

Consultancy Project Report

Socio-economic study on Community Based Seed Producers (CBSP) groups of women SHG group model in Uttar Pradesh

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Submitted to

Rajiv Gandhi Mahila Vikas Pariyojana (RGMVP),

Rae Barelli, Uttar Pradesh



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Executive Summary



CAR-National Academy of Agricultural Research management (ICAR-NAARM) undertook a Socio-economic study of women SHG based seed-production groups of Rajiv Gandhi Mahila Vikas Paryojana (RGMVP) on consultancy mode. The key objectives of the study were (i) to assess the impact of integrating Informal seed systems across different groups of SHG members on intra-household bargaining power with respect to agriculture, (ii) to assess the impact of SHGs on intra-household bargaining power with respect to agriculture, (iii) to explore whether seed production is an economically profitable activity. In addition, the study also attempted to capture the impact of the model in short run. A modest attempt has also been made to quantify non-seed producer SHG members' willingness to pay for participation in the programme. The focus of the study was to understand the working of the model and to suggest strategies for mid-course correction if necessary. The study intended to assess the impact of the model on social and economic dimensions and NOT to assess the impact of the programme.

The study is based on both primary and secondary data. Intra-household primary survey was done among sampled SHG and non-SHG households in the study area. The study has used a multi-stage sampling frame and the sample size was calculated using power tests. The preliminary results from the study are summarized below:

- The summary of socio-economic and farm characteristics shows that the member households are mostly from socially backward classes, but economically well-off among their peers. After accounting for the family labour, the cost of cultivation of seed crops were significantly higher than the grain production.
- Only 60% of the paddy seed producers and 35% of the wheat seed producers sold their seeds. Mostly, seeds were sold to the members of their own SHG. The average sale price of paddy and wheat seed was to the tune of Rs. 16.62 and Rs. 16.37 per Kg respectively, which was higher than that of paddy and wheat grain prices (Rs. 13.11/kg and Rs. 14.21/kg respectively).
- Overall, the role of women in agricultural decision making had improved in seed and non-SHG households. We had looked into the intra-household bargaining power of women members in household across various groups (strata). There were conflicts among the primary decision maker and women members in decision making across groups. Though the share of conflicts remained almost the same, the nature of conflicts differed between the SHG and non-SHG households. In non-SHG households, conflicts were due to male dominance, while in SHG-households, it was due to female dominance in decision making. The study show that the conflicts were lesser in seed-producer households compared to non-seed producer households in seed-SHG.

- The net profits from seed cultivation was lower than grain cultivation in case of paddy. After accounting for family labour cost, the profits turned out to be negative for both paddy and wheat. Comparing the cost and returns structure the study revealed that, the average sale price of paddy and wheat seeds need to be increased to Rs. 20 and Rs. 19 per kg respectively to make profits from seed production on par with grain production.
- Members who are socio-economically better (elite) among the peers (SHG members in a group) have a higher chance of being selected as a seed producer if they are president or secretary. This might not be an issue as the interest of the group is to produce good quality seed. But our study shows that those people may not end up with producing good quality seeds.
- The study showed that the non-seed SHG women are willing to pay higher quantity of seeds than the current arrangement (3X quantity of seed in case of paddy and 2X in case of wheat, where X stands for seed provided for seed production) for participation in the seed production.

A detailed discussion on the summary above is given in the chapters. The results discussed above are preliminary and the models used may need revisions.

Socio-economic study on Community Based Seed Producers (CBSP) groups of women SHG group model in Uttar Pradesh

Introduction

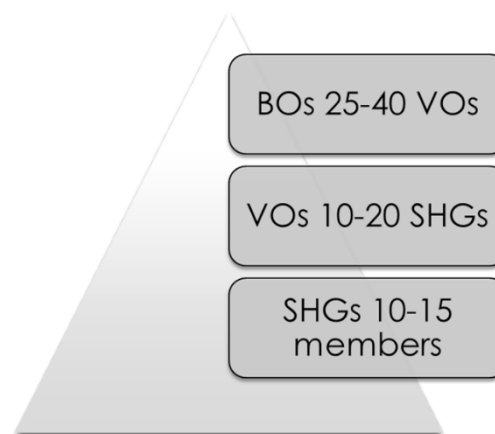
Seed is a key intervention for enhancing productivity, nutrition and resilience of small holder farmers (McGuire and Sperling 2016). Globally several efforts have been done by researchers, policy makers, foundations and other organisations to improve the access of farmers to seed in developing countries (Coomes et al. 2015). Farmer seed networks are emerging as alternative channels for improving access to seed. Various studies had discussed the role of such Community Based Seed Producers (CBSP) groups in providing improved seeds (Almekinders et al., 1999; Badstue et al., 2006; Audi et al., 2008; Alemu, 2011; Louwaars and de Boef, 2012; Rajendrana et al., 2016). Though these CBSP models are diverse as they are individual organisation or programme driven, the base model is a community driven seed production initiative, where seeds are produced and distributed among farm communities (Subash et al. 2016). The current study aims to look at the socio-economic implications of such a model promoted by Rajiv Gandhi Mahila Vikas Yojana (RGMVP).

RGMVP

RGMVP is right based organisation working in backward regions of Uttar Pradesh (UP). Their work mainly focuses on alleviating poverty through collective action of women by Self Help Groups (SHGs). The SHG platform is leveraged for layering of various development interventions such as maternal and child health, nutrition, and sanitation. Through collectivization, women can access opportunities and challenge social and cultural hierarchies, which they are not able to do as individuals. The members of the SHG are able to obtain loans, start income generating activities, and access information on health, education, sanitation, agriculture and rights/entitlements.

At an operational level, RGMVP organizes women in a three-tier structure. The lowest level is the Self-Help Group (SHG), above that is the Village Organisation

Figure 1. Three-tier structure of RGMVP

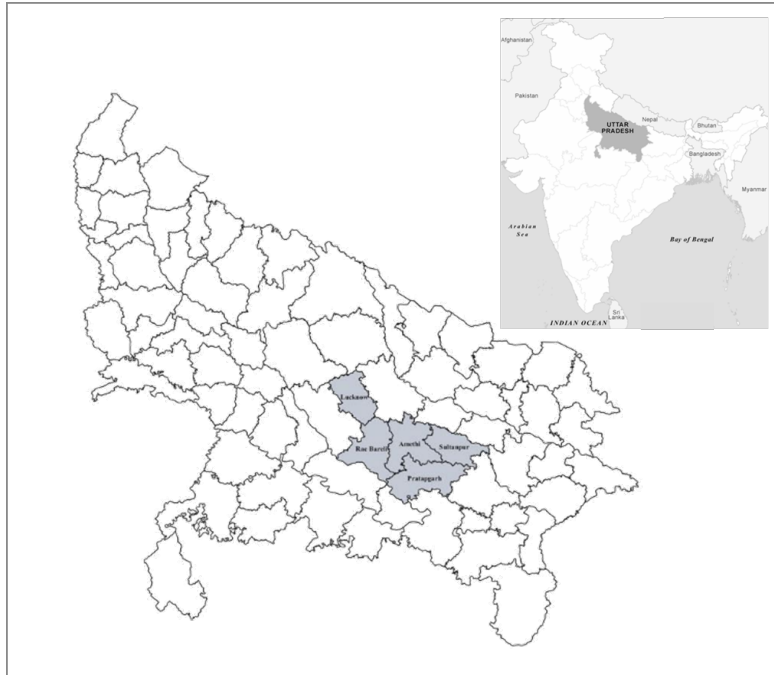


Source: RGMVP (2016)

(VO), followed by the Block Organisation (BO) (Figure 1). The SHG comprises 10 -15 members, the VOs comprises women representatives from 10 -20 SHGs, and the BO is a federation structure consisting 25 -40 VOs. These federations help in bridging the gap between government delivery systems and poor people. RGMVP has also set up Community Resource Development Centres (CRDC) at the regional level to build robust training and management system to scale up the model using the local resources and leadership. These structures act as regional management units, which manage BOs falling under their administrative area.

Informal Seed Systems Project through Women SHGs

Strengthening Informal Seed Systems through Women Self-Help Groups in Uttar Pradesh, India is a project funded by Bill and Melinda Gates Foundation (BMGF). The seed production programme was layered on the existing SHG initiatives of RGMVP. The project was first carried out in a pre-pilot phase in 2014 in two districts (Amethi and Rae Bareli) covering six blocks across the districts. The programme was launched later (2015) as full fledge project with one year of baseline and pilot

Figure 2. Targeted area under the project in Uttar Pradesh

phase, and scale up phase in five districts (Amethi, Lucknow, Pratapgarh, and Rae Bareilly and Sultanpur) covering 12 blocks in these districts in Uttar Pradesh, India (Figure 2).

The project leverages the existing women SHG platform to strengthen informal seed systems in order to address issues around seed availability, access and utilization to ensure seed security, women's empowerment, and nutrition security. This is done by strengthening the existing seed delivery system and creating new sources of seed supply. The existing seed delivery systems include public seed sources for certain varieties, farmer to farmer exchange, farmers saving her own seed, and informal market mechanisms. New sources of seed supply include linkages with universities and research (for both foundation and certified seed of existing and new varieties), SHG seed and producers and the others

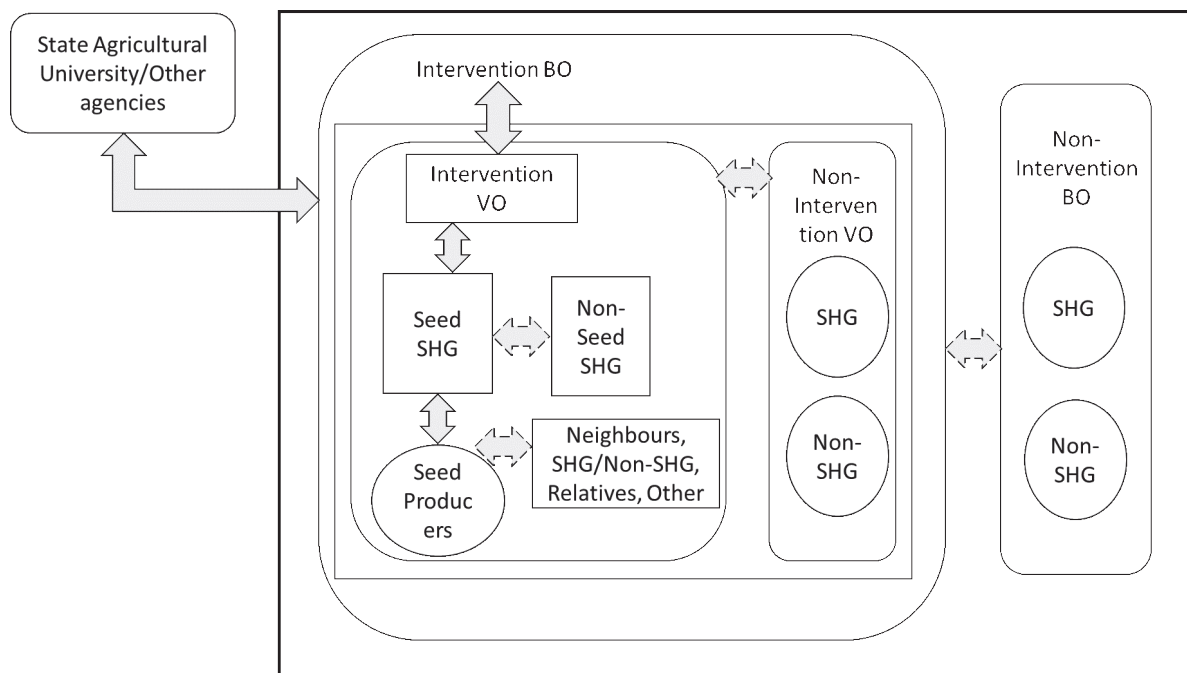
RGMVP Model

The key objective of the project is to strengthen informal seed systems (access to seed) leveraging the SHGs to empower women in agriculture. To facilitate this process, purchase and production of varieties is done by SHGs and their federations (VO) who get the seed

produced by CBSPs. The programme is layered on the existing SHG platforms (roughly 10% of the SHGs have been targeted for the programme).

Women members of SHG households are targeted to become seed producers (CBSPs) for the VO. In this model, foundation seed of farmer preferred improved varietal seeds has been purchased by SHG/VO from the State Agricultural Universities (SAUs) and provided the same to the SHG members for multiplication after estimating the requirement of seed for next season (Figure 3).

The seed is given to the seed producers with a condition that they will take up all the necessary measures to ensure seed quality and return a portion ('X' times the quantity of seed provided) of harvest to the VO. This is to ensure that quality, regular trainings are imparted by RGMVP to community on seed production and management. Community conducts regular visits to seed production plots for quality assurance. At the BO/regional level, 10 community leaders are responsible for monitoring 14 blocks. At village level, two community leaders impart training and monitor 12 villages. One Community leader looks after one village, nearly 8 to

Figure 3. Seed production and distribution


15 SHGs per person. RGMVP experts in providing the handholding support at every level.

Training was provided to selected members of the SHG at each VO. They are named as "Ajeevika Sakhi", who in turn train the seed producer members. They were trained to follow Good Agriculture Practices (GAP) such as raising nursery and transplanting the crop and System of Rice Intensification (SRI). They also level the land before going for seed production. The seed production is carried out using the inputs of the seed producers. After harvest, the seed producers give back pre-decided quantities to the VO. Thus, there is seed availability at two levels - at VO and with seed producer. Seed at VO (referred to as "Seed Bank") will primarily be disseminated amongst remaining VO members. Meanwhile, VO communicates about varietal availability to other VOs and BOs. Then, as per the demand received from them, remaining seed with VOs and seed members are sold to them. During this process, seed producers will get a premium when the seed is sold by the VO while VO will sell the same at a margin which goes into the VO's account. Seed producers can also sell/exchange seed by themselves at different avenues.

The production and dissemination of farmer preferred varieties through SHGs was conceptualized to enable women farmers to access these seed. The seed production programme was integrated on the existing SHG initiatives. Members of selected SHGs households become seed producers and procured seed for seed production. The key objective of the project was to strengthen informal seed systems (access to seed) leveraging the existing SHGs and to empower women in agriculture.

Empowerment is a broader concept and defined depending on the context. Alkire et al (2013) had done a detailed review on empowerment and how to measure empowerment. Though there are various dimensions through which we could measure empowerment: intra-household bargaining power is the underlying component which determines empowerment (refer Keddebe et al. 2013, Doss 2013, Malapit and Quisumbing 2014). Growing number of evidences in literature demonstrate lack of attention to intra-household dynamics in intervention targeted for women could impact empowerment (see Alkire et al. 2013). Quisumbing and Kumar (2011) in their study had shown that interventions focused on women could

result in growing gender asset inequality in household. Anderson et al. (2017) in his study had concluded that absence of spouse agreement could be challenge for interventions aimed at reducing gender inequality or empowerment of women in rural regions. In the pilot, we designed Focus Group Discussions (FGDs) and recorded anecdotal evidences of changing intra-household decision making in targeted households. This prompted us to focus on understanding the changing intra-household bargaining power and decision making as a result of such intervention. Additionally, seed production involves additional cost which has its trade-off with the existing crop production. The study would also assess such trade-off cost to understand whether the model is economically feasible.

Objective

The research questions the study explored are

- Impact of integrating informal seed systems across different groups of SHG members on intra-household bargaining power with respect to agriculture
- Impact of SHGs on intra-household bargaining power with respect to agriculture
- Is seed production an economically profitable activity for the farmers who are members of the CBSP?

Other than these objectives, two more dimensions were probed

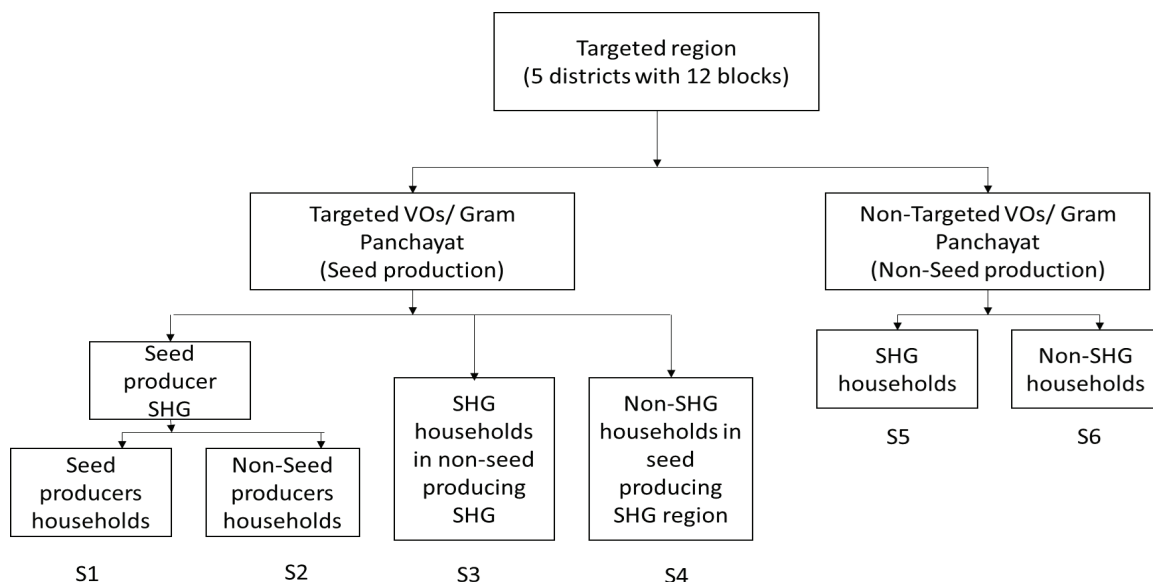
- The study also looked into whether elite capture had happened in the model and whether it impacted the programme
- We also assessed the Willingness to Pay for the programme among non-seed producer SHG members

These objectives were added during the pilot testing. The FGDs and interaction with the SHG members and RGMVP managers intrigued us to probe these dimensions. The results from these objectives could help in designing the programme in an effective way. A detailed discussion about these objectives is given in chapters.

Methodology Sampling Method

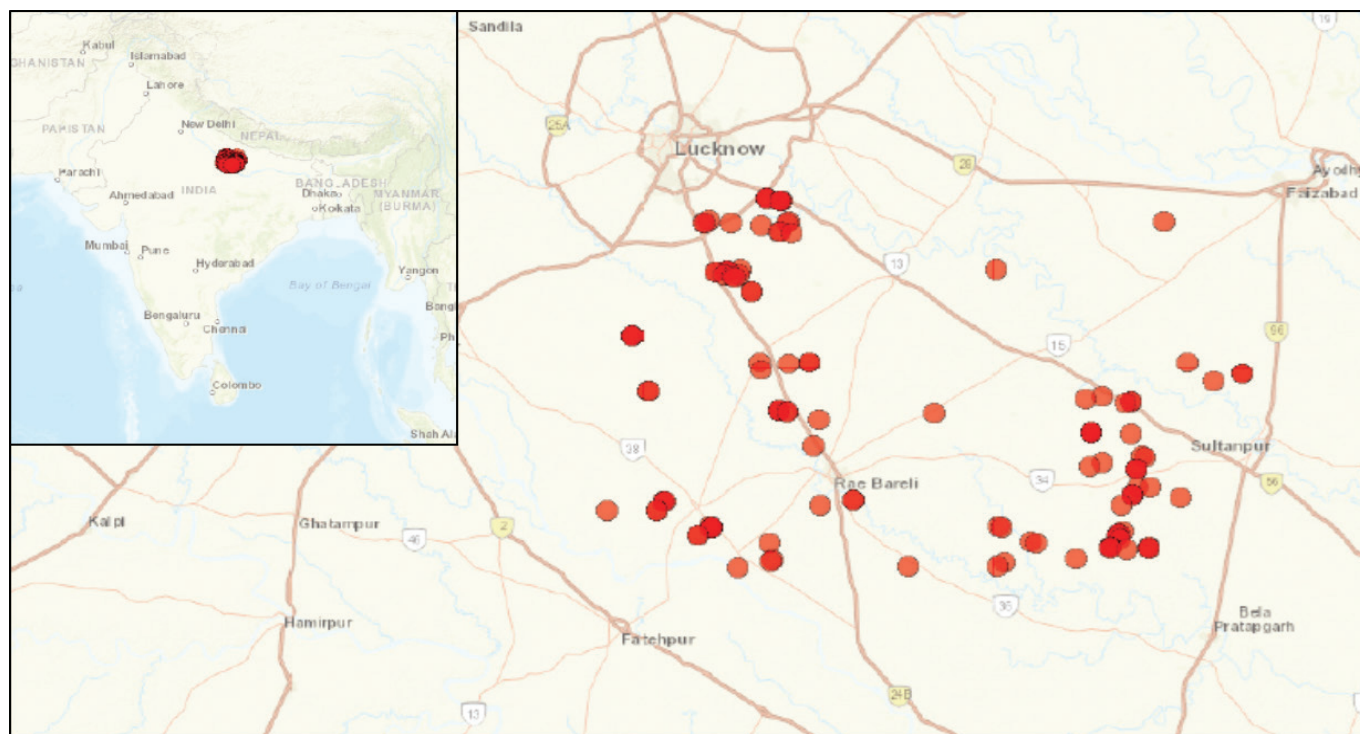
The study is based on intra-household primary data collected from sampled SHG and non-SHG households in the pilot study region (5 districts with 12 blocks). The sampling was done using multi-stage sampling method (Figure 4).

Figure 4. Sampling frame



Note: Gram Panchayats are village unit which consists of a cluster of hamlets. S1, S2, S3... S6 are the strata.

Figure 5. GPS point of sampled households



Note: Only 120 GPS points were finally noted. GPS points plotted for visualisation

At stage one, Targeted and Non-targeted VOs (Gram Panchayats) were randomly chosen from 12 blocks. The number of VOs and the total sample size was calculated based on power calculation (Figure 4). A census was done for SHG members in the sampled VOs to check whether the SHG and SHG member exists. At stage two, from the sampled VOs (targeted and Non-targeted) the population was divided into six strata; seed producers in targeted SHG in targeted VO (S1), non-seed producers in targeted SHG in targeted VO (S2), non-seed producer SHG in targeted VO (S3), non-SHG members in targeted VO (S4), non-seed producer SHG in non-targeted VOs (S5) and non-SHG members in non-targeted VOs (S6). The SHG households was randomly sampled from the census data (which was a verification of baseline data). In each stratum a total of 140 households were sampled. The total sample size was estimated using power test and distributed across the strata. A total of 840 households were planned to be surveyed and we ended up surveying 815 households. The non-SHG households in targeted and non-targeted VOs was randomly selected from households after doing census of non-SHG households in the sampled VOs in treatment and control region. The locations of sampled households in the study area are shown in Figure 5.

Power calculation

The sample size was estimated through power calculation using optimal design software (Spybrook et al 2011). The effect size was calculated based on paper by Garikipati (2008) which also looked on impact of SHG women lending on women empowerment. The estimated effect size ranged from 0.12 to 0.24 for various household level decisions. We used effective size approach in estimating the number of VOs and power size approach in estimating total sample size (Figure 6-7). A total of 92 VOs were sampled (with effect size 0.12 and $\alpha=0.05$). For estimation of total sample size per VOs we took effect size on higher end (0.20) with $\alpha=0.05$. The sample size was estimated to be 800 and we interviewed 840 households (140 households per strata). We oversampled it by 5% to account for missing.

Data

The study used both primary and secondary data (baseline data collected by RGMVP). The primary data was collected using three set of structured questionnaires (See Appendix). One for the household (interview to be done with the household head), other for the women SHG member (separately if the household head is not SHG member) and another for the primary

Figure 6: Sample estimation for VO's using Power calculation

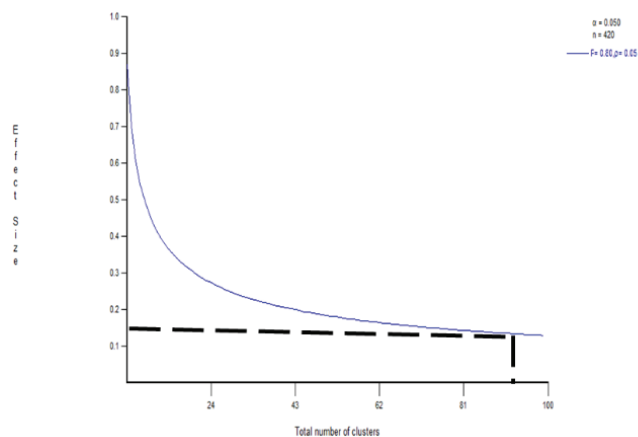


Figure 7: Total sample estimation using Power calculation

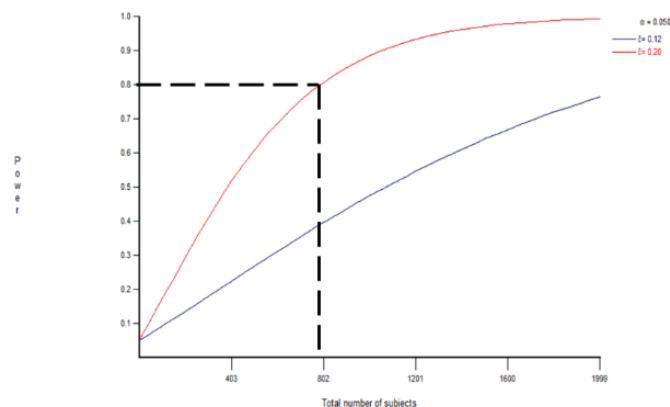


Table 1. Questionnaire-respondent classification

Questionnaire	Strata 1	Strata 2	Strata 3	Strata 4	Strata 5	Strata 6
Household	Household Head	Household Head	Household Head	Household Head	Household Head	Household Head
Individual 1	Primary decision maker	Primary decision maker	Primary decision maker	Primary decision maker	Primary decision maker	Primary decision maker
Individual 2	Seed producer women SHG member	Women SHG member	Women SHG member	Spouse of the primary decision maker	Women SHG member	Spouse of the primary decision maker

Note: If the primary decision maker is household head the Individual 1 question would be asked to the household head itself. If the Women SHG member is both Household Head and Primary Decision maker only one questionnaire would be administered. Please refer Figure 4 for strata.

decision maker in the household (Spouse or other family member- if SHG women is not the primary decision maker). In case of non-SHG household interview was done with the household head, primary decision maker (If household head is not the primary decision maker in agriculture) and spouse of the household head.

The interviews of SHG members and primary decision makers (if the SHG member is primary decision maker there won't be separate interviews) was done separately. This approach is different from the conventional approach of interviewing husband and wife in a dual household. As Doss (2011) had pointed out that in rural areas of developing countries, there might be multiple adults and decision makers may not be household head and spouse. So we had designed it in way that we do not

implicitly or explicitly assume the household head and spouse as primary decision makers. Rather we looked into primary decision maker and his wife (for non-SHG households) and primary decision maker and women SHG member (For SHG household). The primary decision maker in agriculture is determined by information provided by the household head. Data was gathered on the socio-economic characterises, decision making (production, marketing, postharvest harvest practices, access and control of resources), social capital, time and resource allocation, farm characteristics and cost of cultivation would be collected.

The secondary data was used to sample the respondents for the study as discussed before and also used to do a preliminary study. The qualitative data collected during the process is used to draw anecdotal evidences.

Table 2. Impact framework used for the study

	Treatment household	Control household	Assessment	Effect
1	Strata1	Strata2	Impact of seed production	Direct effect
2	Strata1 & Strata2	Strata3 & Strata 5	Impact of seed SHG	Direct effect
3	Strata 3	Strata 5	Impact of seed SHG and SHG	Direct effect
4	Strata 1 & Strata 2	Strata 5	Impact of seed SHG	Direct effect
5	Strata 5	Strata 6	Impact of SHG	Indirect effect
6	Strata 1,2,3,5	Strata 4,6	Overall Impact of SHG	Direct effect

Impact Framework

The study majorly uses impact assessment methodology for exploring the objectives. The treatment and control groups are drawn from different strata to understand various effects; direct, spill over, and indirect (See table 2).

Scope of the study

The study aimed at understanding two dimension as a result of the intervention; intra-household bargaining power of women and economic cost of seed production.

The study focuses on the changes happening as a result of the intervention and not on evaluating the impact of the programme. The findings from the study could be used to understand how the model is working and to frame strategies for mid-course correction if necessary. Several other dimensions of the seed productions marketing and pricing of seed, Willingness to pay and functioning of SHG and household participation was also analysed.

Chapters

Socio-economic profile of households

A summary of key socio-economic variables used in the study is given in the session (Table 3). The variables are tabulated based on strata (refer methodology). A detailed summary of different variables used for different objective of the study would be given under different chapters.

In this session, the results from the study are outlined as chapters: 1. Socio-economic profile of the household, 2. Farm Characteristics, 3. Seed yield, cost and sales, 4. Intra-household decision making, 5. Trade-off cost of the seed production programme, 6. Impact of elite capture on the programme, 7. Willingness to participate and pay.

Table 3. Socio-Economic profile of the household

	Strata1	Strata2	Strata3	Strata4	Strata5	Strata6	Total
Caste							
General	9.09	11.67	10.69	10.29	12.88	21.74	12.70
OBC	47.40	50.00	51.91	50.00	53.03	52.90	50.80
ST	14.94	7.50	14.50	9.56	12.12	5.80	10.85
SC	28.57	30.83	22.90	30.15	21.97	19.57	25.65
Household type							
Nuclear	60.65	65.83	68.18	58.7	61.36	63.04	62.82
Joint	39.35	34.17	31.82	41.3	38.64	36.96	37.18
Household members*	5.74	5.93	5.86	5.60	5.55	5.69	5.72
House Type							
Kaccha	33.55	37.29	45.8	40.15	33.08	37.23	37.75
Semi Kuccha	43.23	44.92	32.06	41.61	49.23	40.88	41.96
Pucca	23.23	17.80	22.14	18.25	17.69	21.90	20.30
Livestock Units*	1.84	1.57	1.79	1.31	1.39	1.56	1.58
Agricultural Asset* value	14,714.48	6,636.81	13,617.65	9,680.928	10,056.64	14,038.65	11,626.34
Non-Agricultural Asset value*	21,734.36	15,345.27	29,194.6	16,050.27	16,031.63	29,643.10	21,454.97
Migrant	19.35	15.00	18.94	10.14	13.64	20.29	16.32

Note: Variables * are average values, others are in percentages

Majority of the households belong to OBC category. The share of disadvantage groups (SC/ST) were higher among SHG households (both seed and non-seed). About 63% of the households are nuclear family but the share was higher among SHG households in treatment region. Though, the seed-member seed-SHG had higher share of joint family. But the average number of household members showed pattern in reverse direction to that of family type. The average members were higher in non-seed member SHG households, followed by seed SHG households, SHG households and non-SHG households. Households across different strata possessed mainly semi-pucca houses. SHG households have better housing than non-SHG group in treatment region. Seed producers of SHG households had better housing than

the non-seed producers of the same group. The livestock asset holding of the households were calculated by converting different type of households into Livestock Units (LSU). Average LSU was higher among SHG households compared to non-SHG households in control region. While it was vice versa in treatment region. Seed producers of SHG households had higher LSU compared to non-seed producer seed-SHG households. The SHG households are well-off compared on non-SHG households in both agricultural and non-agricultural assets in target region and vice-versa in control region. The average value of agricultural assets was higher in seed producer of seed-SHG households compared to non-seed SHG in treatment region. While the average value of non-agricultural asset was higher in non-seed

SHG compared to seed-SHG households.

Higher share of migrant members was found in SHG households in treatment regions and vice versa in control region. The share was higher in seed-producer seed-SHG households compared to other households in treatment region.

Farm Characteristics

A brief summary of the different variables capturing characteristics of the farm is given in table 4. The average land holding and cultivated households were higher in seed households and non-SHG members in treatment regions. Majority of SHG households grow paddy as a major crop in Kharif season but non-seed SHG and non-SHG members grow mainly wheat in Rabi season. The cost of cultivation of paddy in Kharif and wheat in Rabi shows that the SHG households had incurred higher cost than non-SHG households. The calculated costs are higher than the CACP data on cost of cultivation of rice and wheat in Uttar Pradesh. It might be due to outliers in the data, which needs to be cleaned further. Test statistics using 'Anova' shows that there is no significant

difference in cost across the strata households.

Seed yield, cost and prices

Table 5 shows the yield (kg/ha) of paddy, wheat and its seed crops across different strata. The paddy and wheat grain yield was found to be higher among seed producers (Strata 1). In case of paddy, this was followed by SHG members and non-SHG members in control region. While for wheat, it was followed by non-seed producers in seed-SHG (Strata 2).

The cost of cultivation of paddy seed in Kharif season and wheat seed in Rabi season was calculated based on the data collected by the seed producer households of seed-SHGs (Table 6). The cost (Cost 1 and Cost 2) was found to higher for paddy compared to wheat. But including the family labour, the cost was found to be higher in case of wheat compared to paddy.

The cost of cultivation of seed (paddy and wheat) was also compared the cost of cultivation with cost of cultivation grain (paddy and wheat) in Kharif and Rabi season (Table 7). Paired t-test was used to compare the cost of seed with cost of grain crops. The cost-difference

Table 4. Farm characteristics of the same households

	Strata1	Strata2	Strata3	Strata4	Strata5	Strata6	Total
Land Owned	0.54	0.33	0.45	0.54	0.31	0.57	0.46
Land cultivated	0.54	0.37	0.44	0.51	0.33	0.57	0.46
Paddy as major Kharif crop ^s	82.58	81.67	74.24	80.43	87.12	78.26	80.74
Wheat as major Rabi crop ^s	88.39	90.00	93.18	93.48	92.42	97.83	92.52
Kharif paddy cost of cultivation (Cost 1)	26,981.64	26,223.37	28,055.4	24,334.59	28,033.55	27,926.98	26,921.95
Rabi Wheat cost of cultivation (Cost 1)	28,240.12	29,216.05	27,789.68	26,693.28	28,335.62	27,841.31	27,984.76
Kharif paddy cost of cultivation (Cost 2)	29,720.11	27,916.80	30,387.18	26,531.58	29,259.46	29,897.34	28,963.99
Rabi Wheat cost of cultivation (Cost 2)	29,265.83	30,243.53	29,409.13	27,586.75	29,117.19	29,132.39	29,090.34
Kharif paddy cost of cultivation (Cost 3)	33,678.58	31,350.24	33,875.94	30,278.47	32,918.42	33,437.31	32,614.28
Rabi Wheat cost of cultivation (A3)	32,474.39	32,769.11	32,194.09	30,402.75	31,358.34	31,978.23	31,843.54

Note: Variables \$ is in percentage. Cost 1 is all variables cost except labour, Cost 2 is variable cost + Labour cost, Cost 3 is Cost 2 + family labour cost.

¹ [http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Livestock_unit_\(LSU\)](http://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Livestock_unit_(LSU))

was found to be significantly across all strata when higher for paddy (seed vs grain) when the cost of family labour is included. For wheat, the cost difference was only higher in case of strata1.

The price at which the grain and seed of paddy and seed are sold is given in table. The average price at which the paddy grain was sold was Rs. 13, while wheat grain was sold at Rs. 14. Paddy and wheat seeds were sold at a higher price than the grains.

Most of the paddy and wheat grains are sold to local traders and mandis (local markets) (Figure 8). Only 60% paddy seed producers and 35% of the wheat seed producers sold their seed. Among these, about 57% of the paddy seed-producers sold their grain to members of the same SHG and 12% of them sold to other SHG members and 26% of them sold it to traders. About 62% of the wheat producers sold their seeds to same SHG and 17% of them sold it to other SHG members, and other 17% sold it to traders (Figure 9).

Table 5. Yield of paddy, wheat and its seed production across different strata

	Paddy yield (kg/ha)	Wheat yield (kg/ha)
Strata 1	3,250.18	2,672.13
Strata 2	2,734.62	2,456.16
Strata 3	2,827.10	2,101.41
Strata 4	2,453.38	2,231.79
Strata 5	2,989.99	2,382.47
Strata 6	2,952.27	2,296.39
Total	2,870.19	2,370.88
Seed	2,684.73	2,776.16

Table 6. Cost of cultivation of paddy and wheat seed

	Cost 1	Cost 2	Cost 3
Paddy seed cost of cultivation	30,940.83	35,512.82	45,195.62
Wheat seed cost of cultivation	24,598.52	28,168.54	46,067.73

Note: Cost 1 is all variables cost except labour, Cost 2 is variable cost + Labour cost, Cost 3 is Cost 2 + family labour cost.

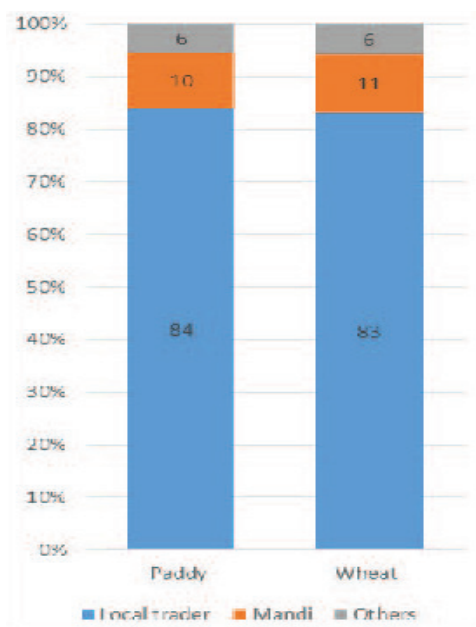
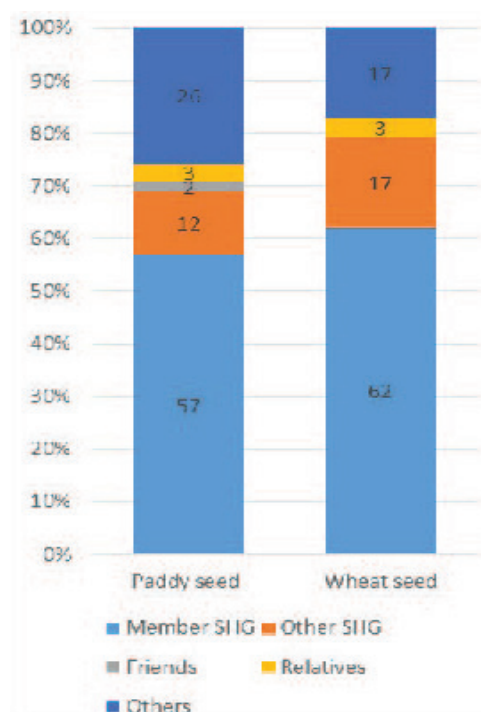
Table 7. Difference in cost of cultivation of seed with grain crop across strata

	Strata1		Strata2		Strata3		Strata4		Strata5		Strata6
Cost 1											
Paddy cost difference (Seed Vs Grain)	2,421.71		2,177.89		332.65		4,342.70		643.74		750.32
Wheat cost difference (Seed Vs Grain)	(4,222.55)	***	(975.93)		450.44		1,546.83		(95.51)		398.81
Cost 2											
Paddy cost difference (Seed Vs Grain)	3,686.29		4,390.45		1,897.39		6,069.52	**	3341.64		2,703.76
Wheat cost difference (Seed Vs Grain)	195.42		(977.70)		(143.30)		1,679.08		(98.11)		(97.77)
Cost A											
Paddy cost difference (Seed Vs Grain)	11,068.00	***	11,122.32	***	8,573.77	***	1,2524.08	***	9,884.14	***	9,365.24
Wheat cost difference (Seed Vs Grain)	15,211.00	***	(294.72)		280.30		2,071.64		1,116.05		496.16

Note: Cost 1 is all variables cost except labour, Cost 2 is variable cost + Labour cost, Cost 3 is Cost 2 + family labour cost. *** at 1% significance, ** at 5% significance. The differences are on the higher side due to outliers which still needs to be cleaned.

Table 8. Price of the crop produce (Grain or seed) sold (in Rs.)

	Mean	Std. Dev.	Min	Max
Paddy (Kharif)	13.11	2.94	6.00	25.00
Wheat (Rabi)	14.21	1.27	10.00	18.00
Paddy seed	16.62	7.30	8.00	30.00
Wheat seed	16.37	4.04	10.00	26.00

Figure 8: Buyers of paddy and wheat grain

Figure 9: Buyers of paddy and wheat seed


Intra household decision making

In this session, we assessed the impact of integrating informal seed systems across different groups of SHG members on intra-household bargaining power with respect to agriculture. We also looked into the impact of SHGs on intra-household bargaining power with respect to agriculture. The motivation for this research question came up during the FGDs and interviews done while planning for the study. The members were sharing their journey as a SHG member and the conflicts they underwent in their household and community. The stories narrate that the prospects of financial support through micro-finance provided by SHGs were the key push factor. That made us think what would have happened in those households when the same SHG members were trained in seed production and engaged

in agricultural activities which is male dominant. We looked into the intra-household bargaining power using the dimension of intra-household decision making authority.

Theoretical framework

The underlying theory behind the research question is drawn from co-operative and non-cooperative bargaining models. These models “offer an alternative characterisation of intra-household decision making process” (Anderson et al 2017). Co-operative model assumes that the bargaining outcome in a household as a result of direct negotiation between the spouses and their relative power. Non-co-operative models posit independent action of the spouses leading to a self-enforcing Nash equilibrium which may or may not be

Pareto efficient (Lundberg and Pollack 1994). Studies in developing countries had shown existence of non-co-operative bargaining models (Mabsout and Van Starveren 2010, Malapit and Quisumbing 2014). In our case, we unlike the studies which looked into intra-household decision making in a dual household, we shed the ‘a priori’ assumption that only husband and wife takes decision in the household. We opened up the option and considered it as primary decision maker and spouse (see methodology).

Empirical Models

First we estimated the effect of seed and non-seed SHG in improving the role of women in agricultural decision making using unitary household model (Bobonis 2009, Qusumbing & Maluccio 2003). We modelled gender of the primary decision maker as stated by household as a function of group to which the household is affiliated, individual, household and farm characteristics. The empirical form of the model is

$$P(X=1/0) = \beta_0 + \beta_1 G_k + \beta_2 X_{ij} + \beta_3 Y_{ij} + \beta_4 Z_{ij} + \mu$$

where, X is the primary decision maker and X=1 indicates female and 0 otherwise. G_k is the group (seed SHG, non-seed SHG and others) to which the household belongs and X_{ij} is a set of individual characteristics, Y_{ij} set of household characteristics and Z_{ij} is a set of farm characteristics. The models used for estimating the impact is discussed in the next session.

As discussed in the theoretical framework, the intra-household bargaining may not be captured by the unitary household models. So to test our hypothesis that women centric targeted intervention had an effect on the intra-household bargaining power, we asked two individuals (Primary decision maker and individual²) from each households, their role in decision making. This was captured by asking whether they take decision solely, jointly (spouse) or the decision is taken by other member of the family as options, for different decisions. The options (D_i) were compared between the two individuals primary decision maker $P_i(D_i)$ and individual 2 [$S_i(D_i)$] plotted as a matrix $P_i(D_i) \times S_i(D_i)$. A total of 16 combinations emerged out of options provided to them

(Figure 10). The combinations indicate the interaction of roles or bargaining among individuals or intra-household accord over decision-making authority.

Figure 10. Intra-household decision making matrix

		Individual 2			
		No role	Solely	Jointly	Others
Primary decision maker	No role	1	2	3	4
	Solely	5	6	7	8
	Jointly	9	10	11	12
	Others	13	14	15	16

Note: Individual 2 could be spouse of primary decision maker or SHG member (if SHG member is not primary decision maker in SHG household). See methodology session for details.

The households were classified as conflict and non-conflict households based on options provided by two individuals. ‘Conflict’ may not be considered as a negative connotation, it just measures difference in perception of the individuals in decision making. If the options make up the combinations 2, 3, 5, 9 and 11, they are classified as non-conflict household as the interaction is a result of an individual with no role or both individuals engaged in joint decision. While the combinations 6, 7, 8, 10, 12, 14, 15 is a result of difference in perceived decision making authority. The classification is highlighted by red and green boxes in figure 10 for conflict and non-conflict households. The combinations 1,4,13 and 16 were dropped as one among the individuals had no role or other individuals in the households had role in decision making. To analyze, the intra-household accord we could use logit/probit models.

$$P(H=1/0) = \beta_0 + \beta_1 G_k + \beta_2 X_{ij} + \beta_3 Y_{ij} + \beta_4 H_{ij} + \beta_5 Z_{ij} + \mu$$

Where, H is the household and H=1 indicates conflict household and 0 otherwise. G_k is the group (Seed SHG, Non-seed SHG and others) to which the household belongs and X_{ij} is a set of individual characteristics primary decision maker, Y_{ij} set of individual characteristics individual 2, household characteristics and Z_{ij} is a set of farm characteristics.

The combinations were further classified into eight categories based on the gender and relative bargaining of the two individuals. Relative bargaining (dominant or submissive) is measured based on the option

² Please see the methodology

Table 9. Categories of intra-household bargaining and as result of decision-making authority

Categories	Options	Description
A	2,5	No conflict but male dominant
B	2,5	No conflict but female dominant
C	11	No conflict joint decision making
D	3,9	Conflict male submissive
E	3,9	Conflict female submissive
F	7,8,10,14	Conflict male dominant
G	7,8,10,14	Conflict female dominant
H	6	Conflict equal claim
I	12,15	Conflict indecisive

Note: Combinations 1,4,13 and 16 were dropped

provided by both individual. An individual is stated to be in dominant position if he claims to be the sole decision maker, while other individual states no role in that decision or considers as joint decision, or states other family member. An individual is stated to be in submissive position if he states no role in that decision while the other individual states joint decision making.

Category 'A' are households in which male plays a dominant role in decision making, while in category 'B' households female have a dominant role. Category 'C' are households in which there is a joint decision making. In the all three above mentioned, households there are no conflicts and the roles are defined. Households belonging to category D and E, male and female members may not have self-recognised their role but their counterpart stated they take decisions jointly. This shows that the member had under-estimated their role. In case of category F and G, one individual (male or female) claimed his role, while other shared it as joint role or did not recognised the counterpart's role. Male and female members had equal claimed themselves to be sole decision maker in households falling in category H. Category I are households were the conflicts were not identified.

These categories were grouped as conflict (Category D to H) and non-conflict (Category A to C) households for computational easiness. The category based visualisation was only done using stacked graphs.

To understand the intra-household bargaining as a result of participation in the groups, we used impact assessment methodology by considering the intra-household accord as the outcome variable. The reason

behind using such model and the empirical specification is given in the next session.

Analytical methodology

The analytical methodology used in this study is based on recent publications (Abebaw and Haile 2013, Ainembabazi et al 2017, Bernard et al 2008, Wossen et al 2017a, Wossen et al 2017b).

Establishment of casual impact/effect of SHG participation on various outcome variables requires controlling for biases due to several factors. There are three kind of biases: first, the members of the SHG significantly differ from non-members in various individual, household, farm level and community level observable characteristics. This might have a direct effect on the outcomes such as intra-household bargaining and net cultivable income. Due to this, the observed difference between the member and non-member might be due to those observed differences rather the effect of participation. The second bias could be due to unobservable characteristics. The participation of a member in a SHG could be a result of individual unobserved characteristics such as risk taking ability, relationship with other member, trust and other local dynamics unique to each community. The third bias, which is highly probable in our case is spill-over effect. The SHG member could also affect the outcome of the non-SHG member, leading to underestimation.

Such biases are controlled in random experiment by randomly assigning treatment and control groups. In our case as the ex-post study is done using a non-experimental approach, quasi impact assessment methodologies such as Propensity Score Matching

(PSM), Inverse Probability Weighted Adjusted Regression (IPWAR), Endogenous Switching Regression (ESR), and Instrumental Variable (IV) approaches could be used to control for biases.

We would discuss briefly about different methodologies used in the study and how it helps in reducing the biases.

Propensity Score Matching (PSM)

PSM is a commonly used methodology especially with cross sectional data. PSM approach estimates a propensity score based on which treated households are matched with untreated households (Table 2) and the difference in the outcome variables are measured as impact (Dehejia and Wahba 2002). Propensity scores are estimated using a logit model. The average treatment effect can be estimated following (Imbens and Wooldridge 2009)

$$ATT = E[Y(1) - Y(0) | T = 1]$$

where Y(1) and Y(0) are outcome variables for treatment and control households. PSM assumes that there is no systematic difference among the observed and un-observed characteristic among those households. This means that PSM could produce a biased result if the PSM model is mis-specified (Robins et al 2007, Wooldridge 2007, 2010). Though this is a major limitation in PSM, studies had shown that the un-observed characteristics which affect the participation could be independent of the outcome (Imbens 2004). It assumes that the heterogeneity observed due to unobserved characteristics could be distributed equally across the treated and non-treated (control) households. This assumption could be checked using Rosenbaum bound sensitivity analysis (Rosenbaum 2002). Another way of addressing the issue is by using IPWAR approach.

Inverse Probability Weighted Adjusted Regression (IPWAR)

IPWAR is a combination of regression and propensity score methods. This could solve the issue of mis-specification of the model and bring robustness in

estimation (Imbens and Wooldridge, 2009, Wooldridge 2010). The linear regression model could be expressed as

$$(\alpha_0, \beta_0)$$

Where Y_i is the outcome variable x_i 's are a set of control variable, α and β estimates, ϵ_i is the error term, and $i \in [0,1]$ for control and treatment. In case of IPWRA, first we estimate the propensity scores $[p(x_i, \hat{\gamma}^0)]$ In the second step, we estimate (α_0, β_0) and (α_1, β_1) employing linear regression estimation, using inverse probability-weighted least square as

$$\min_{\alpha_0, \beta_0} \sum_i^N (Y_i - \alpha_0 - \beta_0 x_i) / p(x_i, \hat{\gamma}^0) \text{ if } T_i = 0$$

$$\min_{\alpha_1, \beta_1} \sum_i^N (Y_i - \alpha_1 - \beta_1 x_i) / p(x_i, \hat{\gamma}^1) \text{ if } T_i = 1$$

The Average Treatment Effect (ATT) is computed by taking difference between the two equations.

$$ATT = \frac{1}{N_w} \sum_i^{N_w} [(\hat{\alpha}_1 - \hat{\alpha}_0) - (\hat{\beta}_1 - \hat{\beta}_0) x_i]$$

Where $(\hat{\alpha}_1, \hat{\beta}_1)$ and $(\hat{\alpha}_0, \hat{\beta}_0)$ are estimated inverse probability estimates of treated and control households and N_w is total number of treated household. Though this approach is better than previous, it could only overcome first bias as a result of observed characteristics. There are other approaches like ESR and IV, which could be used to solve endogeneity bias due to un-observed characteristics.

Outcome indicators

The outcome variables used in the study measures the effect of the model rather than the impact of the program. The outcome variables for the objective in this session is given in table 10.

Table 10. Outcome variables

S.No.	Outcome variables	Type	Description
1	Primary decision maker	Binary	1= If primary decision maker is male, 0= otherwise
2	Conflict	Binary	1= If there is a conflict in intra-household decision making, 0= otherwise

Intra-household bargaining

To understand the gender effect, gender of the primary decision maker is considered as an outcome variable. Intra-household bargaining power captured as conflict is the second outcome variable (Refer empirical model in this session above).

Independent observable characteristics

Variables capturing individual, household and farm level characteristics reviewed from various studies and discussion with various stakeholders were used in this study. A list of variables is given in table 11.

Table 11. Dependent variables

	Variable	Type	Description
1	Sex of the household head	Binary	1= If Household Head is Female, 0=otherwise
2	Age of the household head	Continuous	Age of the household head in years
3	Age square of the household head	Continuous	Square of the age of household head
4	Household head education	Binary	1= Household head is illiterate, 0= otherwise
5	Migrant	Binary	1= If spouse of the household head is a migrant, 0=otherwise
6	Caste	Binary	1= Higher caste, 0=otherwise
7	Family members	Continuous	Total number of members in the family
8	Agricultural asset	Continuous	Total value of agricultural asset
9	Non-Agricultural assets	Continuous	Total value of non-agricultural asset
10	Total land holding	Continuous	Total land owned by household (ha)
11	Cultivated land	Continuous	Total land cultivated by household (ha)
12	Position in SHG	Binary	1= If the member is in an official position

Results and Discussion

The impact of seed and non-seed SHG in improving the role of women in agricultural decision making using unitary household model is shown in table 12. We report the nonparametric estimates of the average treatment effect on the treated (ATT), which means the mean impact of the treatment. The study shows that the impact, measure as percentage of female members are primary decision maker, was significantly higher in seed-SHG (12%) and SHG (8-10%) compared to their respective control groups. There was no significant impact among seed-members. Indirect effect of the intervention on non-SHG members were observed.

The impact of seed and non-seed SHG in improving the role of women in agricultural decision making using unitary household model is shown in table 12. Overall SHGs had shown a roughly 9% impact and there was also indirect impact.

The self-reported authority on different decisions were captured using 14 questions. The questions were framed as “whether you alone, or jointly (with spouse), or other family member, take decision on the particular subject (listed as 14 questions). The calculation of intra-households accord from these questions are given in the methodology. The individuals (primary decision maker and spouse/SHG member) were interviewed separately to ensure that they do not influence each other. The circumstances of violation of this condition is quantified and incorporated into the model to see its effect. As discussed in the methodology, the intra-household accord among households in different strata are shown in table 1. Comparing across strata, the conflicts were observed in decision regarding borrowing and lending of money, and money received from sale of seed. This two are the decisions influenced by the interventions. In treatment region, in general, seed-member seed-

Table 12: Effect of improving role of women in agricultural decision making

Effect	PSM		IPWAR	
	ATE	P value	ATE	P value
1	0.05	0.277	0.04	0.530
2	0.06	0.326	0.08	0.100
3	0.07	0.187	0.08	0.222
4	0.08	0.136	0.12	0.020
5	0.13	0.007	0.11	0.018
6	0.10	0.004	0.08	0.025

Note: Initial estimates, the model may require revisions. Balancing test and post-estimations were carried out (not reported in the draft). P Value <0.05 is significant at 5% level and <0.01 is significance at 1%.

SHG households showed lesser conflicts in decision making than non-seed seed-SHG households. The only exception to the above said statement was borrowing of money. Comparing seed and non-seed member households among seed SHGs, the relative conflicts were high only in case of borrowing and lending of money. The non-seed seed-SHG households had higher conflicts in decision making on buying selling of land and other property, education and participation in other groups.

In control region, the SHG member households showcased higher conflicts compared to non-SHG households. The exception was only in decision regarding borrowing and lending of money, money received from cash crop sales and use of income earned by female member of the household.

The impact of participation of households in the intervention is assessed using PSM and IPWAR. The results are shown in table 13. The impact of participation of households in the intra-household decision making dynamics is assessed using PSM and IPWAR. The results are shown in table. We report the ATT, which is the average of conflicts (% households with conflicts) for 14 intra-household decisions (see methodology). Significant impact was only observed in effect 1(Direct impact of seed production). The results show that the conflicts were lesser in seed-producer households compared to non-seed producer households in seed-SHG (table 14). The effects were significant for decision on planting/harvesting of cash crop/variety and seed crop, buying selling of land, participation in institutions, and money received form food and cash crop sales.

Table 13: Effect of participation of households in seed production

Decisions	PSM		IPWAR	
	ATT	P values	ATT	P values
1	-0.113	0.080	-0.054	0.385
2	-0.179	0.001	-0.170	0.016
3	-0.088	0.204	-0.117	0.091
4	-0.129	0.137	-0.108	0.130
5	-0.198	0.023	-0.164	0.019
6	-0.190	0.013	-0.152	0.054
7	-0.068	0.401	-0.064	0.358
8	-0.221	0.007	-0.206	0.011
9	-0.299	0.000	-0.277	0.000
10	-0.287	0.002	-0.242	0.003
11	-0.112	0.063	-0.135	0.076
12	-0.171	0.000	-0.139	0.079
13	-0.155	0.000	-0.130	0.101
14	-0.148	0.036	-0.152	0.052

Note: Initial estimates, the model may require revisions. Balancing test and post-estimations were carried out (not reported in the draft). P Value <0.05 is significant at 5% level and <0.01 is significance at 1%.

The kind of conflicts happening with in each decision are shown in charts 1 to 14. Stacked percentage graphs are used in depiction and it shows percentage of each households in category (refer Table on category). We had tried to explain the major underlying patterns.

In case of decision on planting/harvesting of food crop/variety (Chart 1), SHG households have lesser male dominance than non-SHG households. The only exception was in the case of non-seed member households in seed SHGs (strata 2) where male is relatively more dominant than the other SHG household groups. But these households had also shown a higher share of female dominance compared to other group. SHG households in both treatment (non-seed) and control region shows a higher share if male submissiveness. The seed-member seed SHG showed conflicts with equal claims, which was also observed in non-member household in treatment region and SHG household's in control region.

With respect to decision on planting/harvesting of cash crop/variety (Chart 2), higher share of male dominance is observed in SHG households in treatment and control region and non-SHG households in control region. Female dominance on this decision was only observed

Table 12. Households which recorded conflicts in different decision making across strata (Percentage)

S. No.	Decisions	Treatment region				Control region	
		Strata1	Strata2	Strata3	Strata4	Strata5	Strata6
1	Planting /harvesting of food crop/variety	17.91	17.43	25.44	27.27	25.66	20.83
2	Planting /harvesting of cash crop/variety	14.17	22.33	22.94	26.96	21.50	15.74
3	Planting /harvesting of crop for seed crop/variety	18.11	21.15	19.05	22.52	21.70	15.89
4	Livestock keeping, buying and selling	16.00	21.36	18.37	21.55	22.22	21.62
5	Buying selling land and other property	13.71	23.00	18.18	17.27	24.07	22.22
6	Borrowing and lending money	23.62	23.58	19.05	19.30	24.77	26.13
7	Education and marriage of children	16.28	14.15	17.43	11.40	18.02	13.51
8	Participation in institutions and other groups	19.33	22.64	24.30	18.18	24.00	20.22
9	Money received from food crop sales	18.55	27.72	19.19	21.78	26.00	17.92
10	Money received from cash crop sales	17.54	25.00	18.09	20.21	19.78	21.21
11	Money received from sales of seed	20.34	20.62	17.58	19.15	18.89	18.18
12	Use of income the household in total earns from non-agricultural activities	21.49	20.59	15.15	25.47	23.81	20.75
13	Use of income earned by male household members	22.31	21.36	17.00	24.53	23.58	22.73
14	Use of income earned by female household members	20.17	21.36	16.00	25.96	15.31	22.64

Note: Strata 1= Seed member seed-SHG household in treatment region, Strata 2= Non-Seed member seed-SHG household in treatment region, Strata 3= Non-seed SHG households in treatment region, Strata 4= Non-SHG member households in treatment region, Strata 5= SHG household in control region, Strata 6=non-SHG member households in control region.

Chart 1: Type of conflict with regard to decision making on Planting /harvesting of food crop/variety

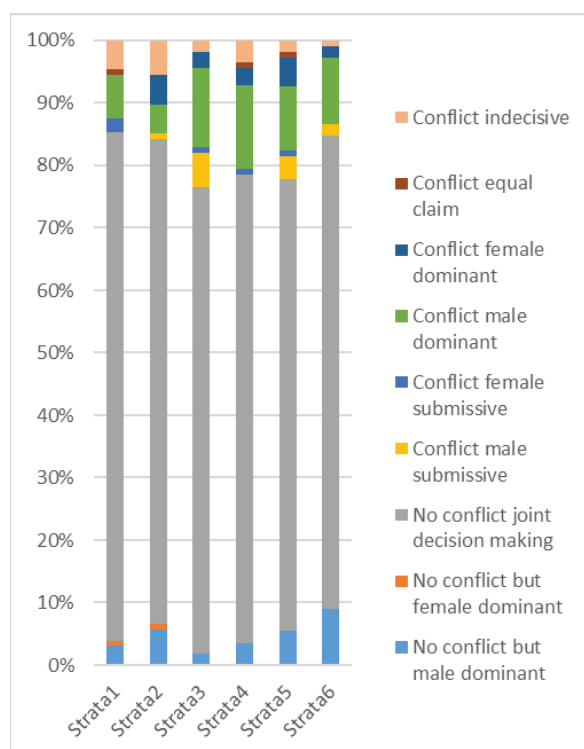


Chart 2: Type of conflict with regard to decision making on Planting /harvesting of cash crop/variety

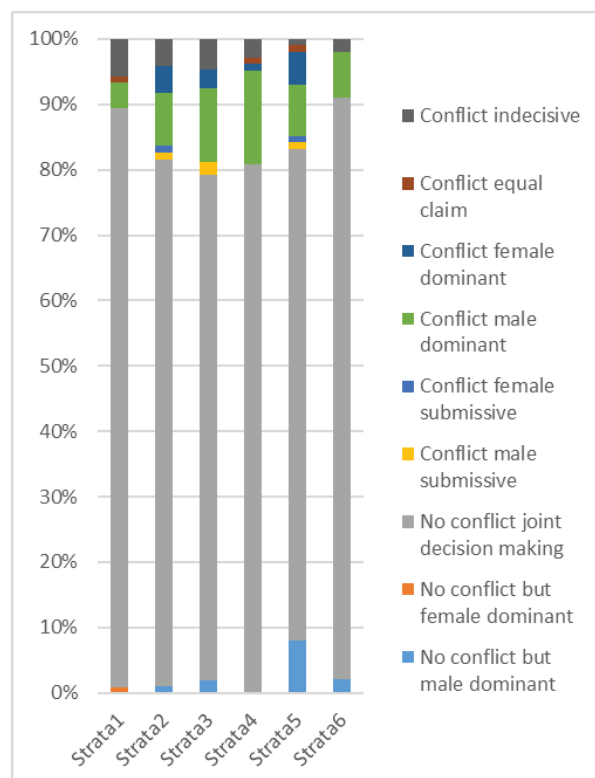


Chart 3: Type of conflict with regard to decision making on Planting /harvesting of crop for seed

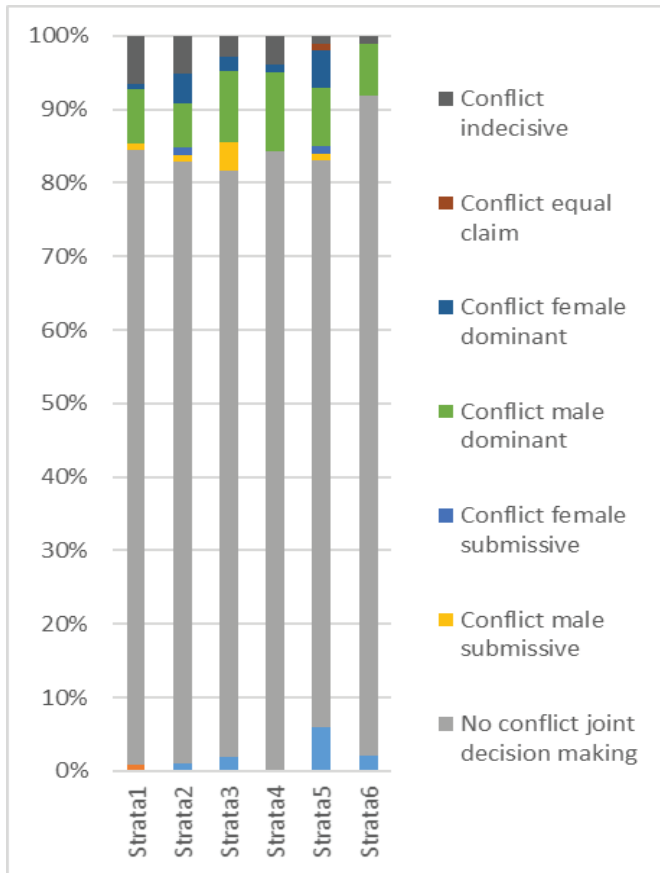
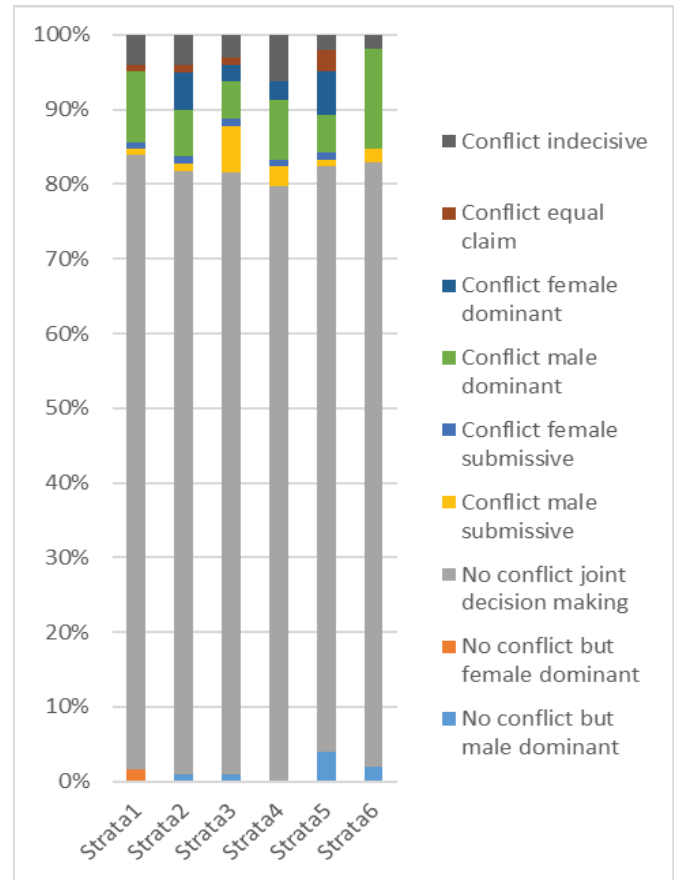


Chart 4: Type of conflict with regard to decision making on Livestock keeping, buying and selling



in seed-member seed-SHG households. In this case, conflicts were found to be higher in control groups.

The conflicts with respect to decision on planting/harvesting of crop for seed was found to be higher in treatment households (Chart 3). Female dominant households were only found among seed-member seed-SHG households. Male dominance was found in all non-seed SHGs and control households.

In case of decision regarding keeping, buying and selling of livestock (Chart 4), households with equal claims among members were found in all SHG groups compared to non-SHG households. Female dominance was also found in seed-member seed-SHG households. Conflicting female dominance share was found in SHG households in control region which was absent in the non-SHG households.

In treatment region, households with female dominance was also found among seed member households on decisions regarding buying selling land and other

property (Chart 5). Male dominance was found in all non-seed SHGs and control households. In this case, the seed-member seed SHG households had shown relatively lesser conflicts due to female. In the control region, the share was almost the same but the nature of conflicts differed. The share of female dominant households in conflict households increased in SHG households.

Borrowing and lending of money is a key decision, which might have influenced by the participation of members in SHG (which is a micro lending programme). The results show that conflict was higher in SHG households in target region (Chart 6). In control region, the share of conflicts was similar in both control region, but the nature of conflicts differed. The conflicts were due to equal claims. In the conflicts were lesser in seed-producer of seed-SHG households compared to other households.

With regard to decision making on education and marriage of children, the conflicts were higher in SHG

Chart 5: Type of conflict with regard to decision making on buying selling land and other property

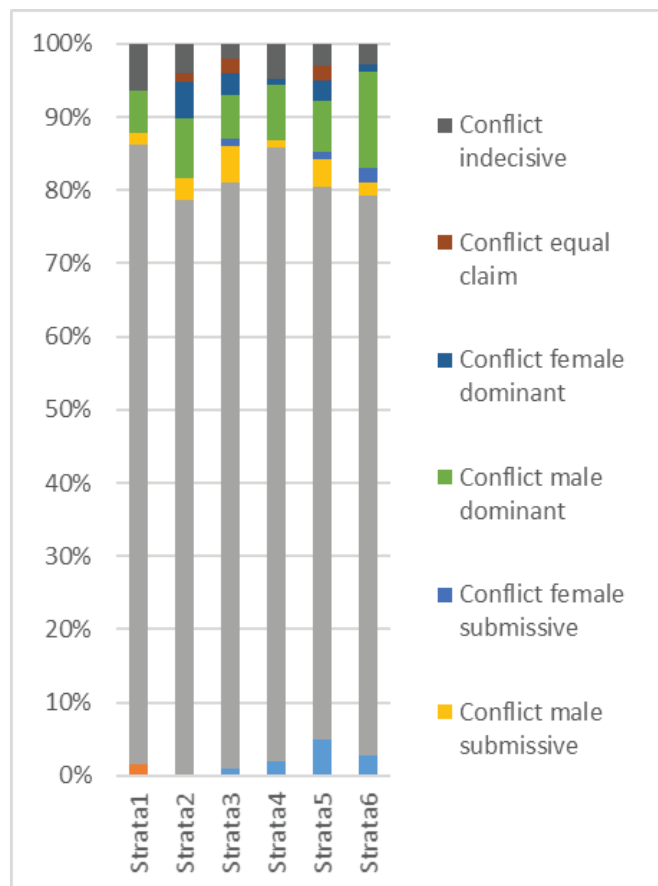
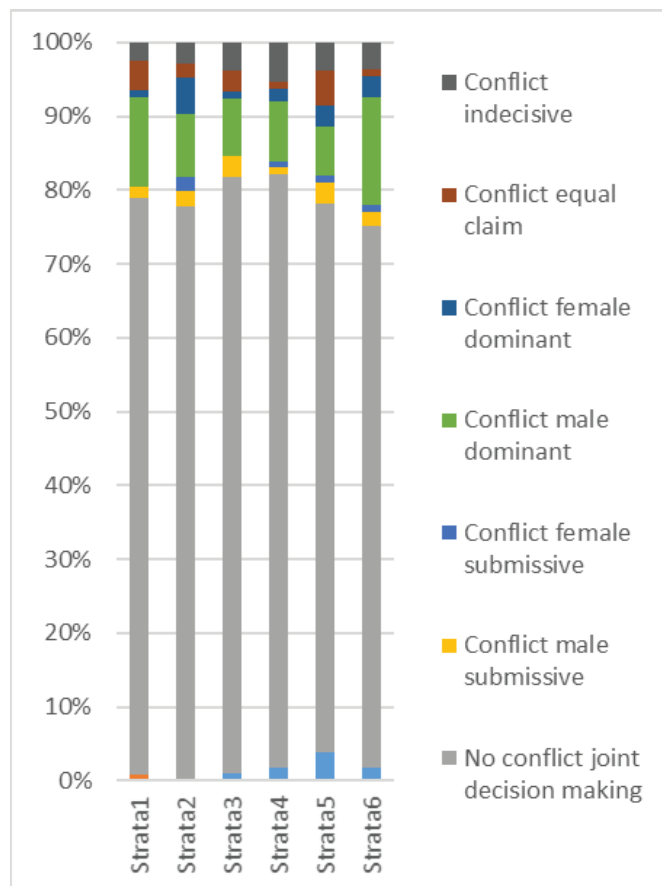


Chart 6: Type of conflict with regard to decision making on Borrowing and lending money



households. The conflicts in SHGs were due to female dominance. Non-conflicting male dominance was noticed among SHG households in control region. The conflicts in households regarding this decision process is lesser than other decision processes. The share of conflicts was higher in SHG households regarding decision on education and marriage of children. The share of male dominant households was higher in SHG member household in control region. These households also had higher share of conflicts due to female dominance. The non-seed member seed-SHG households had higher share of conflicts as a result of female dominance, while in seed producer households it was due to male dominance.

In case of decision on participation in institutions and other groups (Chart 8), female dominant households were found in SHG households and all households in treatment region. The share of conflicts was also higher in SHG households. The conflicts in these

households were mainly due to female dominance. In non-SHG households' conflicts were mainly due to male dominance. Non-SHG households and SHG households in control region showed households with male submissive nature.

The conflicts on decision regarding money received from sales of food crops is higher among SHG households in both treatment and control household (Chart 9). The SHG households also had higher share of conflicts as a result of female dominance compared to non-SHG households. Male submissive households were observed in non-seed member seed-SHG households and SHG households in both treatment and control region. None of the households were female dominant. The male dominant households were higher among SHG and non-SHG households in the control region.

Similarly, decision on money received from cash crop sale, had no female dominant households and male

Chart 7: Type of conflict with regard to decision making on Education and marriage of children

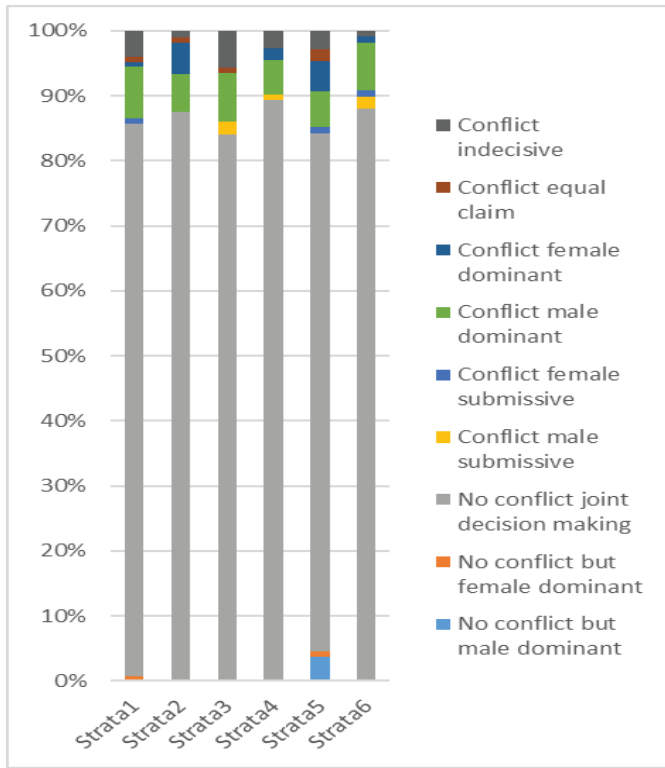


Chart 8: Type of conflict with regard to decision making on Participation in institutions and other groups

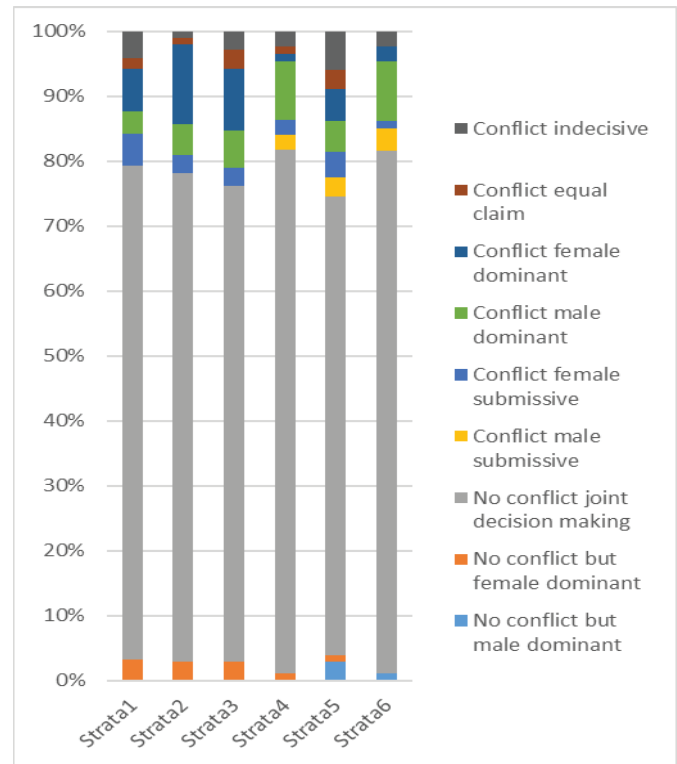


Chart 9: Type of conflict with regard to decision making on Money received from food crop sales

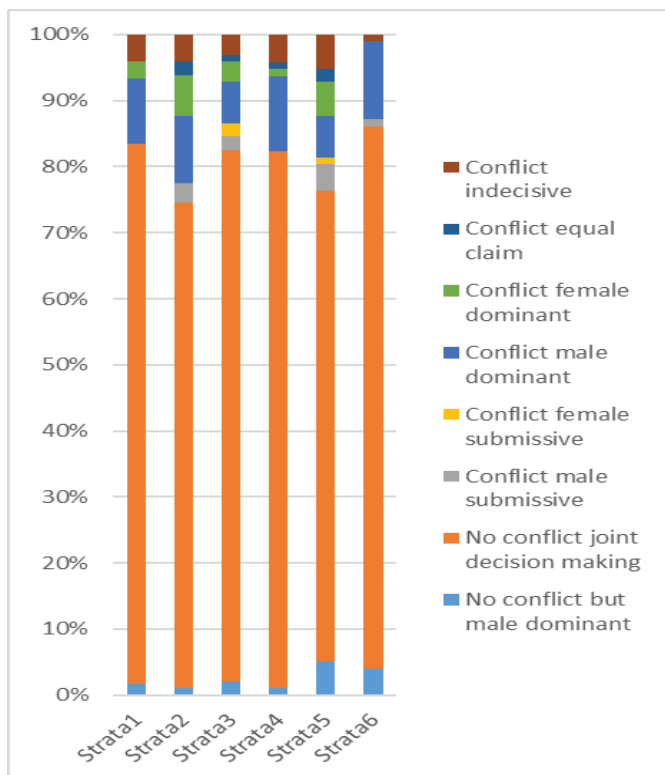


Chart 10: Type of conflict with regard to decision making on Money received from cash (eg) crop sales

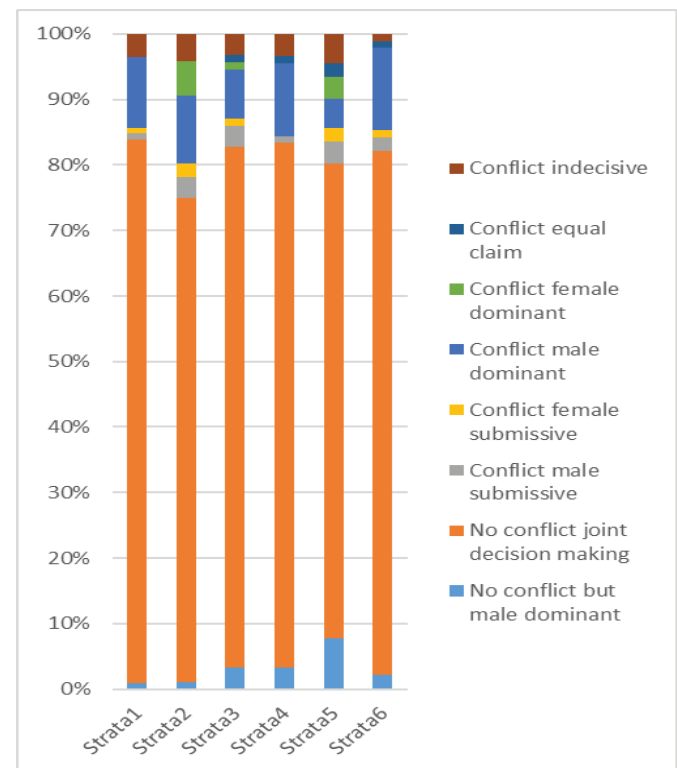


Chart 11. Type of conflict with regard to decision making on Money received from sales of seed

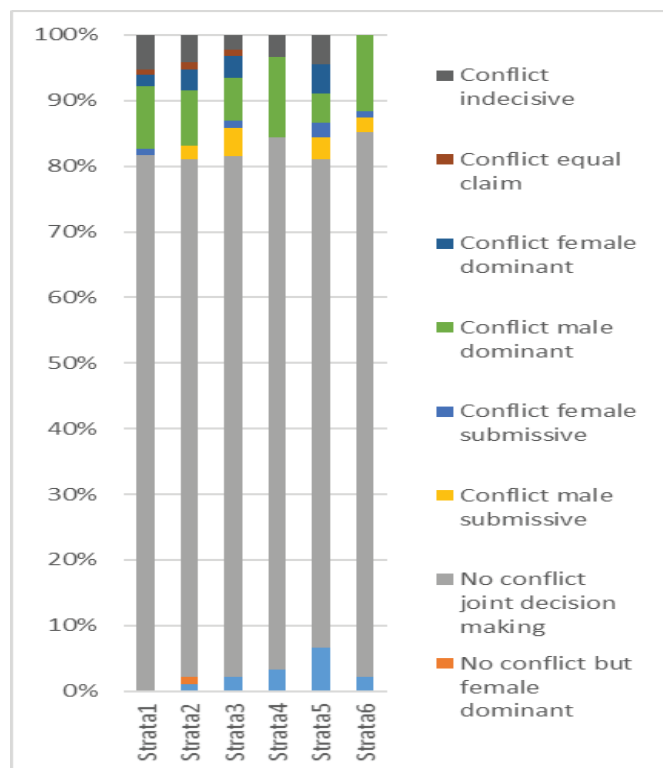
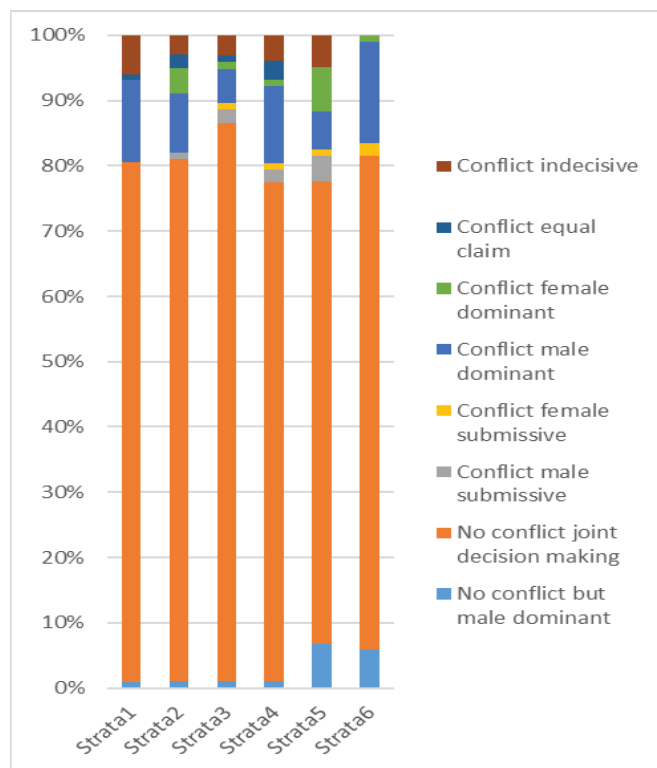


Chart 12. Type of conflict with regard to decision making on Use of income the household in total earns from non-agricultural activities



dominant households were predominant among SHG and non-SHG households in control region (Chart 10). The conflicts were higher in non-seed producer seed-SHG households and the share of female dominance was also higher among these households. The conflicts in non-SHG households in control region due to male dominance, on the other hand both male dominance and female dominance.

In case of decision on money received from sales of seed (Chart 11), none of the seed-producer had absolute male dominance. The share of male dominance was also higher in SHG households in control region compared to non-SHG households in treatment region. Non-seed producer seed-SHG households had some share of both male and female dominance. Conflicts in SHG households were due to female dominance.

With regard to decision on use of income from non-agricultural households (Chart 12), the share of conflicts was similar in seed-producer and non-seed producer seed SHG households. The conflicts in seed-SHG is

due to male dominance. The share of conflicts in SHG households in treatment region is lesser than non-SHG households. In control region, though the share on conflicts in SHG and non-SHG households is more or less similar but the nature of conflicts differs, as female dominance become the main reason for conflict in SHG household.

In case of decision on use of income earned by male household member (Chart 13) and female household member (Chart 14), the pattern was almost similar. The share of conflicts was more or less same among seed-SHG groups, but more female dominance was found among non-seed producers. The conflicts in the SHG household in the treatment region was lesser than non-SHG members. Similar pattern was also observed in decision on spending of female members' income among SHG and non-SHG households in control region. While in case of decision on male income, the share of conflict was almost same but the nature of conflicts changed. In both cases, the SHG households also had higher share of non-conflict male dominance.

Chart13: Type of conflict with regard to decision making on Use of by income earned by male household members

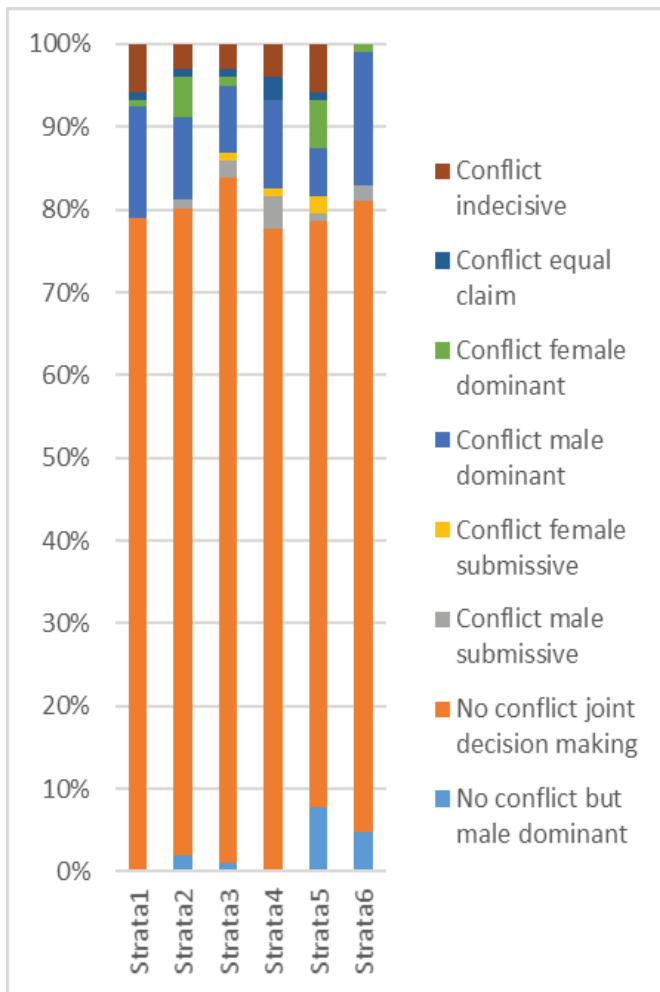
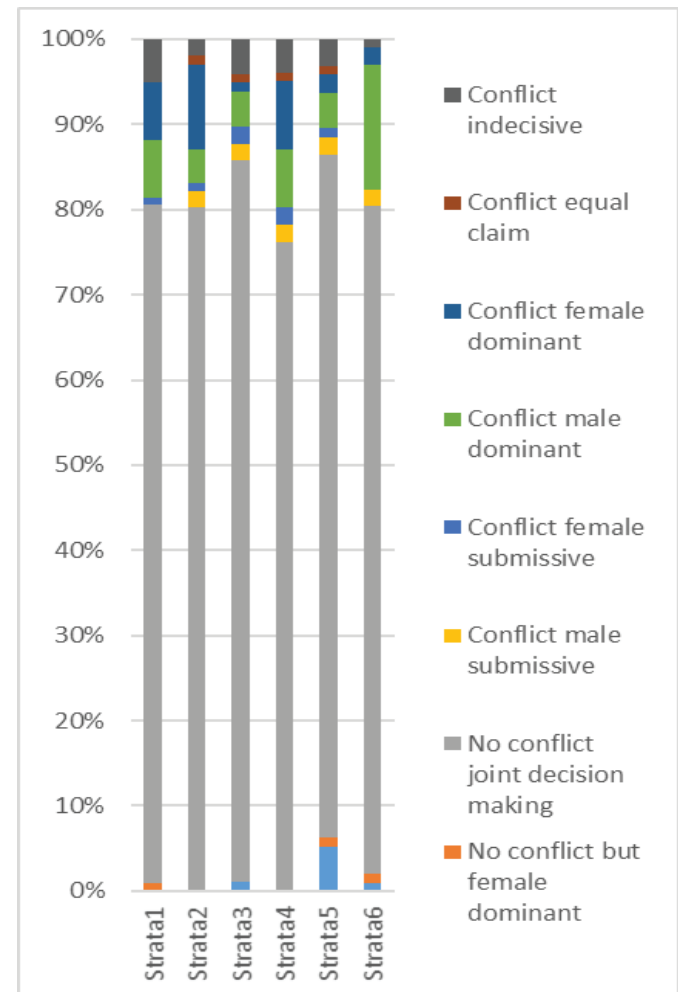


Chart 14: Type of conflict with regard to decision making on Use of income earned by female household members



Conclusion

The role of women in agricultural decision making in SHG households had improved. But no incremental improvement was observed by households’ participation in seed-SHG. The study shows that conflicts exists in all strata, though the percentage of conflicts remained more or less the same, the nature of conflicts changed across the strata. The conflicts in non-SHG was as a result of male dominance, while in SHG-households it was due to female dominance. There are change in dynamics as a result of household member participation in SHG, but the dynamics is more co-operative when they become seed-members in seed SHGs.

Trade-offs in seed cultivation

In this session, we explored whether seed production an economically profitable activity for the farmers. The profitability of the farmers is measured based on trade-offs in net profits. The average Profit (Rs. per ha) from paddy and wheat seed was compared with the average paddy and wheat net profits in Kharif and Rabi Season (Table 14). Simple tabular analysis was used in this session due to issues with the outliers. This session would be revised later using matching and other econometric estimations. The total revenues were calculated by multiplying the average price (Rs. /kg) they received on grain or seed with the yield (kg/ha). The net profits were calculated by taking the difference between the total profits and the total cost of cultivation.

Table 14. Profit from paddy, wheat and its seed production plots across different strata

	Cost 1		Cost 2		Cost 3	
	Paddy	Wheat	Paddy	Wheat	Paddy	Wheat
Strata1	15,636.85	10,609.16	12,898.38	9,583.45	8,939.90	6,374.89
Strata2	8,815.34	5,677.36	7,121.91	4,649.88	3,688.47	2,124.29
Strata3	9,015.33	2,063.98	6,683.55	444.53	3,194.79	-(2,340.43)
Strata4	7,835.67	5,012.55	5,638.68	4,119.09	1,891.79	1,303.09
Strata5	11,173.21	5,510.88	9,947.29	4,729.32	6,288.34	2,488.17
Strata6	10,785.13	4,782.26	8,814.76	3,491.19	5,274.79	645.34
Total	10,713.87	5,697.03	8,671.83	4,591.45	5,021.55	1,838.25
Seed	13,671.36	20,846.01	9,099.37	17,275.99	-(583.43)	-(623.20)

Table 15. Price for paddy and wheat seed (Rs. /kg)

	Current prices	Cost 1	Cost 2	Cost 3
Paddy seed	16.6	17.4	18.0	20.2
Wheat seed	16.4	12.7	13.6	18.9

The results show that the average profits (using Cost 1 and Cost 2) of paddy was lower in seed production plots compared to their grain production plots in strata1 (seed-producers). While it was higher (almost twice) in case of wheat cultivation. But the net profits from seed production was higher in seed production plots compared to paddy and wheat production plots in other strata. While including family labour in the cost of cultivation (Cost 3), the profits from seed production was lower than net profits gained from all other strata. (Table 15)

We calculated the price (Rs. /kg) at which the seeds need to be sold to achieve an equivalent profit of paddy and wheat grain. We used 'Goal seek' option in Excel. The results show that the price of paddy and wheat seed need to be at least Rs. 20 and Rs.19 to make it equivalent to the grain cultivation (Covering Cost 3).

Impact of elite capture on the programme

In this session, we would focus on understanding the whether elite capture happened in the programme. Elite capture is a commonly observed among community development programmes. Elite capture in a SHG happens as a result of leaders or the powerful (individuals of superior nature by economic, political, educational or otherwise) take all the benefits provided to the group. It would lead to risk of resources misappropriation and

may prove self-defeating (Platteau and Gaspart 2003). A recent study by Vandewalle (2017) looked into this effect in SHGs in India and observed elite capture. Though in this programme, the key objective is to produce good quality seed, it may not be an issue if the leaders produce seed. But good quality seed should be produced and distributed among other members. During the FGDs we asked the members how the consent was drawn in deciding the seed producer, they stated that a democratic process was followed. But during an in-depth interview with a SHG leader, she shared that she needs all the seeds produced for her own consumption and for her relatives. This prompted us to probe into this dimension. We used the baseline data collected by RGVMP on all the SHG members who produced paddy seed varieties in the targeted region.

Theoretical framework

The theoretical insights of the study are mainly drawn from the literature on elite capture. Elite capture happens in two forms, the elite (leaders) imposes their own interest while getting benefits from funding agency, and second they take the benefits provided for the whole community (Platteau 2009). The present study draws from the second form, and we investigated whether elite capture had happened in the programme and what's the impact of it.

Empirical Models

To model this research question we looked into whether the selection of seed producer was influenced by elite and then modelled whether it had impacted the programme. To understand the factor determining the selection of seed producer we used probit model. Let X be a women member with a given set of socio-economic and farm characteristics. The decision to be selected as a seed producer is modelled as

$$\Pr(Y=1 | X) = \Phi(\beta X_{ij}) \quad (1)$$

Where the dependent variable is selection of member as a seed producer ($Y=1$ if selected as seed producer, 0 =otherwise), Φ is the cumulative distribution function, X_{ij} is a set of socio-economic and farm characteristics. Though few women SHG members were selected in the group for seed production they were not able to produce seed successfully. We probed whether factors influencing selection of seed producer influence successful seed production. To understand this, we used a two stage 'heckprobit model', where first stage is a probit model determining the factors determining selection of seed producer and the second stage probit determining the factors determining the successful seed production. The probit model assumes that there exists an underlying relationship. The latent equation is empirically modelled as

$$y_j^* = X_j\beta + u_{1j} \quad (2)$$

Such that we observe only the binary outcome

Probit equation

$$y_j^{probit} = (y_j^* > 0)$$

Where the dependent variable is a successful seed production (1 =successful seed producer, 0 =otherwise), X_{ij} is a set of socio-economic, farm characteristics, variety grown and cultivation method followed.

However, the dependent variable is not always observed, rather dependent variable of j is observed if

Selection equation

$$y_j^{select} = (Z_j\gamma + u_{2j} > 0)$$

Where, the dependent variable y_j^{select} is selection of member as a seed producer (1 =selected as seed producer, 0 =otherwise), Z_j is a set of socio-economic and farm characteristics and

$$u_1 \sim N(0,1)$$

$$u_2 \sim N(0,1)$$

$$\text{corr}(u_1, u_2) = \rho$$

When $\rho \neq 0$, standard probit estimation techniques applied to the first equation yields biased results. See (Van de Ven and Van Pragg 1981) to further understand how the log likelihood is estimated. Other than the baseline data used for modelling, discussion from FGDs are used for drawing inference.

Results and discussion

The socio-economic characteristic of different group of members (seed producers and non-producers of targeted SHGs, and members of non-targeted SHG) are given in table 15. Average age of targeted SHG group members are higher than non-targeted SHG and total SHG members. But among the targeted SHG (CBSP group) members the average age of seed producers was less than non-seed producers. Seed production is a risky business as there are chances of rejection of harvest if it does not meet the needed quality standards, women of younger age are having more risk taking ability than that of older women. The average total number of family members in targeted SHG group is less than non-targeted SHG. The average total landholding of seed producers is higher than non-seed producers in targeted SHG and non-targeted SHG. But higher standard deviation is observed showing that high variability is observed among size of landholding among the members. The primary objective of the farmer is to meet his household consumption. A small sized household with large landholding have higher marketable surplus. These households given an opportunity would opt for seed production in the land after meeting their consumption. Likewise, relatively bigger landholders were preferred as they had sufficient land to meet their consumption requirements and seed production both. Also, in bigger plots, the ratio of rejected³ portion to seed is less.

³ Paddy and wheat seed plot require an isolation distance of 3 meters. So as to ensure that, outer 3 meter portion of the seed plot is rejected and is used for consumption.

The average date of joining SHG remained same across seed producers, non-seed producers and non-targeted SHG members. The seed-producers mostly belong to lower caste (OBC and SC) and are mostly illiterate. The proxy for economic status (availability of toilet, household type, MGNREGA⁴ and household economic status) are lower for the seed producers compared to non-seed producers and members in non-target SHG. As it is already established that people belonging to lower caste have weak economic status, almost all members of the family work to support the family and so do women. Women belonging to this category work in the farms and

thus meet the criteria of seed producer (which is- she should be herself involved in farming). Also, as people move up in the economic ladder, women working for the family is considered disrespectful particularly for men, in rural context.

The share of seed members holding office posts (President and Secretary) is higher than non-seed producers and non-target SHG members. Among the targeted SHG members the share of official member is double that of non-seed producers.

Table 16. Summary of socio-economic characteristics of SHG members

Variables	Targeted SHG (CBSP group)				Non-targeted SHG		Total	
	Seed producer		Non-seed producer		Mean	Std. Dev.	Mean	Std. Dev.
	Mean	Std. Dev.	Mean	Std. Dev.				
Age (years)	35.04	8.36	35.27	9.18	33.78	9.91	33.93	9.83
Total Family Members	4.75	2.69	4.73	2.28	4.85	2.21	4.84	2.22
Agricultural land (ha)	0.31	5.43	0.19	2.44	0.23	3.67	0.23	3.64
Date [§]	0.36	0.19	0.36	0.19	0.36	0.20	0.36	0.20
Caste (OBC) *	0.45	0.50	0.45	0.50	0.39	0.49	0.39	0.49
Caste (SC) *	0.39	0.49	0.38	0.49	0.38	0.49	0.38	0.49
Caste (General)*	0.10	0.30	0.11	0.31	0.15	0.36	0.15	0.36
Illiterate*	0.54	0.50	0.53	0.50	0.47	0.50	0.48	0.50
Education (Primary)*	0.20	0.40	0.20	0.40	0.21	0.41	0.21	0.41
Education (Middle)*	0.09	0.29	0.09	0.28	0.11	0.31	0.10	0.31
Education (Secondary)*	0.03	0.18	0.03	0.18	0.05	0.21	0.04	0.21
Education (higher secondary)*	0.02	0.14	0.02	0.15	0.03	0.16	0.03	0.16
Education (Graduate)*	0.01	0.10	0.01	0.10	0.01	0.11	0.01	0.11
Toilet*	0.10	0.30	0.12	0.32	0.13	0.34	0.13	0.34
House (Temporary roofing)*	0.61	0.49	0.59	0.49	0.59	0.49	0.59	0.49
House (Permanent roofing)*	0.18	0.38	0.22	0.41	0.22	0.41	0.22	0.41
Poorest of the poor (POP)*	0.20	0.40	0.22	0.41	0.21	0.41	0.21	0.41
Poor*	0.63	0.48	0.65	0.48	0.63	0.48	0.63	0.48
MGNREGA card*	0.23	0.42	0.30	0.46	0.32	0.47	0.32	0.46
Membership (Official)*	0.26	0.44	0.13	0.34	0.18	0.38	0.18	0.38
Membership (Normal)*	0.54	0.50	0.61	0.49	0.36	0.48	0.39	0.49
N	2,608		8,712		98,791		1,10,111	

Note: * Dummy variables (percentage can be calculated by multiplying with 100). § - Date of joining the SHG group is normalised after converting them using date function in Stata.

Source: RGMVP Baseline database (2016)

⁴ MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act) is a social security for rural household for 100 days minimum employment in a year.

Table 16. Results from probit model (1)

Variables	Coef.	Std. Err.	P>z
Age	0.043	0.012	0.000
Age Square	-0.001	0.000	0.000
Total Family members	0.018	0.007	0.007
Total land holding (ha)	-0.003	0.008	0.699
Social Categories			
Minority	-0.378	0.114	0.001
Other Backward Class	0.126	0.052	0.016
Scheduled Caste	0.137	0.055	0.012
Scheduled Tribe	-0.068	0.202	0.735
Education			
Primary	-0.041	0.038	0.271
Middle	-0.003	0.053	0.952
Secondary	-0.075	0.082	0.363
Higher Secondary	-0.123	0.099	0.217
Graduate	0.124	0.142	0.382
House Type			
Colony	-0.178	0.177	0.314
Semi-permanent roofing	-0.082	0.043	0.055
permanent roofing	-0.128	0.038	0.001
Economic status			
Poor	0.009	0.037	0.813
Less-poor	0.052	0.062	0.397
non-poor	-0.008	0.254	0.976
MGNREGA	-0.209	0.034	0.000
Position in SHG			
President or Secretary	0.555	0.040	0.000
Treasurer	0.074	0.037	0.048
Constant	-1.713	0.223	0.000

Note: Number of observation = 9297, LR χ^2 (14) = 315.74, Prob > χ^2 = 0.0000, Log likelihood = -4794.2195, Pseudo R^2 = 0.0319. The base variable for social category is general, education is illiterate, house type is temporary roofing, economic status is poorest of poor, and membership is normal member. For the first model, 9,297 households were used for analysis out of 11,320 households (Targeted SHG households) due to missing data.

Source: Calculated by authors based on RGMVP baseline data (2016)

The results from the probit model (1) is shown in table 16. The study shows that age of the member has a positive influence on selection as seed producer, but age square had shown negative relationship indicating that with higher age the likelihood would decrease. Members belonging to household with higher family member positively influence selection of member as a seed producer, while with large landholding are less

likely to be selected. Member households belonging to disadvantages social category (OBC and SC) are more likely to be selected as seed producer compared to members from general social category. Seed production being a technical procedure, requiring lot of care from the part of seed producer, SHGs should have selected members who themselves work in their farm so that proper care of the crop is taken ensuring quality seed.

This is more likely in case of lower social category. Members who have primary, secondary and higher secondary education are less likely to be selected as seed producer compared to illiterates, but members who are graduate and above are more likely. Members with a temporary roofing house type are more likely and holding MGNREGA card are less likely to be selected as seed producer. Members of households which are poor and less-poor are more likely to be selected than the poorest (most poor) households. Members who are holding office post in the SHGs are more likely to be selected as seed producers compared to normal members. As office bearers are the ones holding key positions in the SHG, they in one place have more say in the SHG, they are also more responsible for the proper functioning of the group. So there can be two reasons for the above result. One is that the democratic process has been ignored and office bearers decided to use the foundation seed themselves. Or as seed production involves too much of precision, it is a risky affair, it needs to maintain isolation distance, carry out roguing of off-types and diseased plants, care during harvesting, threshing and seed storage most of which involve additional cost. Other poor members in the SHG might not have agreed to take up this additional cost, making office bearers take up seed production themselves.

The motive of SHG to take up CBSP is making quality seed accessible and available to farmers on time. This is a community based intervention, with investment from the SHG federation's corpus. Thus it is essential that the growers given first lot of seed are well capable of performing all the operations well. For this it is essential that the woman herself does farming, which is less likely in case of old seed producers. Households with large landholding usually depend on labour for agricultural operations and hence won't be very suitable, meanwhile

for households with bigger family size makes it easier to perform roguing and other agricultural operations without depending on outside labour. This being a community level business enterprise, there is need to maintain proper records of who are the seed producers, how much seed has been given, what operations have been performed by the seed producer to maintain quality, what is the quantity of seed produced, how much seed has been returned by the seed producer to the federation, who are the people interested in purchasing seed from seed producer and SHG federation etc. Most of these details need to be maintained at federation level and some at farmer level too. This can be ensured if some of the seed producers are graduate.

This prompted us to further explore to understand whether these factors had influenced in successful seed production. To understand this a 'heckprobit' model using seed producers as the dependent variable for selection equation and successful seed producer at the second stage was used. The results from the regression are shown in Table 17. The results show households with MGNREGA card are more likely to be successful in seed production though less likely to get selected as a seed producer. The position of SHG member, which was a key factor in selection of seed producer was found to be detrimental for successful seed production. Members who are office bearers (President/Secretary or treasurer) are less likely to be successful than a normal member. It implies that though the positional power had influenced the selection of being a seed producer, but they were not able to produce good quality seed. None of the varieties were found to be associated with successful seed production, as the varieties were selected by participatory methods and were more or less successful. Members who had gone for SRI method of cultivation are more likely to be successful in seed production.

Table 17. Heckprobit model results

Variables	Probit equation			Selection equation		
	Coef.	Std. Err.	P>z	Coef.	Std. Err.	P>z
Age	0.004	0.028	0.878	0.042	0.012	0.001
Age Square	0.000	0.000	0.811	-0.001	0.000	0.001
Total Family Members	0.000	0.011	0.984	0.016	0.007	0.031
Total land holding (ha)	-0.007	0.030	0.817	-0.002	0.008	0.803

Variables	Probit equation			Selection equation		
	Coef.	Std. Err.	P>z	Coef.	Std. Err.	P>z
Social Categories						
Minority	-	-	-	-0.377	0.117	0.001
Other Backward Class	-	-	-	0.117	0.047	0.013
Scheduled Caste	-	-	-	0.171	0.053	0.001
Scheduled Tribe	-	-	-	0.104	0.169	0.541
Education						
Primary	0.098	0.058	0.090	-0.051	0.040	0.199
Middle	0.069	0.077	0.373	-0.015	0.055	0.790
Secondary	0.230	0.123	0.061	-0.072	0.086	0.407
Higher Secondary	0.167	0.147	0.256	-0.076	0.103	0.462
Graduate	-0.138	0.239	0.565	0.095	0.153	0.535
House Type						
Colony	0.043	0.276	0.876	-0.139	0.181	0.442
Semi-permanent roofing	0.010	0.073	0.890	-0.077	0.045	0.085
permanent roofing	0.036	0.073	0.624	-0.120	0.040	0.003
Economic status						
Poor	-	-	-	-0.023	0.030	0.453
Less-poor	-	-	-	-0.120	0.063	0.055
non-poor	-	-	-	-0.010	0.225	0.964
MGNREGA	0.276	0.055	0.000	-0.228	0.036	0.000
Position in SHG						
President or Secretary	-0.333	0.108	0.002	0.522	0.042	0.000
Treasurer	0.120	0.095	0.206	0.064	0.039	0.101
Crop Variety⁵						
Bina 11	0.091	0.070	0.194	-	-	-
CSR 43	-0.059	0.091	0.517	-	-	-
Swarna Sub 1	0.048	0.112	0.666	-	-	-
Sahabagi	-0.010	0.063	0.873	-	-	-
Cultivation Practices						
Nursery	0.166	0.101	0.102	-	-	-
SRI*	0.169	0.077	0.028	-	-	-
Transplanting	0.066	0.047	0.165	-	-	-
Constant	0.262	0.800	0.743	-1.754	0.232	0.000
/athrho	-1.960	0.592	0.001			
rho	-0.961	0.045				

Note: Number of observation = 8953, Wald $\chi^2(22) = 117.48$, Prob > $\chi^2 = 0.0000$, Log likelihood = -4677.759, LR test of indep. eqns. ($\rho = 0$): $\chi^2(1) = 7.51$ Prob > $\chi^2 = 0.0061$. The base variable for education is illiterate, house type is temporary roofing, and membership is normal member. ⁵ The crop varieties are dummy variables (eg: Bina 11; 1= grown Bina 11, 0=otherwise). *SRI is System of Rice Intensification (read about it in <http://sri.ciifad.cornell.edu/>). Only 8953 households were considered for analysis as 344 households were dropped as they were only supplied one kg of seed.

Source: Calculated by authors based on RGMVP baseline data (2016)

Conclusion

The key objective of the project was to ensure that good quality seeds are accessible to socio-economically backward farmers. The current scenario shows that seed producers belong to such socio-economically backward classes, but mostly to members of superior status in each group. The empirical analysis shows that various factors (economic, educational, social) which showcases superiority, are mostly selected as seed producers. During the focus group discussion, the members stated that the superiority of land and involvement in farming as key factors for deciding the seed producer. Though the decisions might have happened democratically or with meritocracy, the study shows that elite capture might have happened. The study had shown that elite capture had impacted the production of good quality seeds as those superior members were not able to produce good quality seeds.

Willingness to Participate

We asked the SHG members and women members (Non-SHG households) in non-seed whether they are willing to participate in such a programme. About 48% of the participants said they are willing to participate (Figure 11)

Willingness to Pay

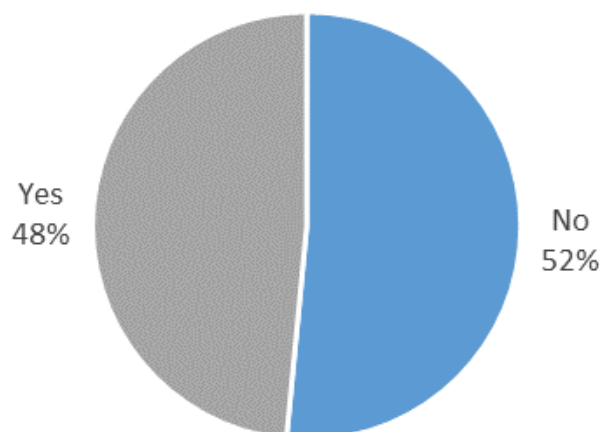
Among the respondents who stated they are willing to participate in such a programme, we estimated how much they are willing to pay. In the existing programme the payment is done as 'X' times the quantity of seed given to them. We used Double Bound Contingency Evaluation Method to estimate the WTP.

Double bound Contingency Evaluation Method

The commonly used estimates for economic value of non-marketed goods and services are hedonic pricing, travel-cost method, contingent valuation method (CVM) (Carson et al. 2001; Abebe & Bogale 2014). Contingent valuation is one of the mostly used method, where the objective is to estimate the willingness to pay (or accept) for change in provision of some goods or services, contingent upon hypothetical market situation (López-feldman 2013). Open ended questions, bidding game, single bound or double bound dichotomous choice question and choice experiment are commonly CVM used for economic value of non-marketed goods and services. In our study, we have used 'double bound contingent valuation method' to elicit the women member of the household [SHG women in case of SHG households and female member (primary decision maker) or spouse of primary decision maker] willingness to pay for participation in the seed. As a test, we have also asked an open ended follow up question on how much amount the farmer is willing to pay to participate in the seed production programme.

Key to success of CVM lies in developing hypothetical market situation for the product /service in question and elicit the willingness to pay contingent upon it (Tinch et al. 2015; Carson et al. 2001; Shashikiran & Umesh 2012; Hanley et al. 2001). During the survey, the enumerators explained the women members of the family about the seed production programme, and the pay back condition in case if the individual is participating in the seed production programme.

Figure 11. Willingness to participate in seed programme



Each respondent was provided with a random quantity “X” (ranging from 1 to 10) and first asked whether she is ready to payback that much quantity of seed back to the SHG once you received some quantity of seed for production. The response of the individual is captured using a dichotomous variable (1=Yes, 0=No). If the response was “Yes”, the quantity was increased by one unit (X+1), and a second question is asked whether they are ready to pay (X+1) times of seed they received initially. If the answer to the first question is “No”, a new bid is offered by reduced by one unit (X-1) and asked whether they are ready to accept it. Depending on the answer for the above said questions the bids gets an upper bound and lower bound which increases the efficiency of the WTP estimates (Hanemann et al. 1991; Hanemann & Kanninen 2008; Gao et al. 2010) and could be used to estimate Willingness to Pay (WTP) econometrically.

Econometric estimation of WTP

Let’s assume that b1 and b2 are two bid amount and Y_{1i} and Y_{2i} be two variables which capture this responses, respectively. The response from the women member could be grouped into following four categories.

1. (Yes, No): Women member is ready to pay initial bid amount but refutes for second bid amount. In this case $Y_{1i} = 1$ and $Y_{2i}=0$. Probability of getting this response is given by

$$\Pr(Y, N) = \Pr(t1 \leq WTP < t2) \quad (1)$$

If WTP depends on set of explanatory variables, i.e., $WTP (Z_i, u_i) = Z_i\beta + u_i$, Where Z_i is the vector of explanatory variables and β represents corresponding coefficients. With assumption that error term is normally distributed with zero mean and standard deviation of σ , we can rewrite expression 1 as

$$\Pr(Y, N) = \Phi\left(\frac{t_2 - Z_i\beta}{\sigma}\right) - \Phi\left(\frac{t_1 - Z_i\beta}{\sigma}\right) \quad (2)$$

2. (Yes, Yes): Here, both Y_{1i} and $Y_{2i} =1$ and probability can be written as $\Pr(Y, Y) = \Pr(t1 < WTP > t2)$ (3)
Applying Bayes rule of probability and rearranging,

$$\Pr(Y, Y) = 1 - \Phi\left(\frac{t_2 - Z_i\beta}{\sigma}\right) \quad (4)$$

3. (No, Yes): In this case, $Y_{1i}=0$ and $Y_{2i}=1$

$$\Pr(N, Y) = \Pr(t1 > WTP \leq t2) \quad (5)$$

$$\Pr(N, Y) = \Phi\left(Z_i\frac{\beta}{\sigma} - \frac{t_2}{\sigma}\right) - \Phi\left(Z_i\frac{\beta}{\sigma} - \frac{t_1}{\sigma}\right) \quad (6)$$

4. (No, No): Case where both y_{1i} and $y_{2i} =0$

$$\Pr(N, N) = \Pr(t1 < WTP < t2) \quad (7)$$

$$(8)$$

Equations 2, 4, 6 and 8 can be expressed in a likelihood functions as

$$\sum_{i=1}^n \left(d_i^{yn} \ln \left(\Phi\left(\frac{t_2 - Z_i\beta}{\sigma}\right) - \Phi\left(\frac{t_1 - Z_i\beta}{\sigma}\right) \right) + d_i^{yy} \ln \left(1 - \Phi\left(Z_i\frac{\beta}{\sigma} - \frac{t_1}{\sigma}\right) \right) + d_i^{ny} \ln \left(\Phi\left(Z_i\frac{\beta}{\sigma} - \frac{t_2}{\sigma}\right) - \Phi\left(Z_i\frac{\beta}{\sigma} - \frac{t_1}{\sigma}\right) \right) + d_i^{nn} \ln \left(1 - \Phi\left(Z_i\frac{\beta}{\sigma} - \frac{t_2}{\sigma}\right) \right) \right)$$

where $d_i^{nn}, d_i^{ny}, d_i^{yn}$ and d_i^{yy} are indicator variables which takes value zero or one depending on the respective response. From the estimates, we can compute WTP.

where $j=1-k$ represents the control variables used in the analysis. (López-feldman 2013).

Estimated willingness to pay is based on the mean value of explanatory variables or control variables. From this estimate, it is difficult to quantify the impact of different variables on WTP. But, it is possible to predict \widehat{WTP} for each respondent by making use of coefficients of maximum likelihood estimation. Determinants of willingness to pay for insurance was analysed using \widehat{WTP} as dependent variable with set of explanatory variable in simple linear regression framework.

Description of the control variables used in the analysis

Variables	Type	Description
Age	Continuous	Age in number of years
Age square	Continuous	Square of ages to capture the exponential effect
Education	Dummy	1 if illiterate, 0=otherwise
Agriculture as primary occupation	Dummy	1 if primary occupation is agriculture, 0=otherwise
Primary decision maker in Agriculture	Dummy	1 if individual is primary decision maker in agriculture
Land owned by household	Continuous	Total land owned by the household
Extension contacts	Continuous	Total of contacts with agricultural extension members

Note: The model may require revision by adding more variables.

Results

In CVM studies, it is important to design and distribution of the initial bid values (The X quantity which the farmer is willing to pay back after the seed cultivation). In our study we had taken 10 bids (ranging from 1 to 10). In the current system, for rice they are paying '3X' quantity of seed and for wheat '2X'. So to avoid an anchoring effect we increase the bids to a range till 10. The bids were drawn randomly in front of the SHG women or women member of the family (non-SHG households). Based on economic theory, as the bid quantity increases, the

probability of getting 'No' responses increases. In CVM literature it is called 'The price test' (Carson et al 2000). Our study also shows a similar pattern with an exception for the bid at '10X' (Figure 12).

The willingness to pay was estimated using MLE and the estimated WTP was 11X (table 18). The estimates were also statistically significant. As a reality check, we have also asked farmers an open ended question about how much they are willing to pay. The average value was 8.85, which is lower than the estimated value.

Figure 12. Distribution of initial bid and corresponding answers

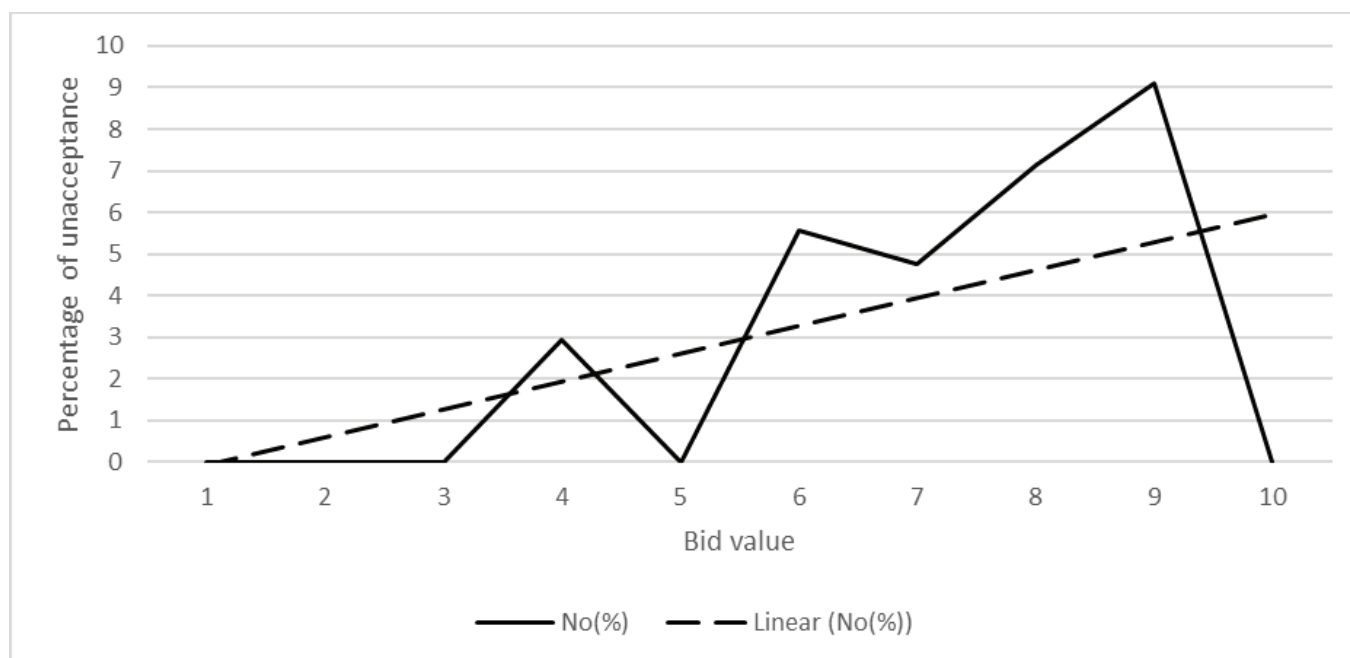


Table 18. Estimated willingness to pay for seed

	Coef.	Std. Err.	z	P>z	[95% Conf. Interval]	
WTP	11.093	1.300	8.530	0.000	8.545	13.640

Table 19. Factors affecting WTP for seed

Variables	Coef.	Std. Err.	t	P>t	[95% Conf. Interval]	
Age	0.005	0.002	2.090	0.038	0.000	0.009
Age square	-0.000	0.000	-2.020	0.045	0.000	0.000
Education	-0.064	0.010	-6.630	0.000	-0.083	-0.045
Agriculture as primary occupation	0.065	0.009	7.030	0.000	0.047	0.084
Primary decision maker in Agriculture	-0.072	0.009	-7.760	0.000	-0.090	-0.053
Land owned by household	0.022	0.007	3.310	0.001	0.009	0.035
Extension contacts	0.112	0.006	18.130	0.000	0.100	0.125
Constant	0.408	0.049	8.320	0.000	0.311	0.505

Note: Number of observation=185, Prob > F=0.0000, R-squared = 0.7288, Adj R-squared= 0.7180.

Factors affecting farmers' willingness to pay was estimated using a simple linear regression model. The results are shown in table 19. Age has shown a positive relationship while age square had shown a negative relationship. The coefficients of both the variables are very close to zero. Illiterate members had shown a negative relationship with WTP, while members who are engaged in agriculture as primary occupation had shown positive relationship. Members who are primary decision makers are showing negative relationship. Contact of members with extension agents was found

to be a key variable and had shown positive relationship with WTP.

Conclusion

The study shows that members are willing to pay more. The results might be overestimated but it could be increased more than the current exchange rates (3X and 2X). The study did not probe the exchange for paddy and wheat separately. In general, the members were ready to pay more for rice as the quantity of seed required is less while for wheat they are hesitant to pay more.

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Appendix

We had attached both hindi and English version of the questionnaire. There were quite a number of coorections done throughtout the process. The hindi draft is the final one.

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

उत्तर प्रदेश में महिला स्वयं सहायता समूह द्वारा समुदाय आधारित बीज कार्यक्रम का सामाजिक-आर्थिक मूल्यांकन

घरेलू प्रश्नावली

सहमति पत्र

सर्वेकर्ता के लिए : उत्तरदाता को नीचे दिए गई सारी जानकारी दें। फिर उत्तरदाता से पूछें कि क्या उसके पास कोई सवाल है, और इन सवालों के तदनुसार उत्तर दें। यदि उत्तरदाता सर्वेक्षण में भाग लेने के लिए सहमत हैं, तो कृपया प्रश्नावली वितरण करने से पहले उनकी मौखिक सहमति का दस्तावेज लें।

नमस्ते! मैं राजीव गांधी महिला विकास परियोजना नामक संगठन के लिए काम करती हूँ। इस संगठन को उत्तर प्रदेश में काम करने का अधिकार प्राप्त है। मुख्य रूप से हमारा काम स्वयं सहायता समूहों द्वारा महिलाओं की सामूहिक कार्यवाही के माध्यम से गरीबी कम करने पर केंद्रित है। हमारी संस्था गरीबी कम करने, महिला सशक्तिकरण और ग्रामीण विकास का काम करती है। आपको इस शोध अध्ययन में भाग लेने के लिए पूछा जा रहा है। इसे आरंभ करने से पहले हम अपने काम के बारे में संक्षिप्त परिचय देना चाहेंगे। आप भाग लेना चाहते हैं कि नहीं यह तय करने से पहले कृपया जानकारी को सुनें और कुछ भी समझ ना आने पर प्रश्न पूछें।

अध्ययन क्यों किया जा रहा है?

हम अनौपचारिक बीज प्रणाली को मजबूत बनाने पर एक तीन वर्षीय बी एम जी एफ परियोजना को लागू कर रहे हैं, जिसमें 5 जिलों में मौजूद स्वयं सहायता समूहों द्वारा लाभ उठाया जा रहा है। इस परियोजना में हम स्वयं सहायता समूहों द्वारा बीज उत्पादन को एकीकृत करने के सामाजिक-आर्थिक प्रभाव का आकलन करने के लिए एक लघु अध्ययन कर रहे हैं। हम आपसे कृषि से संबंधित कुछ प्रश्न, जैसे- उत्पादन, लागत, नई किस्मों की जानकारी, कृषि सूचना तक पहुंच, निर्णय लेना तथा प्रौद्योगिकी और गैर-कृषि संबंधी जानकारी हेतु कुछ प्रश्न पूछेंगे। आपको भाग लेने के लिए चुना जा रहा है क्योंकि आप लक्ष्य क्षेत्र में रह रहे हैं। इस सर्वेक्षण का परिणाम हमें यह समझने में मदद करेगा कि कैसे हस्तक्षेप द्वारा अनौपचारिक बीज प्रणाली को मजबूत बनाया जा सके। आपकी भागेदारी का निर्णय केवल और केवल आपके द्वारा ही लिया जाएगा।

यदि आप इस अध्ययन में भागीदारी करते हैं, तो क्या होगा?

यदि आप इस अध्ययन में भाग लेते हैं, तो आपसे आपकी पारिवारिक कृषि आधारित प्रश्न पूछे जायेंगे। इसमें आपका 1 घंटे का समय लगेगा। आप इसमें अपना समय देंगे। कृषि में घरेलू, प्राथमिक निर्णय निर्माता एवं पति एवं पत्नी। महिला स्वयं सहायता समूह के सदस्य हेतु प्रश्नावली अलग से होगी।

असुविधा की आशंका

आप या आपके परिवार को इस अध्ययन में भागीदारी करने पर कोई असुविधा तो नहीं होगी। आप शायद आय, बचत और अपने परिवार के भोजन खपत के बारे में विचार-विमर्श करते समय असुविधा अनुभव कर सकते हैं। एक प्रशिक्षित गणनाकार आपकी किसी भी विषय पर चर्चा करने व आपके प्रश्नों का उत्तर देने में आपकी सहायता करेगा।

गोपनीयता

आपके परिवार के समस्त सूचनाओं को वास्तव में गोपनीय रखा जायेगा। आप या आपके परिवार को किसी भी अध्ययन रिपोर्ट या प्रकाशन में पहचान नहीं की जायेगी। आकड़े दूसरे आर जी वी एम पी शोधार्थियों से साझा किये जा सकते हैं। यद्यपि हम पूर्ण गोपनीयता बनाये रखने हेतु प्रतिबद्ध हैं।

भागीदारी

इस अध्ययन में आपकी स्वैच्छिक भागीदारी है। आपको इस अध्ययन में भागीदारी करने से इनकार करने का अधिकार है। यदि आप भागीदारी करना चाहते हैं, तो आपको इसे किसी भी समय रोक देने का तथा प्रश्नावली में किन्हीं भी प्रश्नों के उत्तर किसी भी तरह न देने का अधिकार है। यदि आप अपनी भागीदारी हेतु मना या उसे किसी भी समय रोक देते हैं, तो इसके कोई विपरित परिणाम नहीं होंगे।

प्रश्न

आप से अध्ययन के बारे में कोई भी प्रश्न पूछा जा सकता है। यदि आपको बाद में कोई प्रश्न पूछना है तो वे आप श्री के.एस. यादव, परियोजना प्रबन्धक, आर जी एम वी पी को दूरभाष संख्या 9918600901 पर सम्पर्क कर सकते हैं।

क्या आप इस सर्वेक्षण में पूछे गये, प्रश्नों का उत्तर देने को तैयार हैं?

हाँ:

नहीं:

कृपया सही विकल्प में $\sqrt{\quad}$ लगाये।

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

साक्षात्कारकर्ता की पृष्ठभूमि

1.	सर्वेक्षण आरंभ करने का समय (24:00 घंटे प्रारूप)	
2.	सर्वेकर्ता का नाम	
3.	सर्वेक्षण की तिथि	
4.	जिले का नाम	
5.	ब्लॉक का नाम	
6.	गांव का नाम	
7.		
8.	उत्तरदाता का नाम	
9.	उत्तरदाता का मोबाइल नंबर (संकेतिक)	
10.	घर का स्थिति/स्थान (ग्लोबल पोजिशनिंग प्रणाली)	
क.	अक्षांश	
ख.	देशांतर	
11.	परिवार का धर्म 1. हिन्दु 2. मुस्लिम 3. इसाई 4. अन्य (उल्लेख करें)	
12.	जाति/ सामाजिक वर्ग कोड 1. सामान्य 2. अन्य पिछड़ा वर्ग 3. अनुसूचित जनजाति 4. अनुसूचित जाति (कृपया सीधे सवाल न पूछें)	
13.	क्या परिवार राजीव गांधी महिला विकास परियोजना स्वयं सहायता समूह का सदस्य है? (हाँ- 1, नहीं- 0)	
14.	क्या उन्होंने बीज उत्पादन के लिए राजीव गांधी महिला विकास परियोजना स्वयं सहायता समूह से बीज का लिए है? (हाँ- 1, नहीं- 0)	
15.	क्या परिवार ने बीज राजीव गांधी महिला विकास परियोजना स्वयं सहायता समूह से खरीदे थे? ज	
16.	टिप्पणी आपके दृष्टिकोण के प्रति उन्होंने कैसे उत्तर दिया। अन्य चुनौतियां?	

प्रश्नावली के आकड़ों की प्रवृष्टि

आकड़े भरने की तिथि: दिन: महीना:

संचालक (नाम): टिप्पणी:

.....
.....
.....

पर्यवेक्षक द्वारा समीक्षा

पर्यवेक्षक की समीक्षा की तिथि: दिन: महीना: वर्ष:

पर्यवेक्षक (नाम): टिप्पणी:

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 1 : आवास एवं गांव की विशेषता

1.	क्या आप एकल परिवार या संयुक्त परिवार में रहते हैं?	एकल परिवार – 1, संयुक्त परिवार –2	
2.	आपके पास घर किस प्रकार का है।	कच्चा –1 अर्द्ध-कच्चा-2 पक्का- 3 777- ज्ञात नहीं 888- कोई जवाब नहीं	
3.	मुख्य बाजार के लिए सड़क का प्रकार (गांव के बाहर) (यहां उस प्रकार को चुनना है जिसका मुख्य बाजार तक की सड़क/रास्ते में सबसे अधिक भाग हो)	1. पक्की 2. तारकोल से बनी 3. बजरी से बनी 4. मिट्टी से बनी 5. अन्य (उल्लेख करें) 777. ज्ञात नहीं 888ण कोई जवाब नहीं	
4.	पीने के पानी का मुख्य स्रोत	1. पाइप द्वारा पानी की आपूर्ति 2. ढका हुआ कुँआ/हैंडपंप 3. खुला कुँआ 99. अन्य (उल्लेख करें) 777. ज्ञात नहीं 888. कोई जवाब नहीं	

5- निवास से दूरी

		कि.मी.	पहुँचने का समय (एकतरफा, लगा कुल समय) (मिनट में)
	वस्तु	1	2
5.1	गांव का बाजार		
5.2	निकटतम मुख्य बाजार		
5.3	लागत के निकटतम स्रोत (बीज, उर्वरक, खरपतवारनाशी, कीटनाशी)		
5.4	निकटतम कृषक सहकारी समिति		
5.5	निकटतम बीज उत्पादक स्वयं सहायता समूह		
5.6	निकटतम जिला बीज विक्रेता		
5.7	निकटतम कृषि प्रसार कार्यालय		

भाग 2 : घरेलू जनसांख्यिकीय विशिष्टताएं

1	परिवार का मुखिया कितने वर्षों से खेती कर रहा है?	
2	कितने वर्षों से मुखिया के (पति या पत्नि) खेती में संलग्न हैं?	

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

6- परिवार की वर्तमान रचना और व्यवसाय

खरिवारिक एवं गैर-पारिवारिक सदस्य, जो संदर्भित अवधि (2016-17) के दौरान परिवार में स्थायी रूप से रहते हैं और एक ही रसोई से भोजन लेते हैं को शामिल करें।

परिवार कोड	घर के मुखिया से संबंध (उत्तरदांता से आरंभ करें) कोड अ	लिंग पुरुष-1 महिला-2	वैवाहिक स्थिति कोड ब	उम्र (वर्षों में)	शिक्षा कोड स	व्यवसाय कोड द		खेती में लगाया गया समय (पूरे काम का प्रतिशत)	प्रवासी'हां-1 नहीं-0
						मुख्य	माध्यमिक		
1	2	3	4	5	6	7	8	9+	10
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									
16.									

कोड अ: 1- मुखिया स्वयं, 2- पति या पत्नी, 3- पुत्र/पुत्री, 4- पोता-पोती, 5- माता/पिता, 6- भाई/बहन, 7-भांजा या भतीजा, 8- दामाद/बहु 9-बहनोई/ननद, 10- सास/ससुर, 11-परिवार के अन्य संबंधी, 12- नौकर 13-किरायेदार, 14- कोई अन्य सदस्य जो रिश्तेदार न हो, 99- अन्य (उल्लेख करें)

कोड ब: 1- विवाहित पति या पत्नि के साथ रह रहे हैं, 2- वैवाहिक लेकिन पति या पत्नि आलग रह रहे हैं, 3- तलाकशुदा, 4- विधवा, 5-अविवाहित, 99- अन्य (उल्लेख करें)

कोड स: 1- कोई शिक्षा नहीं/अशिक्षित, 2-कोई शिक्षा नहीं/अर्द्धशिक्षित, 3-प्राथमिक शिक्षा (ग्रेड 1-5), 4- मध्यम (6-7), 5-माध्यमिक (ग्रेड 8-10), 6-उच्च माध्यमिक (ग्रेड 11-12), 7- स्नातक, 8- परास्नातक, 9- व्यावसायिक शिक्षा, 10 विद्यालय नहीं जाते हैं (15 वर्ष तक के बच्चों के संबंध में) 99- अन्य (उल्लेख करें)

कोड द: 1- कृषि, 2-पशुपालन, 3-मत्स्य पालन), 4-वेतनभोगी, 5-कृषि के अतिरिक्त स्वयं का पेशेवर रोजगार, 6-खेत पर अस्थायी श्रमिक, 7- गैर-कृषि अस्थायी श्रमिक 8-स्कूल/कॉलेज के बच्चे, 9- गैर-विद्यालयी बच्चों, 10- घर के काम में संलग्न, 10 कोई अन्य कार्य नहीं 99- अन्य (उल्लेख करें)

'पिछले 5 वर्षों में घर के सदस्य निवास स्थान से 2 महिनों से अधिक बाहर रहते हैं।

7. घर में कृषि के बारे में प्राथमिक निर्णय कौन लेता है? (पारिवारिक कोड नीचे की तालिका से लें)

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 3: घरेलू सम्पत्ति

8 उत्पादन उपकरण एवं मुख्य घरेलू उपकरण, आपके परिवार के पास निम्न में से कितनी सम्पत्ति स्वयं की है?

।: कृषि सम्पत्ति

	सम्पत्ति	सम्पत्ति की संख्या (यदि नहीं तो "0" रखें)	सम्पत्ति के एक मद का अनुमानित वर्तमान मूल्य (रूपये में)
1.	गाय/भैंसा/बैलगाड़ी		
2.	धक्का गाड़ी		
3.	ट्रैक्टर		
4.	खींची जाने वाली गाड़ी		
5.	बैल से चलने वाला हल		
6.	ट्राली		
7.	थ्रेसर		
8.	पानी का हैंडपंप		
9.	मोटरयुक्त पानी का पंप		
10.	नैपसेक स्प्रेयर		
11.	कुदाल या फावड़ा		
12.	पत्थर की चक्की		
13.	मोटरयुक्त चक्की		
14.	जनरेटर/डीजल इंजन		
15.	अनाज भण्डारण बिन		
16.	अन्य कृषि यंत्र (उल्लेख करें)		

ठ: गैर-कृषि सम्पत्ति

	सम्पत्ति	सम्पत्ति की संख्या (यदि नहीं तो "0" रखें)	सम्पत्ति के एक मद का अनुमानित वर्तमान मूल्य (रूपये में)
1.	रेडियो		
2.	टेलीविजन		
3.	टेलीफोन		
4.	मेबाइल		
5.	गैस चूल्हा		
6.	मिट्टी के तेल का चूल्हा		
7.	सइकिल		
8.	मोटरसाइकिल		
9.	कार या ट्रक		
10.	अन्य (उल्लेख करें)		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

६ पशुधन सम्पत्ति

पशुधन का प्रकार	2016 के अन्त तक पशुधन की संख्या (यदि सम्बन्धित समूह का कोई पशुधन नहीं है तो "0" लिखे)
1. दूध देने वाली गाय	
2. दूध न देने वाली गाय	
3. बछड़े (गाय के)	
4. जुताई हेतु प्रशिक्षित भैंसा	
5. दूध देने वाली भैंस	
6. दूध न देने वाली भैंस	
7. जुताई हेतु बैल	
8. बछड़े (भैंस के)	
9. पौढ़ दूध देने वाली बकरी/भेड़	
10. अन्य पौढ़ बकरी/भेड़	
11. युवा पौढ़ बकरी/भेड़	
12. पौढ़ मुर्गी	
13. बत्तख/ अन्य मुर्गी	
14. मधुमक्खी के छत्ते	
15. प्रौढ़ सुअर	
16. युवा सुअर	
17. अन्य	

भाग-4 खेत की विशेषताए

		क्षेत्रफल	इकाई
1.	स्वामित्व वाली कुल भूमि		
2.	कृषि योग्य कुल भूमि		
3.	किराये (पट्टे) पर ली गयी, कुल भूमि		
4.	किराये (पट्टे) पर दी गयी, कुल भूमि		
5.	परती भूमि		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

1. भूखंड की विशेषताएं:

इस भाग में हम आपसे 2016.2017 में आपके परिवार द्वारा बोये गये फसल का विवरण देने को कहेंगे। फसल जमीन का वह क्रमिक भाग है जिस पर आप एकमात्र फसल या फसलों का मिश्रण को समरूप, मेल खाती फसल प्रबन्धन पद्धति के अन्तर्गत बोया गया है। यह क्रमिक हो एवं एक मीटर से अधिक चौड़ाई के रास्ते से अलग न किया गया हो।

खेत की पहचान संख्या	क्षेत्रफल	इकाई	फसल के प्रकार	मिट्टी का प्रकार	पानी का निकास	सिंचाई का स्रोत	मालिकाना स्थिति	जमीन कैसे प्राप्त किया
			कोड -।	कोड -ठ	कोड -६	कोड -व	कोड -ॡ	कोड -ृ
1	2	3	4	5	6	7	8	9
खरीफ								
1								
2								
3								
4								
5								
रबी								
1								
2								
3								
4								
5								

कोड -। रू फसल के प्रकार: एकल फसल-1, मिश्रित फसल-2, अन्य-99

कोड -ठ रू मिट्टी के प्रकार: चिकनी मिट्टी-1, दोमट -2, बलुई-3, अन्य (उल्लेख करें)-99

कोड -६ रू पानी का निकास : पूरी तरह से पानी रुकता है-1, कुछ-कुछ पानी रुकता है-2, बिल्कुल पानी नहीं रुकता है-3

कोड -व रू सिंचाई का स्रोत: नहर-1, ट्यूबवेल-2, बारिश-3, असिंचित-4, अन्य (उल्लेख करें)-99

कोड -ॡ रू कार्यालय की स्थिति: परिवार के मुखिया द्वारा लिया गया-1, परिवार के अन्य सदस्य द्वारा लिया गया -2, सांझा / बटाई फसल -3, अन्य (उल्लेख करें)-99

कोड -ृ रू कैसे प्राप्त की: पुस्तैनी -1, खरीदी गयी -2, अन्य (उल्लेख करें)-99

6. फसल के लागत या आय के बारे में जानकारी**अ. निम्न प्रश्न प्रमुख खरीफ फसल (सबसे बड़ा क्षेत्रफल) से संबंधित है।**

1. खरीफ मौसम में उगाई जाने वाली प्रमुख फसलें
2. भूखंड संख्या (कृपया भूखंड विशेषता से संबंधित तालिका में भूखंड संख्या देखें).....
3. भूखंड का क्षेत्रफल : अ) बीघा में, ब) बिस्वा में
4. उगाई जाने वाली फसल की प्रजाति
5. कुल उत्पादन की मात्रा (किग्रा.)
6. कितना अनाज खाने के लिये रखा है (किग्रा.)
7. क्या आपने पैदावार का कुछ हिस्सा बेंच दिया है (हाँ-1, नहीं-0)----- (यदि नहीं, तो प्रश्न संख्या 9 पर जाएं)
8. यदि हां, तो आपने किसे अनाज बेचे है?

क्र.सं.	क्रेता कोड 1- स्थानीय व्यापारी, 2- मंडी, 99-अन्य, उल्लेख करें	विक्रय किये गये उत्पादन की मात्रा (किग्रा.)	मूल्य (रु./किग्रा.)
1			
2			
3			
4			
5			

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

9. यदि नहीं, तो आप उत्पादित फसल को किस दाम से बेचना चाहते हैं? (रु०/किग्रा०)

10. लागत का मूल्य

1-	बोने के प्रकार 1-हाथ से छिटककर 2- ट्रैक्टर संचालित सीड ड्रिल, 3- पावर टिलर से संचालित सीडर, 4- ड्रम सीडर, 5-रोटावेटर, 6- टर्बो सीडर, 7- रोपाई				
		मात्रा	इकाई	मूल्य / लागत (रूपये / इकाई)	कुल लागत (रूपये)
		1	2	3	4
2.	बुवाई पूर्व भूमि तैयार करने हेतु किये गये कार्यों (जुताई करना, भूमि को समतल करना) की कुल लागत				
3.	बीज दर				
4.	बीज उपचार (अगर कोई नहीं तो "0" लिखें)				
5.	गोबर की खाद का उपयोग (स्वयं की)				
6.	गोबर की खाद का उपयोग (खरीदकर)				
7.	अन्य खाद				
8.	उर्वरक और वृद्धि संबंधित				
	प यूरिया				
	इण्डाई अमोनियम फॉस्फेट (डी.एफ.पी.)				
	बप				
	कप				
9.	कीटनाशी और खरपतवारनाशी				
	प				
	इण्डाई				
10.	सिंचाई				
11.	मशीन से कटाई				
12.	अन्य (उल्लेख करें)				

ब. निम्न प्रश्न प्रमुख रबी फसल (सबसे बड़े क्षेत्रफल) से संबंधित है।

1. रबी मौसम में उगाई जाने वाली प्रमुख फसलें
2. भूखंड संख्या (कृपया भूखंड विशेषता से संबंधित तालिका में भूखंड संख्या देखें).....
3. भूखंड का क्षेत्रफल : अ) बीघा में, ब) बिस्वा में
4. उगाई जाने वाली फसल की प्रजाति
5. कुल उत्पादन की मात्रा (किग्रा.)
6. कितना अनाज खाने के लिये रखा है (किग्रा.)
7. क्या आपने पैदावार का कुछ हिस्सा बेंच दिया है (हाँ-1, नहीं-0)----- (यदि नहीं, तो प्रश्न संख्या 9 पर जाएं)
8. यदि हां, तो आपने किसे अनाज बेचे है?

क्र.सं.	क्रेता कोड 1- स्थानीय व्यापारी, 2- मंडी, 99-अन्य, उल्लेख करें	विक्रय किये गये उत्पादन की मात्रा (किग्रा.)	मूल्य (रु./किग्रा.)
1			
2			
3			
4			

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

9. यदि नहीं, तो आप उत्पादित फसल को किस दाम से बेचना चाहते हैं? (रु०/किग्रा०)

10. लागत का मूल्य

1.	बोने के प्रकार 1-हाथ से छिटककर 2- ट्रैक्टर संचालित सीड ड्रिल, 3- पावर टिलर से संचालित सीडर, 4- ड्रम सीडर, 5-रोटावेटर, 6- टर्बो सीडर, 7- रोपाई				
		मात्रा	इकाई	मूल्य/ लागत (रूपये/इकाई)	कुल लागत (रूपये)
		1	2	3	4
2.	बुवाई पूर्व भूमि तैयार करने हेतु किये गये कार्यों (जुताई करना, भूमि को समतल करना) की कुल लागत				
3.	बीज दर				
4.	बीज उपचार (अगर कोई नहीं तो "0" लिखे)				
5.	गोबर की खाद का उपयोग (स्वयं की)				
6.	गोबर की खाद उपयोग (क्रय करके)				
7.	अन्य खाद				
8.	उर्वरक और वृद्धि संबंधित				
	प यूरिया				
	इण्डाई अमोनियम फॉस्फेट (डी.एफ.पी.)				
	बण				
	कण				
9.	कीटनाशी और खरपतवारनाशी				
	प				
	इण				
10.	सिंचाई				
11.	मशीन से कटाई				
12.	अन्य (उल्लेख करें)				

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

11. मजदूरी

अ) खरीफ / रबी

	खरीफ फसल						रबी फसल						
	मजदूरी दिवस की संख्या (मजदूर ' दिनों की संख्या) एक क्रियाकलाप हेतु आवश्यक				प्रतिदिन की मजदूरी (रु.)		मजदूरी दिवस की संख्या (मजदूर ' दिनों की संख्या) एक क्रियाकलाप हेतु आवश्यक				प्रतिदिन की मजदूरी (रु.)		
	पुरुष		महिला		पुरुष	महिला	पुरुष		महिला		पुरुष	महिला	
	परिवार सदस्य	बाहर के सदस्य	परिवार सदस्य	बाहर के सदस्य			परिवार सदस्य	बाहर के सदस्य	परिवार सदस्य	बाहर के सदस्य			
1. भूमि की तैयारी													
2. बुवाई और													
3. खेत में गले हुये पौधे को पुनः लगाना या अतिरिक्त पौधों को निकालना													
4. हाथ से खरपतवार निकालना													
5. मिट्टी चढ़ाना													
6. सिंचाई करना													
7. उर्वरक देना													
8. कीटनाशी का छिड़काव													
9. कटाई और मड़ाई													

12. बीज उत्पादन के लिए फसल आगत एवं निर्गत की सूचना

बीज भूखंड (केवल बीज उत्पादकों के लिए)

अ. निम्नलिखित प्रश्न धान के बीज उत्पादन से संबंधित है

17. भूखंड संख्या (कृपया भूखंड विशेषता से संबंधित तालिका में भूखंड संख्या देखें).....

18. भूखंड का क्षेत्रफल : अ) बीघा में, ब) बिस्वा में

19. उगाई जाने वाली फसल की प्रजाति

20. कुल उत्पाद की मात्रा (किग्रा.)

21. कितना बीज खाने के लिये रखा है (किग्रा.)

22. क्या आपने कोई बीज बेचे/विक्रय किये हैं (हाँ-1, नहीं-0)----- (यदि नहीं, तो प्रश्न संख्या 8 पर जाएं)

23. यदि हां, तो आपने किसे बीज बेचे है?

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

क्र.सं.	क्रेता कोड 1- स्वयं सहायता समूह सदस्य, 2- गैर स्वयं सहायता समूह सदस्य, 3- मित्र, 4- संबंधी, 5-अन्य, उल्लेख करें	विक्रय किये गये बीज की मात्रा (किग्रा.)	मूल्य (रू./किग्रा.)
1			
2			
3			
4			
5			

24. यदि नहीं, तो आप जिस मूल्य पर बीज बेचने की सोच रहे हैं वह क्या है?.....(रू./किग्रा.)

25. लागत का मूल्य

1-	बोने के प्रकार 1-हाथ से छिटककर 2- ट्रैक्टर संचालित सीड ड्रिल, 3- पावर टिलर से संचालित सीडर, 4- ड्रम सीडर, 5-रोटावेटर, 6- टर्बो सीडर, 7- रोपाई	मात्रा	इकाई	मूल्य / लागत (रूपये/इकाई)	कुल लागत (रूपये)
		1	2	3	4
2.	बुवाई पूर्व भूमि तैयार करने हेतु किये गये कार्यों (जुताई करना, भूमि को समतल करना) की कुल लागत				
3.	बीज दर (किग्रा/एकड़)				
4.	बीज उपचार (अगर कोई नहीं तो "0" लिखें)				
5.	गोबर की खाद का उपयोग (स्वयं की)				
6.	गोबर की खाद उपयोग (क्रय करके)				
7.	अन्य खाद				
8.	उर्वरक और वृद्धि संबंधित				
	उर्वरक और वृद्धि संबंधित				
	प यूरिया				
	इण्डाई अमोनियम फॉस्फेट (डी.एफ.पी.)				
	बण				
9.	कण				
	कीटनाशी और खरपतवारनाशी				
	प				
	इण्डाई				
	उर्वरक और वृद्धि संबंधित				
10.	सिंचाई				
11.	मशीन से कटाई				
12.	अन्य (उल्लेख करें)				

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

ब. निम्नलिखित प्रश्न गेहूं के बीज उत्पादन से संबंधित है

1. भूखंड संख्या (कृपया भूखंड विशेषता से संबंधित तालिका में भूखंड संख्या देखें).....
2. भूखंड का क्षेत्रफल : अ) बीघा में, ब) बिस्वा में
3. उगाई जाने वाली फसल की प्रजाति
4. कुल उत्पाद की मात्रा (किग्रा.)
5. कितना बीज खाने के लिये रखा है (किग्रा.)
6. क्या आपने कोई बीज बेचे/विक्रय किये हैं (हाँ-1, नहीं-0)----- (यदि नहीं, तो प्रश्न संख्या 8 पर जाएं)
7. यदि हां, तो आपने किसे बीज बेचे है?

क्र.सं.	क्रेता कोड 1- स्वयं सहायता समूह सदस्य, 2- गैर स्वयं सहायता समूह सदस्य, 3- मित्र, 4- संबंधी, 5-अन्य, उल्लेख करें	विक्रय किये गये बीज की मात्रा (किग्रा.)	मूल्य (रु./किग्रा.)
1			
2			
3			
4			
5			

8. यदि नहीं, तो आप जिस मूल्य पर बीज बेचने की सोच रहे है वह क्या है?.....(रु./किग्रा.)

9. लागत का मूल्य

क्र.सं.	विवरण	मात्रा	इकाई	मूल्य/ लागत (रुपये/इकाई)	कुल लागत (रुपये)
		1	2	3	4
1-	बोने के प्रकार 1-हाथ से छिटककर 2- ट्रैक्टर संचालित सीड ड्रिल, 3- पावर टिलर से संचालित सीडर, 4- ड्रम सीडर, 5-रोटावेटर, 6- टर्बो सीडर, 7- रोपाई				
2.	बुवाई पूर्व भूमि तैयार करने हेतु किये गये कार्यों (जुताई करना, भूमि को समतल करना) की कुल लागत				
3.	बीज दर (किग्रा/एकड़)				
4.	बीज उपचार (अगर कोई नहीं तो "0" लिखें)				
5.	गोबर की खाद का उपयोग (स्वयं की)				
6.	गोबर की खाद उपयोग (क्रय करके)				
7.	अन्य खाद				
8.	उर्वरक और वृद्धि संबंधित				
	प यूरिया				
	इण्डाई अमोनियम फॉस्फेट (डी.एफ.पी.)				
	बप				
	कप				
9.	कीटनाशी और खरपतवारनाशी				
	प				
	इण्डाई				
10.	सिंचाई				
11.	मशीन से कटाई				
12.	अन्य (उल्लेख करें)				

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

ब) बीज उत्पादन के लिये

	धान के बीज उत्पादन						गेहूं के बीज उत्पादन						
	मजदूरी दिवस की संख्या (मजदूर ' दिनों की संख्या) एक क्रियाकलाप हेतु आवश्यक				प्रतिदिन की मजदूरी (रु.)		मजदूरी दिवस की संख्या (मजदूर ' दिनों की संख्या) एक क्रियाकलाप हेतु आवश्यक				प्रतिदिन की मजदूरी (रु.)		
	पुरुष		महिला				पुरुष		महिला				
	परिवार सदस्य	बाहर सदस्य	परिवार सदस्य	बाहर सदस्य	पुरुष	महिला	परिवार सदस्य	बाहर सदस्य	परिवार सदस्य	बाहर सदस्य	पुरुष	महिला	
1. भूमि की तैयारी													
2. बुवाई और													
3. खेत में गले हुये पौधे को पुनः लगाना या अतिरिक्त पौधों को निकालना													
4. हाथ से खरपतवार निकालना													
5. मिट्टी चढ़ाना													
6. सिंचाई करना													
7. उर्वरक देना													
8. कीटनाशी का छिड़काव													
9. कटाई और मड़ाई													

भाग- 6: प्रसार सेवाओं की उपयोगिता तक पहुंच

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग-6: प्रसार सेवाओं की उपयोगिता तक पहुंच

मद सं.	समग्री	परिवार के किसी सदस्य ने 2016 खण्ण्ण, पर प्रशिक्षण या सूचना प्राप्त की है? किसी ने नहीं-0 परिवार कोड	यदि किसी सदस्य ने 2016 के दौरान प्रशिक्षण या सूचना प्राप्त की है सूचना का मुख्य स्रोत कोड अ	यह प्रशिक्षण आपके लिए कितना उपयोगी था? (उन्हीं मदों के बारे में पूछे जिनमें प्रशिक्षण दिया गया है कोड ब
		1	2	5
1.	धान/गेहूं की नयी प्रजातियां			
2.	खेत में कीट व रोग नियंत्रण			
3.	मृदा उर्वरता प्रबन्धन एवं			
4.	जल प्रबंधन (सिंचाई सहित)			
5.	फसल चक्र			
6.	जलवायु परिवर्तन से अनुकूलन			
7.	फसल भण्डारण के समय कीट			
8.	बजार के कार्य तथा मूल्य निर्धारण			
9.	सामूहिक क्रिया/कृषक संगठन			
10.	पशु उत्पादन			
11.	परिवार का स्वास्थ्य			
12.	स्वच्छता			
13.	परिवार नियोजन			
99	अन्य (उल्लेख करें)			

कोड अ

1- सरकारी प्रसार सेवा	5- बीज के व्यापारी	9-निजी कम्पनी	13- रेडियो/टेलीविजन	99- अन्य (उल्लेख करें)
2- स्वयं सहायता समूह	6- सम्बन्धी कृषक	10-शोध केन्द्र	14- समाचार पत्र	777- ज्ञात नहीं
3- कृषक सहकारी या अन्य समूह	7- गैर-सरकारी संगठन	11- जागरूकता अधिकारी	15- मोबाइल फोन	888- कोई उत्तर नहीं
4- पड़ोसी कृषक	8- अन्य निजी व्यापारी	12- विद्यालय	16- स्वास्थ्य सम्बन्धी पत्र	

कोड ब : यह प्रशिक्षण आपके लिए कितना उपयोगी था? (उन्हीं मदों के बारे में पूछे जिनमें प्रशिक्षण दिया गया है- उपयोगी नहीं था -1, कुछ-कुछ उपयोगी नहीं था-2, ठीक-ठाक उपयोग था-3, काफी हद तक उपयोगी था-4, अत्यन्त ही उपयोगी था-5

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

उत्तर प्रदेश में महिला स्वयं सहायता समूह द्वारा समुदाय आधारित बीज कार्यक्रम का सामाजिक-आर्थिक मूल्यांकन

व्यक्तिगत प्रश्नावली. 1 प्राथमिक निर्णय लेने वाला

वर्तमान प्रश्नावली परिवार के व्यक्तिगत सदस्यों के लिए है। यह व्यक्तिगत सदस्य प्राथमिक निर्णय लेने वाला और दूसरा स्वयं सहायता समूह के सदस्य/उसके/उसकी पति या पत्नी है।

संयुक्त निर्णय लेने के मामले में कृपया दोनों के विचारों को अनुग्रहित करें। यदि प्राथमिक निर्णय निर्माता और स्वयं सहायता समूह का सदस्य एक ही है तो सदस्य के पति अथवा पत्नी का साक्षात्कार लेना है।

परिवार में स्वयं सहायता समूह का सदस्य न होने की दशा में कृपया प्राथमिक निर्णय निर्माता के पति अथवा पत्नी का साक्षात्कार लें।

कृपया सुनिश्चित करें कि

1. आपने सभी प्रश्न पूछ लिये हैं।
2. परिवार के सभी सदस्यों की सूची तैयार कर ली है।
3. आपने प्राथमिक निर्णय निर्माता/स0सहा0समूह सदस्य/उसकी/उसके पति या पत्नी की पहचान कर ली है तथा प्रश्नावली को घरेलू सर्वेक्षण से व्यक्ति से भरवाने का प्रबन्ध किया है।

भाग 0. साक्षात्कार पृष्ठभूमि (उचित पर गोला बनाये)

1) साक्षात्कार कैसे लिया गया

1. केवल प्रतिवादी (उत्तर देने वाला)
2. प्राथमिक निर्णय निर्माता/स0सहा0समूह सदस्य/उसकी/उसके पति या पत्नी के साथ
3. परिवार के अन्य सदस्य

भाग 1. व्यक्तिगत सूचना

1.	उत्तर देने वाले का पारिवारिक कोड (कृपया घरेलू प्रश्नावली में परिवार कोड देखें)	
2.	लिंग (पुरुष- 1, महिला-2)	
3.	क्या आप कृषि के संबंध में प्राथमिक निर्णय कर्ता हैं (संयुक्त निर्णय कर्ता की दशा में उन्हें प्राथमिक निर्णय कर्ता माने) (हाँ- 1, नहीं- 0)	
4.	सरकारी कृषि प्रसार एजेंटों के साथ संपर्कों की संख्या	
5.	गैर सरकारी या समूह आधारित कृषि प्रसार एजेंटों के साथ संपर्कों की संख्या	

भाग 2. सामाजिक पूंजी और नेटवर्किंग

1.	आप कितने समय से गांव में रह रहे हैं ? (वर्ष)	
2.	गांव में रिश्तेदारों की संख्या ?	
3.	गांव में दोस्तों की संख्या (संबंधी नहीं) ?	
4.	क्या आप किसी औपचारिक और अनौपचारिक संस्था के पिछले 3 वर्षों में सदस्य रहे हैं? (हाँ- 1, नहीं- 0)	
5.	क्या आप किसी समूह के सदस्य हैं? (हाँ- 1, नहीं- 0)	
यदि "हाँ" तो कृपया निम्नलिखित प्रश्न पूछें और यदि "नहीं" तो अगले सत्र में जायें।		
6.	आप कितने साल से जुड़े हैं (वर्ष में)	
7.	क्या आप राजीव गांधी महिला विकास परियोजना (आर0जी0एम0वी0पी0) स्वयं सहायता समूह के सदस्य हैं? (हाँ- 1, नहीं- 0)	
8.	समूह में पद : (अध्यक्ष-1, सचिव-2, कोषाध्यक्ष-3, सदस्य-4, अन्य-99)	
9.	क्या आपने स्वयं सहायता समूह से बीज प्राप्त किया है? (हाँ- 1, नहीं- 0)	

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

कोड- 1	कोड- 2	कोड- 3	कोड- 4	कोड- 5	कोड- 6	कोड- 7
1- सरकारी प्रसार	1- बीज उपलब्ध नहीं	13- विपणन नहीं	1- समूह, क्लब / कोपरेटिव	1- उपहार / मफत		
2- कृषक कारपोरेशन/यूनियन	2- बीज खरीदने हेतु नकद का अभाव	14- हरी अवस्था में चोरी	2- अन्य कृषक	2- बीज उधार लिया गया		
3- स्वयं सहायता समूह	3- ज्ञान का अभाव	15- नील गाय या दूसरे पशु	3- बीज विक्रेता	3- नकद खरीदा गया		
4- गैर सरकारी संगठन	4- पर्याप्त खाद का अभाव	16- पर्याप्त भूमि का अभाव	4- स्थानीय बीज उत्पादक	4- वस्तु के रूप में भुगतान		
5- शोध केन्द्र (परीक्षण/प्रदर्शन/खेत दिवस)	5- पशुओं का चारा अत्यधिक	17- उच्च कौशल की आवश्यकता	6- भू-स्वामी	5- दूसरे बीज से बदला गया		
6- बीज/अनाज भण्डारक	6- रोगों/कीटों हेतु अति संवेदनशील	18- घटिया भूसा कवर	7- गैर सरकारी संस्थान/ सरकार द्वारा मुफ्त प्रदान की गयी	6- सब्सिडी या नकद		
7- अन्य कृषक संबंधी	7- सूखा हेतु अति संवेदनशील	19- रहने के लिए संवेदनशील	8- सरकारी सब्सिडी कार्यक्रम	99- अन्य (उल्लेख करें)		
8- अन्य कृषक/पड़ोसी	8- कृषि जलवायु के लिए उपयुक्त नहीं	99- अन्य (उल्लेख करें)	99- अन्य (उल्लेख करें)	777- ज्ञात नहीं		
9- रेडियो/समाचार/टेलीविजन	9- खराब स्वाद	777- ज्ञात नहीं	777- ज्ञात नहीं	888- कोई जवाब नहीं		
99- अन्य (उल्लेख करें)	10- अनाज का रंग वांछनीय नहीं	888- कोई जवाब नहीं	888- कोई जवाब नहीं			
777- ज्ञात नहीं	11- कम उपज वाली प्रजाति					
888- कोई जवाब नहीं	12- अनाज का कम मूल्य					

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 4. पारिवारिक निर्णय निर्माता के रूप में भूमिका

1. निम्न विषयों पर घर में कौन निर्णय लेता है? (एकमात्र या मुख्य निर्णय निर्माता) यदि विषयवस्तु परिवार के लिए अप्रासंगिक है तो 0 लिखिये।

	विषयवस्तु	क्या आप विषयों पर निर्णय लेते हैं ? हाँ, एकमात्र – 1 हाँ, संयुक्त रूप से (पति/पत्नी)– 2 अन्य – 3 नहीं– 0	आप किस स्तर तक निर्णय निर्माण में भागीदारी करते हैं (यदि आप चाहें तो) नहीं – 1 नहीं कर सकते है। न्यून – 2 कुछ मामले में कर सकते है। मध्यम – 3 ज्यादा मामले में कर सकते है। उच्च – 4 अधिकतर मामलों में कर सकते है।
1	खाद्यान्न फसलों/प्रजाति के बिजाई/पौध रोपण/ कटाई/प्रजाति		
2	नगदी फसलों/प्रजातियों के बीज के रोपण/कटाई		
3	बीज हेतु प्रजातियों के बीज के रोपण/कटाई		
4	पशु रखने, क्रय करने एवं बेचने		
5	भूमि एवं अन्य सम्पत्ति के क्रय/विक्रय में		
6	धन उधार लेने व देने		
7	बच्चों की शिक्षा एवं विवाह		
8	संस्थानों एवं अन्य समूहों में भागीदारी		
9	खाद्यान्न फसल बेचने से प्राप्त धन के प्रबंध में		
10	नकदी फसल बेचने से प्राप्त धन के प्रबंध में		
11	बीज फसल बेचने से प्राप्त धन के प्रबंध में		
12	परिवार द्वारा गैर-कृषि कार्यों से अर्जित धन का प्रयोग धन के प्रबंध में		
13	परिवार के पुरुष सदस्य द्वारा अर्जित धन का प्रयोग धन के प्रबंध में		
14	परिवार की स्त्री सदस्य द्वारा अर्जित धन का प्रयोग धन के प्रबंध में		
15	गाँव से बाहर जाने के लिये		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 5. उत्पादक पूंजी तक पहुँच

क्र. सं.	उत्पादक पूंजी	क्या आपकी अपनी है (...) हाँ, एकमात्र – 1 हाँ, संयुक्त रूप से – 2 अन्य – 3 नहीं – 0	क्या आप इसके प्रयोग का निर्णय लेते हो हाँ, एकमात्र – 1 हाँ, संयुक्त रूप से – 2 नहीं – 3, संबद्ध नहीं – 0
1	कृषि भूमि		
2	बड़े पशुधन (गांय, भैंस)		
3	छोटे पशुधन (बकरी, भेड़, सुअर)		
4	मुर्गीपालन (चूजे, मुर्गी, बत्तख)		
5	मछली तालाब / उपकरण		
6	कृषि के उपकरण (गैर मशीनीकृत, बेलचा, हसिया)		
7	कृषि के उपकरण (मशीनीकृत, ट्रैक्टर, टिलर)		
8	गैर कृषि व्यवसाय उपकरण (सिलाई मशीन, सौर ऊर्जा, दरांती)		
9	घर या अन्य ढाँचा		
10	बड़े टिकाऊ उपभोक्ता (फ्रिज, टेलीविजन)		
11	छोटे टिकाऊ उपभोक्ता (फ्रिज, टेलीविजन)		
12	मोबाइल		
13	बिना खेती वाली जमीन		
14	वाहन (साइकिल, मोटर साइकिल)		

भाग 6. आर्थिक समावेश

- क्या आपके परिवार के किसी सदस्य (या पूरे परिवार) ने पिछले 12 महीने में कोई ऋण लिया है या उसके लिए आवेदन किया है ? (हां- 1, नहीं-0)
- परिवार (घरेलू) ऋण की मांग एवं पिछले 12 वर्षों में इसके स्रोत

ऋण का स्रोत	क्या आपका परिवार या कोई सदस्य ने किसी स्रोत से ऋण हेतु सम्पर्क किया है (हां- 1, नहीं-0)	यदि स्तम्भ 1 में हाँ है तो क्या उसने वह ऋण प्राप्त किया (हां- 1, नहीं-0)	उधार लेने का निर्णय किसने किया पारिवारिक कोड (देखें 5.1)	इसके उपभोग का निर्णय किसने लिया पारिवारिक कोड (देखें 5.1)
	1	2	3	4
1. स्वयं सहायता समूह (कृषि कार्य हेतु)				
2. औपचारिक ऋणदाता (बैंक / सोसाइटी आदि)				
3. अनौपचारिक ऋणदाता (गांव का मालगुजार, बनिया, दुकानदार आदि)				
4. मित्र तथा संबंधी				
5. औपचारिक समूह				
6. अन्य (उल्लेख करें)				

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 7. चौबिस घंटे का समय आवंटन

एक सामान्य दिन में आप कृषि/व्यवसाय संबंधी कार्यों के लिए कितने घण्टे समय देते हैं?

एक सामान्य दिन में आप कितने घण्टे समय अव्यवसायिक कार्यों में लगाते हैं?

भाग 8: सम्मिलित होने की इच्छा & भुगतान करने की इच्छा

एक सामान्य दिन में आप कृषि/व्यवसाय संबंधी कार्यों के लिए कितने घण्टे समय देते हैं?

एक सामान्य दिन में आप कितने घण्टे समय अव्यवसायिक कार्यों में लगाते हैं?

परिदृश्य

परिचय: कृषि उत्पादन में अच्छे गुणवत्ता वाले बीजों तक पहुंच और समय पर उनकी उपलब्धता सबसे बड़ी चुनौती है। राजीव गांधी महिला विकास परियोजना के अन्तर्गत स्वयं सहायता समूह हेतु अच्छी गुणवत्ता वाले आधारीय महिला संगठन (विश्वविद्यालयों से खरीद कर देते हैं। यदि आप स्वयं सहायता समूह के सदस्य बनेंगे तो आप बीज उत्पादन का अवसर पा सकते हैं। राजीव गांधी महिला विकास परियोजना आप को बीज उत्पादन पर प्रशिक्षण देगी।

नमांकन और भुगतान: बीज उत्पादक होने के लिए आपके पास समतल भूमि होनी चाहिए तथा अच्छे सिंचाई स्रोत के साथ-साथ भूमि उपजाऊ होनी चाहिए। स्वयं सहायता समूह के सदस्य बनने के बाद आपको बीज खरीदने की राशि में योगदान करना पड़ सकता है। आपको बीज उत्पादन के लिए स्वयं के संसाधनों का उपयोग करना होगा। यदि आप बीज उत्पादन के लिए 1 किग्रा. बीज प्राप्त कर रहे हैं तो आपको स्वयं सहायता समूह को 'ग' किग्रा. बीज का भुगतान करना पड़ेगा। आप बचे बीज का स्वयं उपयोग कर सकते हैं। कृपया बीज उत्पादकता व उत्पादन मूल्य का लेखा जोखा रखें।

उदाहरण: यदि गत्र 5ए तो आपको प्रत्येक 1 किग्रा बीज प्राप्ति पर 5 किग्रा बीज का भुगतान करना होगा।

सम्मिलित होने की इच्छा

1. उपरोक्त परिदृश्य के आधार पर क्या आप बीज स्वयं सहायता समूह में शामिल होना चाहते हैं? (हाँ-1, नहीं -0.).....
2. यदि हाँ, तो आप क्यों शामिल होना चाहते हैं.....
3. यदि नहीं, तो क्यों नहीं शामिल होना चाहते हैं?.....

यदि प्रश्न 2 का उत्तर 'हाँ' है तो भुगतान करने की इच्छा पूछें-

भुगतान करने की इच्छा

'ग' की मात्रा को बिना सोचे समझे (1-10 बिट) चुने। 1-10 तक चिट बनाये, और बिना सोचे समझे एक चिट चुने।

1. परची से सर्वप्रथम चुना गया 'ग'.....

1	क्या आप उपलब्ध करायी गयी बीज मात्रा का 'ग' गुना देने को तैयार है (प्रश्न -1 उत्तर) (हाँ-1, नहीं -0.)		यदि नहीं तो प्रश्न 3 पर जाये ६ यदि हाँ तो प्रश्न 2 पर जाये
2	क्या आप उपलब्ध करायी गयी बीज मात्रा का ;ग1द्व गुना देने को तैयार है? (हाँ-1, नहीं -0.)		यदि हाँ तो प्रश्न 4 पर जाये
3	यदि प्रश्न 1 का उत्तर नहीं है तो क्या आप ग.1 गुना बीज देने को तैयार है? (हाँ-1, नहीं -0.)		यदि नहीं ६ हाँ तो प्रश्न 2 पर जाये
4	आप कितने गुना बीज देने को तैयार है?		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

उत्तर प्रदेश में महिला स्वयं सहायता समूह द्वारा समुदाय आधारित बीज कार्यक्रम का सामाजिक-आर्थिक मूल्यांकन

व्यक्तिगत प्रश्नावली. 2 एक ही है तो सदस्य प्राथमिक निर्णय लेने वाला के पति या पत्नी

वर्तमान प्रश्नावली परिवार के व्यक्तिगत सदस्यों के लिए है। यह व्यक्तिगत सदस्य प्राथमिक निर्णय लेने वाला और दूसरा स्वयं सहायता समूह के सदस्य/उसके/उसकी पति या पत्नी है।

संयुक्त निर्णय लेने के मामले में कृपया दोनों के विचारों को अनुग्रहित करें। यदि प्राथमिक निर्णय निर्माता और स्वयं सहायता समूह का सदस्य एक ही है तो सदस्य के पति अथवा पत्नी का साक्षात्कार लेना है।

परिवार में स्वयं सहायता समूह का सदस्य न होने की दशा में कृपया प्राथमिक निर्णय निर्माता के पति अथवा पत्नी का साक्षात्कार लें।

कृपया सुनिश्चित करें कि

1. आपने सभी प्रश्न पूछ लिये हैं।
2. परिवार के सभी सदस्यों की सूची तैयार कर ली है।
3. आपने प्राथमिक निर्णय निर्माता/स0सहा0समूह सदस्य/उसकी/उसके पति या पत्नी की पहचान कर ली है तथा प्रश्नावली को घरेलू सर्वेक्षण से व्यक्ति से भरवाने का प्रबन्ध किया है।

भाग 0. साक्षात्कार पृष्ठभूमि (उचित पर ✓ करें)

- 1) साक्षात्कार कैसे लिया गया
 4. केवल प्रतिवादी (उत्तर देने वाला)
 5. प्राथमिक निर्णय निर्माता/स0सहा0समूह सदस्य/उसकी/उसके पति या पत्नी के साथ
 6. परिवार के अन्य सदस्य

भाग 1. व्यक्तिगत सूचना

1.	उत्तर देने वाले का पारिवारिक कोड (कृपया घरेलू प्रश्नावली में परिवार कोड देखें)	
2.	लिंग (पुरुष- 1, महिला-2)	
3.	क्या आप कृषि के संबंध में प्राथमिक निर्णय कर्ता हैं (संयुक्त निर्णय कर्ता की दशा में उन्हें प्राथमिक निर्णय कर्ता माने) (हाँ- 1, नहीं- 0)	
4.	सरकारी कृषि प्रसार एजेन्टों के साथ संपर्कों की संख्या	
5.	गैर सरकारी या समूह आधारित कृषि प्रसार एजेन्टों के साथ संपर्कों की संख्या	

भाग 2. सामाजिक पूंजी और नेटवर्किंग

1.	आप कितने समय से गांव में रह रहे हैं ? (वर्ष)	
2.	गांव में रिश्तेदारों की संख्या ?	
3.	गांव में दोस्तों की संख्या (संबंधी नहीं) ?	
4.	क्या आप किसी औपचारिक और अनौपचारिक संस्था के पिछले 3 वर्षों में सदस्य रहे हैं? (हाँ- 1, नहीं- 0)	
5.	क्या आप किसी समूह के सदस्य हैं? (हाँ- 1, नहीं- 0)	
यदि "हाँ" तो कृपया निम्नलिखित प्रश्न पूछें और यदि "नहीं" तो अगले सत्र में जायें।		
6.	आप कितने साल से जुड़े हैं (वर्ष में)	
7.	क्या आप राजीव गांधी महिला विकास परियोजना (आर0जी0एम0वी0पी0) स्वयं सहायता समूह के सदस्य हैं? (हाँ- 1, नहीं- 0)	
8.	समूह में पद : (अध्यक्ष-1, सचिव-2, कोषाध्यक्ष-3, सदस्य-4, अन्य-99)	
9.	क्या आपने स्वयं सहायता समूह से बीज प्राप्त किया है? (हाँ- 1, नहीं- 0)	

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 3. उन्नत फसल प्रजाति का ज्ञान एवं अंगीकरण

खण्ड- अ. धान एवं गेहूँ प्रजाति का ज्ञान, जानकारी के स्रोत एवं बीज, अंगीकरण तथा अंगीकरण न करना

	कृपया अधिकतम धान गेहूँ की जिनके बारे में जानते हो, सुना हो, ऐसी 5 उन्नत किस्मों के नाम दें?	फसल		किस्म की सूचना का मुख्य स्रोत कोड- 1	कभी बोया गया है हां- 1 नहीं-0	यदि कालम 4 में नहीं तो किस कारण से कृपया मुख्य कारण बताएं, कोड- 8
		धान- 1 गेहूँ- 2	वर्ष जब से किस्म पता है या सुना है वर्ष			
	1	2	3	4	5	6
1						
2						
3						
4						
5						
6						
7						
8						
9						
10						

कोड- 1		कोड- 8	
1- सरकारी प्रसार	1- बीज उपलब्ध नहीं	13- विपणन नहीं	
2- कृषक कारपोरेशन/यूनियन	2- बीज खरीदने हेतु नकद का अभाव	14- हरी अवस्था में चोरी	
3- स्वयं सहायता समूह	3- ज्ञान का अभाव	15- नील गाय या दूसरे पशु	
4- गैर सरकारी संगठन	4- पर्याप्त खाद का अभाव	16- पर्याप्त भूमि का अभाव	
5- शोध केन्द्र (परीक्षण/प्रदर्शन/खेत दिवस)	5- पशुओं का चारा अत्यधिक	17- उच्च कौशल की आवश्यकता	
6- बीज/अनाज भण्डारक	6- रोगों/कीटों हेतु अति संवेदनशील	18- घटिया भूसा कवर	
7- अन्य कृषक संबंधी	7- सूखा हेतु अति संवेदनशील	19- रहने के लिए संवेदनशील	
8- अन्य कृषक/पड़ोसी	8- कृषि जलवायु के लिए उपयुक्त नहीं	99- अन्य (उल्लेख करें)	
9- रेडियो/समाचार/टेलीविजन	9- खराब स्वाद	777- ज्ञात नहीं	
99- अन्य (उल्लेख करें)	10- अनाज का रंग वांछनीय नहीं	888- कोई जवाब नहीं	
777- ज्ञात नहीं	11- कम उपज वाली प्रजाति		
888- कोई जवाब नहीं	12- अनाज का कम मूल्य		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 4. पारिवारिक निर्णय निर्माता के रूप में भूमिका

1. निम्न विषयों पर घर में कौन निर्णय लेता है? (एकमात्र या मुख्य निर्णय निर्माता) यदि विषयवस्तु परिवार के लिए अप्रासंगिक है तो लिखिये।

	विषयवस्तु	क्या आप विषयों पर निर्णय लेते हैं ? हाँ, एकमात्र – 1 हाँ, संयुक्त रूप से (पति/पत्नी)– 2 अन्य – 3 नहीं– 0	आप किस स्तर तक निर्णय निर्माण में भागीदारी करते हैं (यदि आप चाहें तो) नहीं – 1 नहीं कर सकते हैं। न्यून – 2 कुछ मामले में कर सकते हैं। मध्यम – 3 ज्यादा मामले में कर सकते हैं। उच्च – 4 अधिकतर मामलों में कर सकते हैं।
1	खाद्यान्न फसलों/प्रजाति के बिजाई/पौध रोपण/कटाई/प्रजाति		
2	नगदी फसलों/प्रजातियों के बीज के रोपण/कटाई		
3	बीज हेतु प्रजातियों के बीज के रोपण/कटाई		
4	पशु रखने, कय करने एवं बेचने		
5	भूमि एवं अन्य सम्पत्ति के क्रय/विक्रय में		
6	धन उधार लेने व देने		
7	बच्चों की शिक्षा एवं विवाह		
8	संस्थानों एवं अन्य समूहों में भागीदारी		
9	खाद्यान्न फसल बेचने से प्राप्त धन के प्रबंध में		
10	नकदी फसल बेचने से प्राप्त धन के प्रबंध में		
11	बीज फसल बेचने से प्राप्त धन के प्रबंध में		
12	परिवार द्वारा गैर-कृषि कार्यों से अर्जित धन का प्रयोग धन के प्रबंध में		
13	परिवार के पुरुष सदस्य द्वारा अर्जित धन का प्रयोग धन के प्रबंध में		
14	परिवार की स्त्री सदस्य द्वारा अर्जित धन का प्रयोग धन के प्रबंध में		
15	गाँव से बाहर जाने के लिये		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 5. उत्पादक पूंजी तक पहुँच

क. सं.	उत्पादक पूंजी	क्या आपकी अपनी है (...) हाँ, एकमात्र – 1 हाँ, संयुक्त रूप से – 2 अन्य – 3 नहीं– 0	क्या आप इसके प्रयोग का निर्णय लेते हो हाँ, एकमात्र – 1 हाँ, संयुक्त रूप से – 2 अन्य – 3 नहीं– 0
1	कृषि भूमि		
2	बड़े पशुधन (गांय, भैंस)		
3	छोटे पशुधन (बकरी, भेड़, सुअर)		
4	मुर्गीपालन (चूजे, मुर्गी, बत्तख)		
5	मछली तालाब/ उपकरण		
6	कृषि के उपकरण (गैर मशीनीकृत, बेलचा, हसिया)		
7	कृषि के उपकरण (मशीनीकृत, ट्रैक्टर, टिलर)		
8	गैर कृषि व्यवसाय उपकरण (सिलाई मशीन, सौर ऊर्जा, दरांती)		
9	घर या अन्य ढाँचा		
10	बड़े टिकाऊ उपभोक्ता (फ्रिज, टेलीविजन)		
11	छोटे टिकाऊ उपभोक्ता (फ्रिज, टेलीविजन)		
12	मोबाइल		
13	बिना खेती वाली जमीन		
14	वाहन (साइकिल, मोटर साइकिल)		

भाग 6. आर्थिक समावेश

1. क्या आपके परिवार के किसी सदस्य (या पूरे परिवार) ने पिछले 12 महीने में कोई ऋण लिया है या उसके लिए आवेदन किया है ? (हां– 1, नहीं–0)

(यदि हाँ तो निम्न तालिका के अनुसार प्रश्न पूछें, यदि नहीं तो अगले भाग में जायें)

2. परिवार (घरेलू) ऋण की मांग एवं पिछले 12 वर्षों में इसके स्रोत

ऋण का स्रोत	क्या आपका परिवार या कोई सदस्य ने किसी स्रोत से ऋण हेतु सम्पर्क किया है (हां– 1, नहीं–0)	यदि स्तम्भ 1 में हाँ है तो क्या उसने वह ऋण प्राप्त किया (हां– 1, नहीं–0)	उधार लेने का निर्णय किसने किया पारिवारिक कोड (देखें 5.1)	इसके उपभोग का निर्णय किसने लिया पारिवारिक कोड (देखें 5.1)
	1	2	3	4
1. स्वयं सहायता समूह (कृषि कार्य हेतु)				
2. औपचारिक ऋणदाता (बैंक/ सोसाईटी आदि)				
3. अनौपचारिक ऋणदाता (गांव का मालगुजार, बनिया, दुकानदार आदि)				
4. मित्र तथा संबंधी				
5. औपचारिक समूह				
6. अन्य (उल्लेख करें)				

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 7. चौबिस घंटे का समय आवंटन

1. एक सामान्य दिन में आप कृषि/व्यवसाय संबंधी कार्यों के लिए कितने घण्टे समय देते हैं?
2. एक सामान्य दिन में आप कितने घण्टे समय अव्यवसायिक कार्यों में लगाते हैं?

भाग 8:सम्मिलित होने की इच्छा & भुगतान करने की इच्छा**परिदृश्य**

परिचय: कृषि उत्पादन में अच्छे गुणवत्ता वाले बीजों तक पहुंच और समय पर उनकी उपलब्धता सबसे बड़ी चुनौती है। राजीव गांधी महिला विकास परियोजना के अन्तर्गत स्वयं सहायता समूह हेतु अच्छी गुणवत्ता वाले आधारीय महिला संगठन (विश्वविद्यालयों से खरीद कर देते हैं)। यदि आप स्वयं सहायता समूह के सदस्य बनेंगे तो आप बीज उत्पादन का अवसर पा सकते हैं। राजीव गांधी महिला विकास परियोजना आप को बीज उत्पादन पर प्रशिक्षण देगी।

नमांकन और भुगतान: बीज उत्पादक होने के लिए आपके पास समतल भूमि होनी चाहिए तथा अच्छे सिंचाई स्रोत के साथ-साथ भूमि उपजाऊ होनी चाहिए। स्वयं सहायता समूह के सदस्य बनने के बाद आपको बीज खरीदने की राशि में योगदान करना पड़ सकता है। आपको बीज उत्पादन के लिए स्वयं के संसाधनों का उपयोग करना होगा। यदि आप बीज उत्पादन के लिए 1 किग्रा. बीज प्राप्त कर रहे हैं तो आपको स्वयं सहायता समूह को 'ग' किग्रा. बीज का भुगतान करना पड़ेगा। आप बचे बीज का स्वयं उपयोग कर सकते हैं। कृपया बीज उत्पादकता व उत्पादन मूल्य का लेखा जोखा रखें।

उदाहरण: यदि गत्र 5ए तो आपको प्रत्येक 1 किग्रा बीज प्राप्ति पर 5 किग्रा बीज का भुगतान करना होगा।

सम्मिलित होने की इच्छा

4. उपरोक्त परिदृश्य के आधार पर क्या आप बीज स्वयं सहायता समूह में शामिल होना चाहते हैं? (हाँ-1, नहीं -0.).....
5. यदि हाँ, तो आप क्यों शामिल होना चाहते हैं.....
6. यदि नहीं, तो क्यों नहीं शामिल होना चाहते हैं?

यदि प्रश्न 2 का उत्तर 'हाँ' है तो भुगतान करने की इच्छा पूछें—

भुगतान करने की इच्छा

'ग' की मात्रा को बिना सोचे समझे (1-10 बिट) चुने। 1-10 तक चिट बनाये, और बिना सोचे समझे एक चिट चुने।

10. परची से सर्वप्रथम चुना गया 'ग'.....

1	क्या आप उपलब्ध करायी गयी बीज मात्रा का 'ग' गुना देने को तैयार है (प्रश्न -1 उत्तर) (हाँ-1, नहीं -0.)		यदि नहीं तो प्रश्न 3 पर जाये ६ यदि हाँ तो प्रश्न 2 पर जाये
2	क्या आप उपलब्ध करायी गयी बीज मात्रा का ;ग1द्ध गुना देने को तैयार है? (हाँ-1, नहीं -0.)		यदि हाँ तो प्रश्न 4 पर जाये
3	यदि प्रश्न 1 का उत्तर नहीं है तो क्या आप ग.1 गुना बीज देने को तैयार है? (हाँ-1, नहीं -0.)		यदि नहीं ६ हाँ तो प्रश्न 2 पर जाये
4	आप कितने गुना बीज देने को तैयार है?		

जिला:

ब्लॉक:

ग्राम:

पारिवारिक पहचान पत्र:

भाग 8 सर्वेक्षण समाप्त करने का समय (24:00 घंटे प्रारूप)**उन्नत किस्मों के नाम**

गेहूं की प्रजातियाँ		धान की प्रजातियाँ	
1	DBW-17	1	DRR 42
2	HD-2967	2	DRR 44
3	HUW-234 (Malwiy)	3	Sahbhagi
4	K-7903 (Halna)	4	Bina 11
			Sambha Mansoori Sub 1
5	PBW-343	5	
6	PBW-502	6	Swarna Sub 1
7	PBW-550	7	CSR 43
		8	CSR 36

टिप्पणी

आपके दृष्टिकोण के प्रति उन्होंने कैसे उत्तर दिये अन्य चुनौतिया?

‘Socio-economic assessment of Community Based Seed Producers (CBSP) groups by Women SHGs in Uttar Pradesh’

Household Questionnaire

Consent Form

*To the Enumerator: Convey the complete information below to the respondent. Then ask the respondent if he/she has any questions, and answer these questions accordingly. If the respondent agrees to participate in the survey, please document their **verbal informed consent** prior to administering the questionnaire.*

Namaste! I work for an organization called RGMVP. We are a right based organisation working in Uttar Pradesh (UP). Our works mainly focus on alleviate poverty through collective action of women by Self Help Groups (SHG). The SHG platform is used various development interventions such as maternal and child health, nutrition, and sanitation. Our organization works on poverty reduction, women’s empowerment and rural development. You are being asked to participate in a research study. We would like to give a brief introduction about our work before we begin. Please listen to the information and ask questions about anything you do not understand before deciding whether or not to participate.

Why is this study being done?

We are implementing a three year BMGF funded project on Strengthening Informal Seed Systems leveraging the existing SHGs in 5 districts of UP. In this project we are doing a small study to assess the socio-economic impact of integrating seed production on SHG. We will be asking you some questions about farming such as production, inputs, adoption of new varieties, access to agricultural information, decision making and technology and also about other non-farm household information. You have been selected to participate because you are living in a target area. The results of this survey will contribute to our understanding how the intervention is useful for strengthening the informal seed systems. The decision on your involvement will be made by you and only you.

What happens if you participate in this study?

If you participate in this study, you will be asked questions on your household’s agricultural situation. This will take 1 hours of your time. You will complete your participation in one session. There would a separate questionnaire for household, primary decision maker in agriculture and spouse/women SHG member.

Risks or discomforts

You or your household will not be exposed to any risks by participating in this study. You may possibly feel discomfort in discussing the income, savings, and food consumption of your household. A trained enumerator will help you to discuss any concerns you may have and to answer your queries.

Confidentiality

All information about your household will be **kept strictly confidential**. You or your household will not be personally identified in any study report or publications. Data may be shared with other RGVMP researchers. However, we are committed to ensuring absolute confidentiality.

Participation

Participation in this study is voluntary. You have the right to refuse to participate in this study. If you choose to participate, you have the right to stop at any time and to not answer certain questions in the questionnaire. If you refuse or stop your participation at any time, there will be no consequences.

Questions

You may ask any questions you have about the study. If you have questions later, they can be directed to Ms. Pooja Trivedi, Project Manager, RGMVP on phone at

Are you willing to give answers to the questions to be asked in this survey?

Yes:

No:

Please tick against the options above

Part 0. Interviewer Background

1.	Enumerators Name	
2.	Date of survey	
3.	Name of District Code:	
4.	Name of Block Code:	
5.	Name of the Village	
6.	Survey Starting time (24:00 hr format)	
7.	Survey End time (24:00 hr format)	
8.	Name of Respondent	
9.	Contact No.(Voluntary) of respondent	
10.	Household location (GPS data)	
	a. Latitude (N)	
	b. Longitude(E)	
11.	Religion of Household 1= Hindu, 2= Muslim, 3= Christian, 4= others (Specify).....	
12.	Caste/ Social Class Code: 1=General, 2=OBC, 3=ST, 4= SC Please do not ask the question directly	
13.	Is the household a member of SHG group of RGMVP? (Yes=1, No=0)	
14.	Have your household procured seed for seed production from SHG group? (Yes=1, No=0) If No ask Q.15	
15.	Have the household brought seed from SHG group? (Yes=1, No=0)	
16.	Remarks How they responded to your approach? Other challenges?	

Data Entry of Questionnaire

Date of Data Entry: Day _____ Month: _____
 Operator (Name): _____ Remarks: _____

Review by Supervisor

Date of Review by Supervisor: Day: _____ Month: _____ Year: _____
 Supervisor (Name): _____ Remarks: _____

Part 1. Housing and Village Characteristics

1.	Are you living in a nuclear or joint family?	(Nuclear = 1, Joint = 2)	
2.	What type of house do you have?	Kachha=1, semi kachha=3 Pucca=3.. 777 = Don't know 888 = No response	
3.	Type of road to the main market (outside the village) (here the type chosen should be the one that makes up the major share of the road/ way to main market)	1 = Concrete 2 = Black tar 3 = Gravel 4 = Mud 99 = Other (specify) 777 = Don't know 888 = No response	
4.	Main source of drinking water?	1= Piped water supply 2 = Covered well/ hand pump 3 = Open well 99 = Other (specify) 777 = Don't know 888 = No response	

5. Distance to [...] from residence

		Km	Time to reach (one way, total time required) (minutes)
	Item	1	2
5.1	Village market		
5.2	Nearest main market		
5.3	Nearest source of inputs (seeds, fertilizers, herbicides, pesticides)		
5.4	Nearest farmer cooperative		
5.5	Nearest SHG seed producer group (CBSP)		
5.6	Nearest District Seed dealer		
5.7	Nearest agricultural extension office		

Part 2. Household Demographic Characteristics

1.	Number of years household head is involved in farming	
2.	Number of years spouse is involved in farming	
3.	Who is the primary decision maker regarding agriculture in the household (Family code from the table below)	

6. Current family composition and occupation

[Include family and non-family members that live permanently in the household and took food from the same kitchen during the reference period (2016-17)]

Family Code	Relation to hh head (start with respondent) Code A	Sex Male-1 Female-2	Marital status Code B	Age in years	Education Code C	Occupation Code D		Time contribution to farm (% of total work)	Migrant* Yes=1 No=0
						Main	Secondary		
1	2	3	4	5	7	8	9	10	11
01									
02									
03									
04									
05									
06									
07									
08									
09									
10									
11									
12									
13									
14									
15									
16									

Code A: 1-Head himself/herself, 2-Wife or Husband, 3-Son/Daughter, 4- Grandchild, 5- Father/Mother, 6-Sister/Brother, 7- Niece or Nephew, 8-Son/Daughter in law, 9-Brother/Sister in law, 10-Father/Mother in law, 11-Other family relatives, 12-Servant, 13-Tenants, 14- Other person not related, 99- others (specify)...

Code B: 1-Married living with spouse, 2-Married but spouse away, 3-Divorced, 4-Widow, 5-Never married, 99-Other (specify)...

Code D: 1.No education/illiterate 2. No education, semi-literate 3. Primary (Grade 1-5) 4. Middle (Grade 6-7) 5. Secondary (Grade 8-10) 6. Higher Secondary (Grade 11-12) 7. Graduate 8. Post graduate 9. Vocational education 10. Does not go to school (in case of children up to 15 years)

Code E: 1-Farming 2. Livestock rearing , 3. Fisheries/Aquaculture, 3- Salaried employment, 4-Self employed off farm, 5-Casual labourer on-farm, 6-Casual labour off farm, 7-School/college child, 8-Non-school child, 9- Involved in household chores,10, No secondary work 99-Other(specify).

**household member lived outside this location for more than 2 continuous months over the past 5 years*

Part 3. Household Assets

1. Production equipment and major household equipment - How many of the following assets does your household own?

A Agricultural assets

Asset	Number of assets (if "No" put 0)	What is the approximate current value for one "piece" of this asset? (NRs)
	1	2
1. Cow/ Buffalo cart		
2. Push cart		
3. Tractor		
4. Trailers		
5. Bullock Plough		
6. Trolley		
7. Thresher		
8. Tractor		
9. Hand water pump		
10. Motorized water pump (diesel)		
11. Knapsack sprayer		
12. Spade or shovel		
13. Stone grain mill		
14. Motorized grain mill		
15. Generator/ Diesel engine		
16. Grainstorage bin		
17. Agricultural land (Acre)		
18. Other agricultural machinery (specify)		

Non-agricultural assets

1. Radio		
2. TV		
3. Telephone		
4. Cell phone		
5. Gas stove		
6. Kerosene stove		
7. Bicycle		
8. Motorbike		
9. Car or truck		
10. Non-Agricultural land		
99. Other (specify).....		

1. Livestock Holding

Livestock type	Number of livestock at end of 2016 (enter 0 if there is no livestock of the respective type)
	1
Cattle	
1. Milking cows	
2. Non milking cows (mature)	
• Cow calves	
4. Trained buffalos for ploughing	
5. Milking buffalos	
6. Female non-milking buffalos	
7. Oxen for ploughing	
8. Buffalo calves	
9. Yaks/ Naks	
Goats/ Sheep	
10. Mature milking goats/ sheep	
11. Other mature goats/ sheep	
12. Young goats/ sheep	
Other livestock	
13. Mature chicken	
14. Ducks/ other poultry	
15. Bee hives	
16. Pigs mature	
17. Pigs, young	
99. Other.....	

Part 4. Farm characteristics

		Area	Unit
1.	Total land owned by household		
2.	Total cultivated land		
3.	Total leased in land		
4.	Total leased out land		
5.	Fallow land		

1. Plot characteristics

In this section we will ask you to please describe all plots your HH cultivated in 2016-17. A plot is a continuous piece of land on which a unique crop or a mixture of crops is grown under a uniform, consistent crop management system. It must be continuous and should not be split by a path of more than one meter in width.

Plot ID	Area (Acre)	Cropping System Code A	Soil Type Code B	Soil Drainage Code C	Source of Irrigation Code D	Tenure Status Code E	How Acquired Code F
1	2	5	6	8	9	10	11
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							

Code A: Cropping system: **Monocropping-1, Intercropping-2, Relay cropping-3, Mixed cropping-4, 99-others**

Code B: Soil type: **Clay-1, Loam-2, Clay loam-3, Sandy loam-4, Sandy-5, Others (specify)- 99**

Code C: **Poorly drained-1, Imperfectly drained-2, Moderately well drained-3, Excessively drained-4**

Code D: Source of irrigation: **Agency managed canal-1, Community managed canal-2, Private canal-3, Natural spring-4, Rainfed-5, Water pipe-6, Others (specify)- 99**

Code E: Tenure status: **Owned by HH head-1, Owned by Spouse -2, Share-cropping-3, Fixed rent-4, Others (specify)- 99**

Code F: How acquired: **Inherited-1, Purchased-2, Others (specify)- 99**

2. Information on crop inputs and outputs

A. The following questions relate to the major (largest area) Kharif crop

The main crop grown in Kharif season _____

The plot number (please refer the plot ID in the table on plot characteristics) _____

Area of the plot _____ (Acre)

Variety of the crop grown _____

Quantity of the produce harvested (kg) _____

Quantity kept for self-consumption (kg) _____

Have you sold the crop (Yes=1, no=0) _____ (If no go to question 9)

If yes, to whom do you sell the seed

S.No.	Buyer (Codes, 1= Private local trader, 2= Mandi=2, others=99)	Quantity sold (kg)	Price (Rs/kg)
1			
2			
3			

If no, what is the price at which you are planning to sell the seed _____ (Rs/kg)

Cost of inputs

1. Seeding type (Codes 1-manual broadcast, 2-seed drill tractor operated, 3-power tiller operated seeder, 4-drum seeder, 5-rotavator, 6-turbo-seeder, 7-transplanting.					
		Qty	Unit	Price, Cost (Rupee) /Unit	Total cost (Rupee)
		1	2	3	4
2.	Pre sowing land preparation (Levelling/ ploughing etc)				
2.	Seed rate (Kg/acre)				
3.	Seed treatment (if no put "0")				
4.	FYM use (Own)				
5.	FYM use (Purchased)				
7.	Other manure				
8.	Fertilizers & growth reg.				
	a. Urea				
	b. DAP				
	c.				
	d.				
9.	Fungicides and herbicides				
	a.				
	b.				
10.	Irrigation				
11	Harvesting				

The following questions relate to the major (largest area) Rabi crop

1. The main crop grown in Rabi season _____
2. The plot number (please refer the plot ID in the table on plot characteristics) ____
3. Area of the plot _____ (Acre)
4. Variety of the crop grown _____
5. Quantity of the produce harvested _____
6. Quantity kept for self-consumption (kg) _____
7. Have you sold the crop (Yes=1, no=0) _____ (If no go to question 9)
8. If yes, to whom do you sell the seed

S.No.	Buyer (Codes, 1= Private local trader, 2= Mandi=2, others=99)	Quantity sold (kg)	Price (Rs/kg)
1			
2			
3			

9. If no, what is the price at which you are planning to sell the seed _____ (Rs/kg)

10. Cost of inputs

1.	Seeding type (Code 1-manual broadcast, 2-seed drill tractor operated, 3-power tiller operated seeder, 4-drum seeder, 5-rotavator, 6-turbo-seeder, 7-transplanting.)				
		Qty	Unit	Price, Cost (Rupee) /Unit	Total cost (Rupee)
		1	2	3	4
2.	Pre sowing land preparation (Levelling/ploughing etc)				
3.	Seed rate (Kg/LU)				
4.	Seed treatment				
5.	FYM use (Own)				
6.	FYM use (Purchased)				
8.	Other manure				
9.	Fertilizers & growth reg.				
	a. Urea				
	b. DAP				
	c.				
	d.				
10.	Fungicides and herbicides				
	a.				
	b.				
11.	Irrigation				
12.	Harvesting				

7. Information on cost of crop inputs and outputs for seed production

Seed plot (only for seed producers)

A. The following questions relate to rice seed production

1. The plot number (please refer the plot ID in the table on plot characteristics) _____
2. Area of the plot _____ (Acre)
3. Variety of the crop grown _____
4. Quantity of the produce harvested (kg) _____
5. Quantity kept for self-consumption (kg) _____
6. Have you sold any seed (Yes=1, no=0) _____ (If no go to question8)
7. If yes, to whom do you sell the seed

S.No.	Buyer Codes 1= SHG member, 2= non-SHG member 3= friends, 4= relatives, 5= VOs, 6= BOs, 99= others specify _____	Quantity sold (kg)	Price (Rs/kg)
1			
2			
3			
4			
5			

8. If no, what is the price at which you are planning to sell the seed _____ (Rs/kg)

9. Cost of inputs

1. Seeding type 1-manual broadcast, 2-seed drill tractor operated, 3-power tiller operated seeder, 4-drum seeder, 5-rotavator, 6-turbo-seeder, 7-transplanting.					
		Qty	Unit	Price, Cost (Rupee) /Unit	Total cost (Rupee)
		1	2	3	4
2.	Pre sowing land preparation (Levelling/ploughing etc)				
3.	Seed rate (Kg/LU)				
4.	Seed treatment				
5.	FYM use (Own)				
6.	FYM use (Purchased)				
7.	Other manure				
8.	Fertilizers & growth reg.				
	a. Urea				
	b. DAP				
	c.				
	d.				
9.	Fungicides and herbicides				
	a.				
	b.				
	c.				
	d.				
10.	Irrigation				
11.	Harvesting				

The following questions relate to the major (largest area) Rabi crop

- The main crop grown in Rabi season _____
- The plot number (please refer the plot ID in the table on plot characteristics) _____
- Area of the plot _____ (Acre)
- Variety of the crop grown _____
- Quantity of the produce harvested _____
- Quantity kept for self-consumption (kg) _____
- Have you sold the crop (Yes=1, no=0) _____ (If no go to question 9)
- If yes, to whom do you sell the seed

S.No.	Buyer (Codes, 1= Private local trader, 2= Mandi=2, others=99)	Quantity sold (kg)	Price (Rs/kg)
1			
2			
3			

- If no, what is the price at which you are planning to sell the seed _____ (Rs/kg)

10. Cost of inputs

1.	Seeding type (Code 1-manual broadcast, 2-seed drill tractor operated, 3-power tiller operated seeder, 4-drum seeder, 5-rotavator, 6-turbo-seeder, 7-transplanting.)				
		Qty	Unit	Price, Cost (Rupee) /Unit	Total cost (Rupee)
		1	2	3	4
2.	Pre sowing land preparation (Levelling/ploughing etc)				
3.	Seed rate (Kg/LU)				
4.	Seed treatment				
5.	FYM use (Own)				
6.	FYM use (Purchased)				
8.	Other manure				
9.	Fertilizers & growth reg.				
	a. Urea				
	b. DAP				
	c.				
	d.				
10.	Fungicides and herbicides				
	a.				
	b.				
11.	Irrigation				
12.	Harvesting				

7. Information on cost of crop inputs and outputs for seed production

Seed plot (only for seed producers)

A. The following questions relate to rice seed production

1. The plot number (please refer the plot ID in the table on plot characteristics) _____
2. Area of the plot _____ (Acre)
3. Variety of the crop grown _____
4. Quantity of the produce harvested (kg) _____
5. Quantity kept for self-consumption (kg) _____
6. Have you sold any seed (Yes=1, no=0) _____ (If no go to question8)
7. If yes, to whom do you sell the seed

S.No.	Buyer Codes 1= SHG member, 2= non-SHG member 3= friends, 4= relatives, 5= VOs, 6= BOs, 99= others specify _____	Quantity sold (kg)	Price (Rs/kg)
1			
2			
3			
4			
5			

8. If no, what is the price at which you are planning to sell the seed _____ (Rs/kg)

9. Cost of inputs

1.	Seeding type 1-manual broadcast, 2-seed drill tractor operated, 3-power tiller operated seeder, 4-drum seeder, 5-rotavator, 6-turbo-seeder, 7-transplanting.				
		Qty	Unit	Price, Cost (Rupee) /Unit	Total cost (Rupee)
		1	2	3	4
2.	Pre sowing land preparation (Levelling/ploughing etc)				
3.	Seed rate (Kg/LU)				
4.	Seed treatment				
5.	FYM use (Own)				
6.	FYM use (Purchased)				
7.	Other manure				
8.	Fertilizers & growth reg.				
	a. Urea				
	b. DAP				
	c.				
	d.				
9.	Fungicides and herbicides				
	a.				
	b.				
	c.				
	d.				
10.	Irrigation				
11.	Harvesting				

The following questions relate to wheat seed production

1. The plot number (please refer the plot ID in the table on plot characteristics) _____
2. Area of the plot _____ (Acre)
3. Variety of the crop grown _____
4. Quantity of the produce harvested _____ (kg)
5. Quantity kept for self-consumption (kg) _____
6. Have you sold any seed (Yes=1, no=0) _____ (If no go to question8)
7. If yes, to whom do you sell the seed

S.No.	Buyer Codes 1= SHG member, 2= non-SHG member 3= friends, 4= relatives, 5= others specify	Quantity sold (kg)	Price (Rs/kg)
1			
2			
3			
4			
5			

8. If no, what is the price at which you are planning to sell the seed _____ (Rs/kg)

9. Cost of inputs

1.	Seeding type 1-manual broadcast, 2-seed drill tractor operated, 3-power tiller operated seeder, 4-drum seeder, 5-rotavator, 6-turbo-seeder, 7-transplanting.				
		Qty	Unit	Price, Cost (Rupee) /Unit	Total cost (Rupee)
		1	2	3	4
2.	Pre sowing land preparation (Levelling/ploughing etc)				
3.	Seed rate (Kg/LU)				
4.	Seed treatment				
5.	FYM use (Own)				
6.	FYM use (Purchased)				
7.	Other manure				
8.	Fertilizers & growth reg.				
	a. Urea				
	b. DAP				
	c.				
	d.				
9.	Fungicides and herbicides				
	a.				
	b.				
	c.				
	d.				
10.	Irrigation				
11.	Harvesting				

Part 5. Labour cost

Labour cost for major crop production in Kharif and Rabi

Please refer to the crop in Q.6 in part 4

Operation	Kharif Crop				Rabi crop			
	Number of labour days (Labors * no of days) required in one operation				Number of labour days (Labors * no of days) required in one operation			
	Male		Female		Male		Female	
	Family members	Hired	Family members	Hired	Family members	Hired	Family members	Hired
	1	2	3	4	5	6	7	8
1. Land preparation								
2. Sowing								
3. Gap filling & Thinning								
4. Manual weeding								
5. Earthing up								
6. Irrigating								
7. Fertilizer application								
8. Pesticide application								
9. Harvesting								
10. Threshing and winnowing								
11. Drying								
12. Cleaning and Packing								

B. Labour cost for seed production
Only for seed producers

Operation	Paddy seed production				Wheat seed production			
	Number of labour days (Labors * no of days) required in one operation				Number of labour days (Labors * no of days) required in one operation			
	Male		Female		Male		Female	
	Family members	Hired	Family members	Hired	Family members	Hired	Family members	Hired
	1	2	3	4	5	6	7	8
1. Land preparation								
2. Sowing								
3. Gap filling & Thinning								
4. Manual weeding								
5. Earthing up								
6. Irrigating								
7. Fertilizer application								
8. Pesticide application								
9. Harvesting								
10. Thrashing and winnowing								
11. Drying								
12. Cleaning and Packing								

Part 6. . Access to and usefulness of extension services

Item ID	Item	Any of the household member received training None-0 Family code (see 5.1)	Main training source, (Codes A)	How useful was this training to you? (ask only for those items where training was provided) (Codes B)
		1	2	5
1	New varieties of rice/wheat			
2	Rice/wheat seed production			
3	Field pest and disease control			
4	Soil fertility management and			
5	Water management, incl. irrigation			
6	Crop rotation			
7	Minimum tillage			
8	Crop storage pests			
9	Market functions and price formation			
10	Collective action/farmer organization			
11	Livestock production			
12	Family health			
13	Sanitation			
14	Family planning			
99	Others (specify).....			

Codes A

1 = Government extension service	5 = Seed traders	9 = Private Company	13 = Radio/TV	99 = Others (specify)
2 = SHG group	6 = Relative farmers	10 = Research center	14 = Newspaper	777 = Don't know
3 = Farmer Coop or other groups	7 = NGOs	11 = VOs	15 = Mobile phone	888 = No response
4 = Neighbouring farmers	8 = Other private trader	12 = School	16 = Health post	

Codes B: Scale variable ranging from **Not useful at all = 1 to Very useful = 5** (where the respondent can choose ANY point in between)

‘Socio-economic assessment of Community Based Seed Producers (CBSP) groups by Women SHGs in Uttar Pradesh’

Individual questionnaire (Primary decision maker)

Please note the current questionnaire is for individual members of the household. One for the primary decision maker and another for the SHG member/his/her spouse.

In case of joint decision making please consider both decision makers. If the primary decision maker and SHG member are the same, then the spouse of the SHG member is to be interviewed.

In case of non-SHG member households please interview the spouse of the primary decision maker.

Please ensure that

3. You had completed the household survey
4. You have completed the family roster
5. You had identified (primary decision maker/SHG member/his/her spouse) and administering the questionnaire to the individuals from the household survey

Part 0. Interview setting (tick the appropriate)

- 3) How was the interview conducted
 1. Only the respondent
 2. With primary decision maker/SHG member/his/her spouse
 3. Other family members

Part 1. Individual Information

1.	Family code of the respondent (please refer family code in in the household questionnaire)	
2.	Sex (male=1, female=2)	
3.	Are you the primary decision maker regarding agriculture (in case of jointly please consider them as primary) (Yes=1, No=0)	
4.	Number of contacts with agricultural extension agents?	

Part 2. Social Capital and Networking

1	How long you are residing in the village? (years)	
2	Number of relatives in the village?	
3	Number of friends (non-relatives) in the village?	
4	Have you been a member of formal and informal institutions in the last 3 years? (Yes=1, No=0)	
25	Is your household a member of a SHG group? (Yes=1, No=0)	
<i>If "Yes" please ask the following questions and if "No" go to next session</i>		
2.	Are you a member of SHG group? (Yes=1, No=0)	
3.	Are you a member of RGMVP SHG group? (Yes=1, No=0)	
4.	Have you availed seed from the SHG? (Yes=1, No=0)	

Part 3. Improved Rice variety knowledge and adoption

Section A. Rice and wheat variety knowledge, sources of information and seed, adoption and dis-adoption

S. No.	Please name a maximum of 5 improved Rice and wheat varieties aware/heard of	Crop Rice-1 Wheat-2	Year variety known/heard YYYY	Main Source of Variety information, Codes A	Ever planted? Yes-1 No-0	If "No" in Column 4, Why not? Please provide the main reason, Codes B	If Yes in column 5						If No in column 13 Will plant variety in future Yes-1 No-0	If No in Column 14, why not, Please provide main reason, Codes B		
							Year first planted YYYY	Main source of seed, Codes C	Amount kg first seed, Codes D	Who made the decision to buy the seed Family code	No. of seasons variety has been planted	Planted variety in 2016, Yes-1 No-0			% Share of area planted with this variety 2016	
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2																
3																
4																
5																
6																
7																
8																
9																
10																

Codes A	Codes B	Codes C	Codes D
1 = Government extension	1 = Seed not available	13 = No market	1 = Gift/free
2 = Farmer Coop/Union	2 = Lack of cash to buy seed (credit)	14 = Theft during green stage	2 = Borrowed seed
3 = SHG	3 = Lack of knowledge	15 = Neelgai or other animal	3 = Bought with cash
4 = NGO	4 = Lack of sufficient manure	16 = Lack of enough land	4 = Payment in kind
5 = Research centre (trials/demos/field days)	5 = Stover too hard	17 = Requires high skills	5 = Exchange with other seed
6 = Seed/grain stockist	6 = Susceptible to diseases/pests	18 = Poor husk cover	6 = Subsidy and cash
7 = Another farmer relative	7 = Susceptible to drought	19 = Sensitive to lodging	7 = Advance pay from coop
8 = Another farmer/ neighbour	8 = Not suitable for the agro climate	99 = Other(specify)	99 = Other(specify)
9 = Radio/newspaper/TV	9 = Poor taste	777 = Don't know	777 = Don't know
99 = Other(specify)	10 = Grain color not desirable	888 = No response	888 = No response
777 = Don't know	11 = Low yielding variety	888 = No response	
888 = No response	12 = Low grain prices		

Part 4. Role in household decision making

Who decides about the following subjects in the house? (sole or main decision maker)

(If subject is irrelevant for the household put 0)

		Do you decide on the subjects Yes, Solely-1 Yes, Jointly (Spouse)-2 No-3	Extent to which you can participate in decision making [if you want to?] No-1 Small-2 Medium-3 High-4
1.	Planting /harvesting of food crop/variety		
2.	Planting /harvesting of cash crop/variety		
3.	Planting /harvesting of crop for seed crop/variety		
4.	Livestock keeping, buying and selling		
5.	Buying selling land and other property		
6.	Borrowing and lending money		
7.	Education and marriage of children		
8.	Participation in institutions and other groups		
9.	Money received from food crop sales		
10.	Money received from cash (eg) crop sales		
11.	Money received from sales of seed		
12.	Use of income the household in total earns from non-agricultural activities?		
13.	Use of income earned by male household members?		
14.	Use of income earned by female household members?		
15.	Participation in training		

Part 5. Access to productive capital

S.No.	Productive capital	Do you own [...] Yes, Solely-1 Yes, Jointly-2 No-3 Not relevant-0	Do you decides about the use of [...] Yes, Solely-1 Yes, Jointly-2 No-3 Not relevant-0
1.	Agricultural Land		
2.	Large Livestock (Cattles, Buffaloes)		
3.	Small Livestock (Goat, sheep, pigs)		
4.	Poultry (Chicken, ducks...)		
5.	Fish pond/equipment's		
6.	Farm Equipment's (non-Mechanised; showel, sickle)		
7.	Farm Equipment (Mechanised; Tractor, tiller)		
8.	Non-Farm business equipments (Sewing machine, solar panels)		
9.	House or other structure		
10.	Large consumer durables (Refrigerator, TV)		
11.	Small consumer durables (Refrigerator, TV)		
12.	Cell phone		
13.	Non-farm lands		
14.	Vehicles (Bicycle, Motorcycle)		

Part 6. Access to credit

Did any member of your household (or the household in total) applied/take up any loan during **last 12 months**?

(Yes =1, No = 0) _____

(if “Yes”, please ask the questions according to the following table, if “No” go to the next session)

2. Household credit demand and sources in the last 12 months

Source of loan	Did your household or a member approached for loan from any source [...]? Yes-1 No-0	If Yes in column 1, then did [...] get it? Yes-1 No-0	Who made the decision to borrow? Family code (see 5.1)	Who made the decision to utilisation? Family code (see 5.1)
	1	2	3	4
1. Self-Help group				
2. Formal lender (bank/financial institution)				
3. Informal lender				
4. Friends and relatives				
5. Informal groups				
6. Other (specify)...				

Part7. Time allocation

1. What the share of your working hours in a normal day? (%) _____

2. What is the share of your leisure time in a normal day? (%) _____

‘Socio-economic assessment of Community Based Seed Producers (CBSP) groups by Women SHGs in Uttar Pradesh’

Individual questionnaire 2. SHG member/Spouse of Primary decision maker

Please note the current questionnaire is for individual members of the household. One for the primary decision maker and another for the SHG member/his/her spouse.

In case of joint decision making please consider both decision makers. If the primary decision maker and SHG member are the same, then the spouse of the SHG member is to be interviewed.

In case of non-SHG member households please interview the spouse of the primary decision maker.

Please ensure that

6. You had completed the household survey
7. You have completed the family roster
8. You had identified (primary decision maker/SHG member/his/her spouse) and administering the questionnaire to the individuals from the household survey

Part 0. Interview setting (tick the appropriate)

4. How was the interview conducted
 4. Only the respondent
 5. With primary decision maker/SHG member/his/her spouse
 6. Other family members

Part 1. Individual Information

1.	Family code of the respondent (please refer family code in in the household questionnaire)	
2.	Sex (male=1, female=2)	
3.	Are you the primary decision maker regarding agriculture (in case of jointly please consider them as primary) (Yes=1, No=0)	
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Part 2. Social Capital and Networking

1	How long you are residing in the village? (years)	
2	Number of relatives in the village?	
3	Number of friends (non-relatives) in the village?	
4	Have you and/or your spouse been member of formal and informal institutions in the last 3 years? (Yes=1, No=0)	
25	Is your household a member of a SHG group? (Yes=1, No=0)	
<i>If “Yes” please ask the following questions and if “No” go to next session</i>		
2.	Are you a member of SHG group? (Yes=1, No=0)	
3.	Are you a member of RGMVP SHG group? (Yes=1, No=0)	
4.	Have you availed seed from the SHG? (Yes=1, No=0)	

Codes A	Codes B	
1 = Government extension	1 = Seed not available	13 = No market
2 = Farmer Coop/Union	2 = Lack of cash to buy seed (credit)	14 = Theft during green stage
3 = SHG	3 = Lack of knowledge	15 = Neelgai or other animal
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5 = Research centre (trials/demos/field days)	5 = Stover too hard	17 = Requires high skills
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(If subject is irrelevant for the household put 0)

		Do you decide on the subjects Yes, Solely-1 Yes, Jointly (Spouse)-2 No-3	Extent to which you can participate in decision making [if you want to?] No-1 Small-2 Medium-3 High-4
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2.	Planting /harvesting of cash crop/variety		
3.	Planting /harvesting of crop for seed crop/variety		
4.	Livestock keeping, buying and selling		
5.	Buying selling land and other property		
6.	Borrowing and lending money		
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15.	Participation in training?		

Part 4. Role in household decision making

Who decides about the following subjects in the house? (sole or main decision maker)

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1.	Agricultural Land		
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6.	Farm Equipment's (non-Mechanised; showel, sickle)		
7.	Farm Equipment (Mechanised; Tractor, tiller)		
8.	Non-Farm business equipments (Sewing machine, solar panels)		
9.	House or other structure		
10.	Large consumer durables (Refrigerator, TV)		
11.	Small consumer durables (Refrigerator, TV)		
12.	Cell phone		
13.	Non-farm lands		
14.	Vehicles (Bicycle, Motorcycle)		

Part 6. Access to credit

3. Did any member of your household (or the household in total) applied/take up any loan during last 12 months? (Yes =1, No = 0) _____

(if "Yes", please ask the questions according to the following table, if "No" go to the next session)

2. Household credit demand and sources in the last 12 months

Source of loan	Did your household or a member approached for loan from any source [...]? Yes-1 No-0	If Yes in column 1, then did [...] get it? Yes-1 No-0	Who made the decision to borrow? Family code (see 5.1)	Who made the decision to utilisation? Family code (see 5.1)
	1	2	3	4
1. Self-Help group herbicide and pesticides...)				
2. Formal lender (bank/financial institution)				
3. Informal lender				
4. Friends and relatives				
5. Informal groups				
6. Other (specify)...				

Part7. Time allocation

1. What the share of your working hours in a normal day? (%) _____
2. What is the share of your leisure time in a normal day? (%) _____

Part 8. Willingness to join and pay**Scenario**

Introduction: Access and timely availability of good quality seed is a biggest challenge in agricultural production. RGMVP through its SHG is procuring good quality foundation seed from organisations (Universities) and giving it to selected SHG members. If you become part of the SHG (as a member) you may get an opportunity to produce seed. RGMVP will be training you in the seed production.

Enrolment and payment: For being a seed producer you should own land and have good irrigation source as well as fertile land. After being a member of SHG, you may need to contribute amount in buying of the seed. You need to use your own resources for seed production. If you are getting 1 kg of seed for seed production, you need to pay "X" kg of seed back to the SHG. You can use the remaining seed. Please account for seed productivity and production cost.

Eg: If $X=5$, you need to give back 5 kg of seed/ 1kg seed received.

A. Willingness to Join

1. Based on the above scenario, will you join the seed SHG group? (Yes=1, No=0) _____
2. If yes, why would you join _____
3. If No, Why will not join _____

If yes in Q2. Ask Willingness to pay.

B. Willingness to pay

Quantity of "X" to be selected randomly from (1-10 bits). Make chits from 1-10 and draw one chit in random.

1. Initial "X" drawn from the bit _____

1.	Are you willing to pay "X" times the quantity of seed provided (Q1 answer) [Yes=1, No=0]		If No go to Q3, If Yes go to Q2
2.	Are you willing to pay (X+1) times the quantity provided [Yes=1, No=0]		If Yes go to Q4
3.	If No in Q1, are you willing to "X-1" times the quantity of seeds [Yes=1, No=0]		Yes or No, go to Q4
4.	What times quantity of seed you are willing to pay?		