid risks of being harassed or sexually exploited.

In 80% of the FGDs, women said that if anyone tries to harass them, they will stop working in the fields until and unless the situation is properly handled. They also revealed that they have not yet faced any sort of harassment in the field.

90% of the FGDs reported that women are facing domestic violence within the families. The women informed that these events are limited to the home premises and are frequent from their husbands. Most often, in their view, these occur due to harsh and inadequate living conditions, not enough opportunities to earn hence ofcourse, mostly financial. The respondents suggested that no serious issues had been reported as yet and (unfortunately said) that such domestic violence was within the 'normal and usual limits".

4.9 Impact of technology and perception of women workers

The study evaluated how women will be affected through the new technology, as they have the main role in transplantation. It was concluded that they would lose this task with the new technology; however it was found that their perspective about the change was not so negative. They consider rice crops to be an important source

of earning but at the same time it did not contribute to their personal income. Due to the hardship entailed in transplantation and the health related issues mentioned above, the perspective of not having to do this work anymore was seen rather a welcomed change. The women shared that they were looking forward to explore some alternative jobs, at least for their next generations.

Low wages for labour was also indicated. They have no hope that it will increase. There is a clear understanding not only among the farmers but even among the women that it is impossible for the farmers to increase the wages because it will not be feasible for them. This is because of the government policies which are not farmer friendly; due to which the farmers are in loss for the last two years, although they are paying the same wages to the labour. The scenario, shared by the women and key informants also showed a fear that small farmers might even quit growing rice if the situation persists. The women were aware of the fact that whatever rise in inflation (without any increase in the rice production) takes place; their earning will remain the same and will not be sufficient rather would be less due to rising expenses. That is why they are looking for various alternatives which are discussed later in this report.

80% of the FGDs reported that women showed interest in understanding the nature of new techniques and showed intention that they would like to work with the new methodology, if it could be possible to engage them. They showed interest in getting trained if provided with an opportunity.

The Contract Farmers had mixed reactions regarding the new technologies; however the progressive farmers are hopeful if they are provided with continuous support from RPL. One of the farmers Mr. Ghulam shared that in case of introducing direct seeding technique, women can be involved in weeding, because direct seeding invites more weeds and using any chemical would harm the baby plants; so the only way to get rid of useless herbs is that women are involved in careful sorting of these plants.

On another note, one finding was the level of satisfaction shared by the RPL farmers as such. They expressed their contentment on the support provided by the RPL team about guidance and easy sale of their rice. However, they shared that a higher level of technical assistance will be required from the RPL experts to ensure their adaptability with the new techniques. The non RPL farmers were not very clear about the feasibility of the new technologies and its profitability for the crop. Both the categories of farmers considered the women to be the necessary link of the rice value chain. Farmers also see a remote chance of quickly switching to new techniques leading to overnight change of labour situation.

4.10 Current level of empowerment of women

The study also aimed to analyse the current level of empowerment of women in the rice value chain. In general, it was a pleasant surprise to see that all the women showed a very positive response to the team in the Focus Group Discussion. More women participated than planned and many came up with new ideas on how to improve their situation. The finding showed:

- In 60% of the households it is men of the families who take major decisions like travelling to any place, marriage of their sons and daughters, education of their children, working with which farmer and when, and for whom to vote etc. (Reported by 55% of the FGDs respondents).
- 30% of the men consult their wives, mothers while taking any decision with respect to children, marriage and education as well as inviting any guests or going to any ones house as guests (Reported by 30% of the FGDs respondents).



Women discussing their problems during FGD in village Dera Islampur

 Only 10% of the women (mainly widows) take major decisions but that too with the involvement of their sons or any older man in the family (reported only by 15% of the FGD respondents). In the village Olkhan da dera, some women said, they cannot even decide when they can cook chicken in their house.

Women stated that before these group discussions, they have never consciously calculated the family's earning through the contribution of each person, man, wife and children.

Another aspect of empowerment was education; the target groups' current generation was not educated, however, the new generation is attaining education without any distinction between boys and girls. The most encouraging part in the discussion was that most of the women were concerned about the future vision and girls' education and they see education as a top priority for improving their lives.

No single woman could be identified as an owner of any kind of property or any other asset, particularly immovable assets such as land and house.

It was also found that there was no specific issue related to voting rights for women and men. However as a whole the community is a little empowered in this regard. Men and

Comments from the RPL team and farmers

The labour is booked by an early advance by the contract farmers; thus are paid well and in time, despite of which we face loss. For the last two years we are not earning well. These men and women are very hardy and have become so tough, that they withstand harsh environment and do not get ill so easily. Machines also need repair and maintenance, when compared to human input, but they should take health precautions while working in fields.

The current government is not farmer friendly. If machines are accessible and used, we will not need labour anymore.

The men and women should be educated in sowing the rice in appropriate ways. Current practice is 1 acre for 80,000 rice plants, and ideal ratio for 1 acre is 60,000 to 70,000 plants. Very poor families cannot afford clean drinking water. It would be nice to have a helpline to register farmers' complaints and worries.

women generally followed the advice of the area's influential and notable (*saradar, chowdhri*) to whom they cast their votes. Although there was a tendency to reject all those who have previously failed to meet their promises of fulfilling the basic needs of the communities i.e. health, clean water, gas, electricity and education, yet they showed helplessness on their lack of freedom to cast vote saying they have no option but to follow the advice, otherwise things can get quite difficult for them.

5 Identification of opportunities and acceptability

80% of the women in the FGDs showed a lot of potential and interest for alternative income generating activities. In 20% of the FGDs women expressed some concern over losing rice plantation task, which is an important source of income for their household. However, the women's job in the rice plantation is currently not their single source of income; they are also involved in vegetable picking and fruit collection. They show interest in doing much more than that. The positive indicator found in the area was the absence of cultural and religious constraints for mobility of women. Men and women in the community can easily interact and the women were bold enough to express their views without any shyness. This represents the hope that there is a clear acceptability of women's contribution to household income through various economic activities. There was high acceptability and hope towards girls' education, women productivity as an earning source and mobility within the cultural and religious boundaries. Some of the potentials were identified during the sessions and are described as follows:

 In 70% of the FGDs women were skilled in art & craft and stitching, they showed interest in working on home based jobs if they could get an opportunity to sell their skill. They may be provided with an opportunity by linking them with some entrepreneurs from nearby cities or may be the national market which could furnish bulk orders on cluster basis. Home based community centres can fulfil the needs.

- In 65% of the FGDs women showed interest in working in factories; such as a service factory which is nearby; the only hurdle is that they have limited educational qualification.
- There is a potential for livestock rising in the community; several households keep 1-2 animals; mostly cattle such as cows or buffalos. The problem in this regard was the price of fodder which is unaffordable for the poor. The animals are owned mostly for their own needs or on a shared animal (Hissa³) basis, getting only a little amount for rearing the animal. They showed interest to work hard as on daily wages that if provision of fodder and links with the milk companies could be found.
- The women are hopeful that the next generation would be graced with jobs because they are educating them. In 35 of the FGDs, women shared their dream that their daughters could have a better life after being educated.
- They showed interest in learning new methods and hence contributing in the new rice growing techniques. They showed confidence that they could even learn the difficult methods. However there was no clarity on what could be the possible roles to assume in the future of rice crops.
- Women showed interest in functional literacy to be able to qualify for more decent jobs, e.g. in a factory environment.

During the group discussions, many suggestions for alternatives to the rice

transplanting emerged, some more realistic than the others. It will be however very important to evaluate how women could have an upgraded role in the rice value chain. The interviews with the key informants, RPL staff, RPL farmers, non RPL farmers and key staff members from RPL (synthesis see Annex 4) suggested that with the new technology women will lose their chance to remain as a part of rice value chain. However everyone believed that shift to new technology will take a long time and therefore there is sufficient time to explore new options and develop new skills. Women are confident that there may be alternative sources for income within agriculture value chains but also in industrial units, though only for literate women, which many young women aspire. Some of the farmers viewed weed removal as a potential opportunity in the new technology of rice value chain. It will be very important to work out how this new role would affect women. RPL may explore new possible roles that women could assume in rice crops in the future.



Women, men and children are involved in collecting, grading and packaging of strawberries

³ Hissa means share in Urdu language



6 Conclusions and recommendations

Women in the rice value chain are only involved in the transplantation phase, not in the transport to the market, processing or in the sales. The rice goes directly from the farmer to the factory. After generations of hard work, it was found that women welcomed the termination of their role in rice transplanting. They considered this job to be tough and with no feasibility to improve their lives due to deteriorating health issues and increasing medical expenses. They considered it to be a blessing if they could find an alternative to their current role in transplanting which means hours of hard work in hot muddy water under burning sun for months. Weeding on the other hand could be an operation where women may be involved when farmers switch to direct seeding practice. This task will be less hard as compared to transplantation during extreme weather in hot water.

Women's work is a contribution to the general income of the family and there is no such practice for women whereby they can report their individual contribution. However, they suggest that the elimination of women's role in rice transplanting may not affect their annual income as much, not because this is not important – but more because they do see alternative options to work. One of those alternatives is weeding in rice fields. New methodologies in the rice production are seen very positively. Cleaning the field from useless plants will be easier than the hard methodologies for transplantation; however technical experts have yet to work out how women may be involved in rice value chain operations (such as weeding) after introducing DSR, AWD and laser levelling techniques. In case herbicides are promoted, manual weeding will not remain an alternative and therefore women may have to look for other possibilities for work (such as brick making, and other agricultural operations).

During the study, no migrant workers were identified within the target groups; it was found that women from the permanent resident households were involved in the rice value chain. However, it was reported by some of the respondents that only a few migrant women, come to fill the shortfall in the season in some areas if there is any. It was found that thousands of women within the targeted 90 villages were involved in the process.

The farmers were satisfied by the support provided by RPL and expected their experts to resolve this matter; however they also felt that the issue regarding shortage of labour will be resolved with improved techniques.

Government Policies are not pro-farmers according to the farmers which lead to low level of labour rates and was found to be a never ending problem in the area, with no hope for improvement. The women are aware of the fact that whatever rises in incomes take place; their earning will remain the same and will not be sufficient. Farmers on the other hand report that they are running financial losses for the last two years; the labourers get their proper wages but the farmers' deficit is continuously growing.

The families were also found under high debt ranging from PKR10, 000 to 100,000 due to shortfalls in meeting routine needs; Bank loan is not a custom in the target area.

Domestic violence existed in the area but was not taken as a serious matter since it was considered to be a part of the culture and is unfortunately taken as a normal routine. Early marriages and child bearing give birth to several complications; also most of the marriages take place within the family (*Baradri*, clan).

Women don't want to sustain their daughters in the rice value chain. This is; however encouraging, that a dire need was felt for girls' educational facilities, which are currently lacking in the target area.

Though women as such show high confidence to find alternative jobs by themselves since there are a lot of options due to the agricultural economic activities in the area, it would still be pertinent to look into the health aspects of women during transplanting season (e.g. mobile clinics, Medical camps etc.). This is just one social aspect that may be taken care of. However more important and directly relevant to value chain may be to seek all possible options for alternatives before losing transplanting task e.g. weeding operation or opening the door for relatively educated women for decent jobs in factory environment by promoting linkages with appropriate stakeholders. Functional literacy is a simple technique to prepare women for such tasks.

There was a clear gender imbalance in the RPL team, since no female member was included. By converting RPL into a more gender balanced and sensitive organisation, there may be a chance to involve women at different levels, in the fields as well as the factory.

Following points may be taken up as recommendable actions under Corporate Social Responsibility (CSR) by RPL and Mars Foods to address some of the major issues in the area:

- 1. Organise medical support with two possible aspects:
 - a. Organise readily available first aid service to injuries / troubles in the field while transplanting
 - b. Mobilise regular health facilities in the villages where women can go for first consultation before they need a more specialised support elsewhere far away
 - c. Sensitise women on basic health and hygiene management
- 2. Provide opportunity for secondary school education for girls (for increasing better prospects)
- 3. Develop or explore new employment opportunities for young women in the area
- 4. Provide clean water to improve health conditions in the area and also decrease health related expenditures

Annexes 5 and 6 briefly propose ideas for preparing feasibility for the first two opportunities.



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Annex 1:

Questionnaire:

Focus Group Discussions with Women Rice Growers in Muridke

General Data:

Interviewer:	Date:	Time:		
Any objection to answer the questions: Yes No	UC Name:	Village Name:		
Population of the village: Male Female Children (girls: Boys:)	No. of migrated women / Family	Language spoken:		
Type of house the groups live in:	Any property (asset)	How long the groups' family has lived here:		
Is your village electrified Yes No	If yes, do you all have electricity? Average bill?	Is there any organised group in the community: Male: Female: Who is the leader of the group		
What kind of assets do you have at home generally? TV Fridge Washing Machine Fan Gas Telephone Any other				

Household income and consumption:

Monthly Income of HH (avg.)	Any woman holding property: yes no if yes what are they?	
Do you have any cultivable land: Y N If yes, how much land?	Who in the family takes the major decisions: Men women both	
Does the families own livestock: yes no	If yes type and number?	
Do you have debts? Yes No	Education: Has the group members attended school: Yes	
How much on average?	If yes, what is the highest education they have received:	
From whom?	Your children attend schools: Yes No	
Why?	Both girls and boys go to school: Yes No -If only girls / boys, Why? How far is the school? Private or government school?	
Health: Medical condition of the women: (any medical conditions within past six months)	Private or government school? Health and Hygiene practices (observation) -Cleanliness -Physical appearance	

Type of medical treatment	-Open defecation
Where do they go for treatment	-Drainage/sewerage system
At what age they had their first child:	-Any diseases (scabies/ rabies etc.)
Access to family planning:	-Any other (specify)

Economic Activity: (can make a pie chart)

Who is the main earning source in your family?	Write %
What do men do for earning?	
What kind of work women do besides hh chores?	Spring
	Summer
	Autumn
	Winter
How many hours do women work per day in field?	Spring
	Summer
	Autumn
	Winter
How much do women earn monthly?	Spring
	Summer
	Autumn
	Winter
What do you do in leisure time if any:	
Any work division at family level: (who will do what)	
How much time spent in household keeping	

1. At what stage of rice growing are you involved in? In which season?

- 2. How much time do you spend for each task.....? (Number of days, hours per day?)
- 3. What is your normal wage for the tasks (note separately for each task)?
- 4. What are other terms and conditions (list by tasks):
- 5. Are you working with the same farmer or you are allowed to work with others as well?
- 6. If with one farmer only why?
- 7. In other season when rice is not grown... what do you do
- 8. What % of your income comes from rice?
- 9. If your rice task is no more needed (enumerator, name the task please) how will it affect you?
- 10. Is there enough labour or is it short?
- 11. Are you involved in manual rice processing? If yes, what is the percept of labour women involved in this?
- 12. In your view how many women may be involved in rice labour in your village alone in Muridke?
- 13. How many similar villages are there in Muridke from which the women also offer labour?
- 14. Is there any seasonal migration?
- 15. Is there any child labour... if yes what do they usually do? Are the children paid?
- 16. What precautions do you take when you work in rice fields?
- 17. Are you asked to take precautions or is it a self-initiative?
- 18. At what stage in rice you face health related hazards?
- 19. How do you get treatment in case of illness from rice field or other occupations?
- 20. Are unmarried girls involved in any stage and at what age are they involved?
- 21. Are they paid the same as women?
- 22. What tasks are performed by younger women?
- 23. Any social issues specific to younger women?
- 24. How important is rice business for the women? What if there was no rice in the field?
- 25. Any other remarks from women?

Annex 2: Questionnaire for Key Informant Interview

Interviewer Detail						
Name of interviewer:	Dat	e:				
General Data of Interviewe	ee					
Name of interviewee:		Village name:				
Designation:	Wc	rking since:				
Gender:	Male Fer	nale				
Qualification:						
Describe respondent's role	e in RPL:					
Main Questions:						
At what stage women, me much time do they spend		wing, what important tasks are involved in each stage and how				
much time do they spend	in each lask?					
Men:	in which seasons?	ethnicity:				
Usual wage?	Contract labour? Yes	/ No				
Women:	in which seasons?	ethnicity:				
Usual wage?	Usual wage? Contract labour Yes / No					
Children:	in which seasons? ethnicity:					
Usual wage?	Contract labour Yes	Contract labour Yes / No				
1. Why women are involved in certain rice tasks (name tasks)						

2. What may be the financial contribution of these women in the income of their families?

3. What is the empowerment level of women in their families? Decisions / Property / Assets

- 4. Are you aware if these women face any violence at domestic level?
- 5. Do they face violence in the field?
- 6. How many villages supply women labour for rice value chain in Muridke alone?
- 7. Approximately how many women are involved as labourer in rice value chain in Muridke alone?
- 8. What kind of new technologies are on cards to be introduced for water efficient rice production?
- 9. Will this affect labourer's situation (positive / negative?) For whom? In which way?
- 10. Any remedies that may be predicted?
- 11. How are the health and hygiene practices seen by you?
- 12. Any specific policy of RPL regarding labour (women / men / children)
- 13. Is there any complaint mechanism for labour involved?
- 14. What will happen if there was no rice in Muridke for labour women and men? What will they do instead?
- 15. Any other remark?

Annex 3: Terms of Reference for Gender Study in Rice value chain

Study Background:

WAPRO project addresses increase in water efficiency and food production in rice value chain in Muridke, District Sheikhupura. Basically the project is based on "3 Ps" i.e. PUSH, PULL & POLICY. Adoption of best water management practices will result from a combination of effective promotion and outreach in Rice value chain ('push') and the articulation of buyer demand and their support for water-saving and crop diversification ('pull'). As a result smallholders produce more food and gain more income, contributing to reduced water footprints and increased food security. Promoting this approach, sharing best practice and demonstrating impact will influence at policy-making levels (3rd P stands for policy).

A proper baseline assessment was carried out in March, 2015 to identify some pre-defined indicators related to water efficiency in rice crop. Elements related to gender involvement were un-intentionally missed which was realised as time passed. It was also realised that the introduction of new technologies in rice value chain has contributed in reducing water use along with the enhancement of farmers' income. However, the impact of such technologies needs to be assessed from the point of gender perspective, particularly the women and children. For this purpose, a study is being conducted to understand the current roles of women in the whole rice value chain in terms of empowerment, earnings etc., and how will this role be affected (positively or negatively) by the introduction of new technologies which the project is planning to implement. The following TORs have been formulated for the study.

To assess the current roles of gender in rice value chain and analyse how it contributes to the overall productivity of the rice value chain

- 1. What is the current status of the women's income and what is their percentage share in the total income generated along the rice value chain?
- 2. What type of gender related exploitations are being observed / experienced at various levels of rice value chain and what steps/ measures could be taken for its mitigation?
- 3. How the change of technology such as transplanting to direct seeding, laser levelling, AWD etc. impact the overall positioning of women in rice value chain and how is it perceived by the women workers themselves?
- 4. Analyse the current level of empowerment of women and its nature in the rice value chain
- 5. Identify existing opportunities to increase the contribution of women to total household income and its acceptability from cultural and religious point of view in the project areas.
- 6. What are the appropriate interventions for upgrading women's roles/positions in the rice value chain?

Suggested Methodology:

The study will be conducted in District Sheikhupura, the rice producing area. Two types of areas will be taken as a study sample i.e. the areas where the best practices are being applied, tested and implemented by contracted farmers of RPL and the second area would be the non RPL clients/farmers who are still attached with the traditional farming technologies. In both the areas, the elements of the study (TORs) will be assessed and compared for gauging the gender-based differences. To date, RPL is working in100 villages with the total number of 450 clients, the majority of which (73%) are located in Muridke Sheikhupura, Ferozwala Sheikhupura and Sheikhupura, whereas, remaining 27% farmers are located in the remaining areas including Narowal Nowshera, Virkan Gujranwala, Kamoke Gujranwala, Pasrur Sialkot, Muzafargarh, Ahmedpur Sial, Jhang, Shorkot and Jhang Gujranwala. Therefore, the study will be conducted in the three areas including Muridke Sheikhupura, Ferozwala Sheikhupura, where majority of RPL clients exist. Non RPL farmers will also be interviewed from the same areas in order to be cost effective and time efficient.

A checklist has been prepared for the data collection through using the Focus Group Discussions (FGDs) as a tool. Data will be collected by selecting 10% of the samples randomly from the total RPL clients and likewise 10% of the samples from the non RPL

.....

clients. Semi structured interviews will be held with each FGDs which will be further validated by personnel interviews. The data will then be analysed using descriptive statistics including percentages, means and gross margin analysis. The following table shows the size of sample respondents in RPL and non RPL areas.

S#	Areas	RPL Clients	10% clients (sample size)	Non RPL clients (10%) As sample size	Total Clients/ Sample size
1.	Muridke Sheikhupura	117	12	12	24
2.	Ferozwala Sheikhupura	41	4	4	8
3.	Sheikhupura	86	9	9	18
	Total	244	25	25	50

A total of 50 respondents will be taken as our study's sample which will be further divided into 10 groups, comprising of 5 members in each group for conducting the FDGs. Therefore, a total of 10 FGDs will be conducted during the assessment period.

Interviews with key personnel: In order to validate the findings of the FGDs, 5 to 6 interviews will conducted with key personalities of the areas. The key personnel may include progressive farmers, middle persons, money lenders, religious & political leaders etc.

Time Frame and Study Team:

FGDs can easily be conducted by a gender expert in a day. Thus a team of two experts, working parallel, will cover 10 FGDs in 2 days. An additional day is required to validate the findings with key personnel. The following table shows the complete details of the activity along with its tentative time schedule;

S#	Particulars	# of days	Tentative time period
1.	Conducting 10 FGDS	2	16-17 February, 2016
2.	Interviews with Key personnel	1	18 February, 2016
3.	Data analysis	2	20 February, 2016
4.	Report writing	2	22 February, 2016
5.	Preparation (Coordination with RPL)	1	In between the whole assessment
6.	Travelling to the research areas (to & fro)	2	15 February (Start travelling g from Peshawar)
Total days		10	

Annex 4: Synthesis of Key Informants Interview through semi structured interviews:

The team conducted interviews from eight key informants (six contract farmers and two staff members of RPL). The findings from the interviews are as follow;

 At what stage women, men and children are involved in rice growing? What important tasks are involved in each stage and how much time do they spend in each task? (Tasks may include land preparation, preparing seedling bed, transplantation, removal of extra weeds, harvesting, etc.)

According to the RPL staff, RPL and non RPL farmers, women in the entire target area are involved in transplantation of rice which takes around 45 days. This task is considered as impossible for men and no traces of the task been carried out through men. It was a common finding from each of the FGD and the interviews from the key informants prove that women are exclusively involved in transplantation, however men extract the plant from the land and provide women for transplanting.

They further added that these women are not only confined to one farmer but are allowed to work for any farmer. Before the season several farmers hire the services of these workers to avoid shortage of labour. The workers try to manage their time for the other farmers who have hired them on contract basis. The workers are treated equally without any discrimination for being Muslims or Christians.

The head of the family receives wages for the entire group; customarily comprising the same family. The average rate on per acre basis is 2700-4000 per acre; the rate is changed every year.

The women spend longer hours for transplanting rice in the field. They spend around 10-12 hours per day for 45 days.

Three of the RPL Contract Farmers and one non RPL Farmer said that children especially girls start working after 12 years of age and have complete family support to become an operational and productive part of the family to be able to earn together. Children below 12 years of age are not allowed to work in the fields. The older women, neighbours and elder daughter or son takes care of the young children.

The RPL and non RPL farmers said that the workers/labours are paid timely and well despite the loss. And for the last two years are not earning well as the current government is not farmer friendly.

All the contract farmers said that, if machines are used so they will not need labour anymore.

They added that the men and women labourers should be educated in sowing the rice plants i.e. on 1 acre 80000 rice plants must be sown but in practice the workers sow 70000 rice plants on 1 acre.

Shehbaz Mushtaq, Quality Control in RPL said that thorough training must be given to the workers on planting the rice plants. He further added that if humans are replaced with machines so it will need proper repairing and maintenance. He suggested that there should be a helpline to register farmers' complaints and worries.

- Why women are involved in certain rice tasks?

The RPL staff, RPL and non RPL farmers were of the view that women are a mandatory option because it is a delicate task since this needs a lot of bending during the activity, only women can do it, as they can bend for 4-6 hours, whereas men can bend only for 1-2 hours.

- Financial contribution of these women in the income of their families?

All RPL staff, RPL and non RPL farmers said that the women workers contribution in the family income is around 30-60%.

- Empowerment level of these women in their families?

The RPL and non RPL farmers said that the major decisions within the families are taken with mutual consensus of men and women but as far as the decisions regarding property and assets are concerned, solely men take decisions.

- Are you aware if these women face any violence at domestic level?

The RPL and non RPL farmers said that yes women do face domestic violence, but this is their personal matter and no one should interfere.

- Do they face violence at field level?

The RPL staff, RPL and non RPL farmers said that the women workers have never faced any kind of harassment in the fields. They are always protected by their family men.

- How many villages supply women as labour for rice value chain in Muridke alone?

The RPL Farmer and RPL staff, Ghulam Yasin, Shokat Ali, Farooq Bhatti, Akbar Ali and Shehbaz Dogar said that there are 103 villages in Muridke and almost every village has women workers but during rice sowing season they fall short of women labourers. The women workers from Lahore, Gujranwala, Sialkot, Hafizabad and Sheikhupura are paid to come to Muridke to work on rice fields. Their transportation cost is paid by the contract farmers.

- Approximately how many women are involved as labour in rice value chain in Muridke alone?

The RPL and non RPL farmers said that thousands of women are involved in the season of rice sowing.

- What kind of new technologies are on the cards for introduction to water efficient rice production?

The RPL and non RPL Farmers said that this is a big challenge that must be eased by adopting new sowing methods and production technology i.e. DSR (Direct Seeded Rice); however rest of the implications may not be ignored at the same time. They also added that there is a positive tendency towards learning new methodologies. Clearing of weeds from the fields will be easier than the hard transplantation methodologies; however technical experts have yet to work out how women could be involved in rice value chain after introducing DSR, AWD and laser levelling techniques.

Ghulam Yasin, Shokat Ali and Farooq Bhatti showed a little doubt on the success of DSR, shared their idea that if there is no conventional transplantation, women can still be involved in weeding, because in direct seeding, there are much more weeds than the previous method; and that has to be tackled through women by careful sorting of the useless plants.

Will this affect the labourers' situation?

The RPL and non RPL farmers said that this would reduce labour shortage because not many farmers are in favour of the new technologies.

- Any remedies that may be predicted?

The RPL and non RPL Farmers said that it is too early to comment.

- How are the health and hygiene practices seen by you?

The RPL and non RPL Farmers reported poor health and hygiene practices as open defecation, unsafe drinking water due to which the workers face different diseases such as hepatitis, malaria, dengue, diarrhoea, skin problems and kidney issues. They further added that women and men need to take safety precautions while working in rice fields to avoid any hazards. All of them said that the men and women workers do not get ill easily. The locals' physique is a strong build and mostly healthy.

Any specific policy of RPL regarding labour (women / men / children)?

The RPL staff, RPL and non RPL farmers said that there are no policies for the workers' safety and health. They also added that there is no complaint mechanism as well.

- What will happen if there was no rice in Muridke for labour women and men? What will they do instead?

The RPL and non RPL Farmers said that there are many other tasks in which these men and women workers could be engaged. The Contract Farmers had no concern or were least interested with what the workers will be doing if there is no rice in Muridke for the workers / labourers. Women could be engaged in harvesting vegetables and fruits and also can flourish their own skills in embroidery, tailoring, and other. Men may find alternate sources of income such as daily wages, labouring in factories, involved in other crops etc.

- Other Comments by the Contract Farmers?

The Contract Farmers were satisfied by the support provided by RPL, and expected their experts to resolve this matter; however they also felt that this issue regarding shortage of labour will be resolved.

Farmers are facing loss for the last two years; the labourers get their wages properly but the farmers do not earn enough from it. Government Policies are not pro-farmers which leads to low labour rates and was found to be a never ending problem in the area, about which the women have no hope. The women are aware of less possibility for the farmers to increase the wages because it will not be feasible for them. So they were aware of the fact that whatever rise in inflation takes place, their earning will remain the same and will not be sufficient.

Annex 5:

Ideas for Health Services

Based on findings of the study, Health and Education were identified to be the primary need and desire of the community. Following feasibility plan has been developed in brief to address these issues within the certain limitation:

- Engage with District Health Officer OR Tehsil Health Officer to identify Lady Health Workers. These women are on their pay roll and their job is to provide services in the villages. They are trained in basic health and gynecological issues.
- Utilise existing Lady Health Workers (LHWs) and motivate them. Involve them to provide medical assistance to the community by:
 - Providing updated first aid kits
 - o Providing fresh first aid trainings. Special training to deal with the effects of pesticides / agro-chemicals
 - o Involved in pesticide application and environmental safety programme
 - Trainings/awareness to communities on safety measures can be delivered through LHWs
 - Regular awareness raising among the communities for creating awareness about the risks of unsafe pesticide preparation/application
 - How to dispose-off chemical waste
 - How in general to keep the environment cleaner (where to throw away domestic waste, basic health and hygiene etc.)
- Coordination with District Health Officer to seek his support for
 - Engaging the LHWs through departmental support
 - o Arranging mobile vans at least during transplantation season
 - o Disseminating LHWs whereabouts in the villages with visible signs so people can access them

Benefits of this option:

- Sustainability of health support: LHWs are a part of the Government Health system. The support provided by them will be sustainable, reachable and long lasting
- Affordability: Women stated that they spend a notable share of income on fixing their health issues arising from transplanting. In case they observe their health in a better way and have access to health facility, it will have a positive impact on their income by reducing medical expenditures.
- Improved health will also add towards prosperity in the area.

Annex 6:

Secondary Education for Girls

Education was identified as a top priority and a dire need for girls in the area. There are primary schools for girls, but no secondary schools. Without secondary education, women have little prospects for better jobs. Following may be explored:

- 1. Using an existing Boys' secondary schools for girls in the second shift. For this purpose, coordination with the District Education Officer in order to
 - \circ $\;$ Sensitise him on the needs of the community for girls secondary education
 - o Granting permission for using the same facility without any additional resources in the evening time
 - Supporting the department through finding lady teachers and providing salaries
 - o Supporting teachers' training for quality education
- 2. Identification of the educated women in the area and supporting them to open home based coaching schools. This can only help talented girls to prepare for self-study and for private exams leading to matriculation.
 - o Providing books and relevant material
 - Providing teachers' trainings
 - Providing support to appear in private matric board exam

Benefits:

- Sustainability of education support: By ensuring an up-gradation of a school within the formal Government Education System, the development will be sustainable, reachable, enduring
- Affordability: it was identified that a notable share of income is spent on education by those who still want to educate their girls and send them away from the rural areas to the towns; though these are very rare cases.
- Improved education status will also add towards prosperity in the families through increased job prospects.
 Through enhancing education, the new generation will be able to improve their earning by having more opportunities and meeting criteria.