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Participatory Research on Climate Smart Agriculture Technologies in Pakistan

Consortium for Scaling up Climate Smart Agriculture in South Asia (C-SUCSeS) Project

SAARC

SAARC Agriculture Centre

BARC Complex, Farmgate, Dhaka, Bangladesh

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Participatory Research on Climate Smart Agriculture Technologies in Pakistan

under

Consortium for Scaling up Climate Smart Agriculture in South Asia (C-SUCSeS) Project

Executed by

Pakistan Agricultural Research Council
National Agricultural Research Centre

SAARC Agriculture Centre
BARC Complex, Farmgate, Dhaka, Bangladesh

Participatory Research on Scaling up Climate Smart Agriculture Technologies & Practices in Pakistan

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Disclaimer

This book 'Participatory Research on Climate Smart Agriculture (CSA) Technologies in Bangladesh' contains country's promising CSA technologies and practices as an output of validation and viability assessment of CSA technologies through field trials at farmers' plots. Such validation and viability assessment were directed by the National Focal Point of C-SUCSeS project of Pakistan and the crop scientists of Pakistan Agricultural Research Council (PARC). The CSA technologies and practices in this publication are those of the authors and do not imply any opinion whatsoever on the part of SAC.

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Foreword

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Chairman, PARC
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Pakistan is among the world's most vulnerable countries to the impacts of climate change. The nation is increasingly experiencing unpredictable weather patterns, including flash floods, droughts, glacial lake outbursts, heat waves, and erratic rainfall. According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), these extreme events are expected to intensify in both frequency and severity due to ongoing climate change.

To address these challenges, the Government of Pakistan has developed a comprehensive strategy featuring key policy interventions and climate-responsive measures. Among these, Climate-Smart Agriculture (CSA) stands out as a critical approach to enhancing resilience, improving crop yields, and promoting the sustainable use of natural resources.

The Consortium for Scaling-up Climate-Smart Agriculture (C-SUCSeS) project is being implemented across South Asia. Through this initiative, selected CSA technologies are being demonstrated, validated, and up scaled by adopting farmers' participatory approach. Capacity building through farmer training and stakeholder engagement is critical for the successful implementation of any strategy that aims to enhance climatic resilience for sustainable agricultural productivity. Promoting sustainable agricultural practices not only supports economic growth but also ensures food security and resilience in the face of a changing climate.

Preface

The Consortium for Scaling-up Climate-Smart Agriculture (C-SUCSeS) project, a joint initiative in South Asia led by the SAARC Agriculture Centre (SAC), the International Food Policy Research Institute (IFPRI), and the International Fund for Agricultural Development (IFAD) is executed in Pakistan by the Pakistan Agricultural Research Council (PARC). Working in collaboration with stakeholders from the National Agricultural Research System, PARC has developed an inventory of 34 CSA technologies that have been published through C-SUCSeS platform. Subsequently, selected CSA technologies have been validated through participatory research across targeted ecologies. These include the Rice-Wheat Cropping System (comprised of ~2 million hectares), and the Rainfed Mixed Cropping System (covers ~25% of cropped area).

Scaling up Climate-Smart Agriculture is essential to building Pakistan's agricultural resilience and ensuring national food security in a changing climate. By effectively integrating traditional agricultural knowledge with modern technologies, climate-smart agriculture (CSA) empowers farmers to optimize the use of land, water, and other natural resources. This approach not only boosts productivity but also builds resilience to the adverse effects of climate change, such as erratic weather patterns, droughts, and floods. CSA plays a crucial role in promoting sustainable livelihoods, especially for smallholder farmers who are most vulnerable to environmental and economic shocks. Through practices that reduce greenhouse gas emissions and enhance carbon sequestration, CSA contributes to both climate mitigation and adaptation.

I extend my heartfelt gratitude to all the experts, researchers, and practitioners who contributed their time and insights to this publication. I also thank the C-SUCSeS project and the SAARC Agriculture Centre (SAC) for their financial support. It is my earnest hope that this book will serve as a valuable resource and catalyst for continued research, innovation, and widespread adoption of climate-smart agriculture throughout South Asia, fostering a more sustainable and food-secure future for the region.

Dr. Imtiaz Hussain
National Focal Point-C-SUCsEs

Acknowledgements

We would like to express our sincere gratitude to all those who contributed to the successful completion of this participatory field report under the C-SUCSeS (Consortium for Scaling-up Climate-Smart Agriculture) project in Pakistan.

Our deepest appreciation goes to the SAARC Agriculture Centre (SAC) for its continued financial and technical support and for initiating this important regional initiative aimed at promoting climate-smart agriculture among smallholder farmers.

We acknowledge the support of the National Agricultural Research System (NARS) institutions, particularly the field teams, agricultural extension workers, and researchers whose tireless efforts and commitment were crucial in implementing project activities and compiling field-level findings.

We are thankful to the local farming communities, field practitioners, and stakeholders who actively participated in the data collection, demonstrations, and validation processes. Their valuable insights, traditional knowledge, and direct experiences were instrumental in shaping this report and ensuring its practical relevance.

Special thanks to Dr. Ghulam Muhammad Ali, Chairman PARC and Dr Imtiaz Hussain, Member Plant Sciences Division PARC, for their continued support in implementation of this project.

This report stands as a reflection of the collaborative efforts between researchers, farmers, and institutions, and we hope it will contribute meaningfully to the scaling-up of climate-smart agriculture practices in Pakistan and across the SAARC region.

The Authors

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Abbreviations and Acronyms

AAB	Agro Advisory Bulletin
AED	Agriculture Environment Division
AIRC	Agriculture Implement Research Center
AKC	Agriculture Knowledge Center
AWD	Alternate Wetting and Drying
CBO	Community-Based Organizations
CCAFS	Climate Change, Agriculture and Food Security
CGIAR	Consultative Group on International Agricultural Research
CIAT	International Center for Tropical Agriculture
CSA	Climate Smart Agriculture
C-SUCSeS	Consortium for Scaling-up Climate Smart Agriculture in South Asia
DLS	Department of Livestock Services
DoA	Department of Agriculture
DDSR	Dry Direct Seeded Rice
FGD	Focal Group Discussion
FYM	Farmyard Manure
ICT	Information and Communication Technology
INGO	International Non-Government Organization
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
MoALD	Ministry of Agriculture and Livestock Development
NAERC	National Agricultural Environment Research Centre
NARC	Nepal Agricultural Research Council
NGOs	Non-Governmental Organizations
NID	National Identity Number
NRs	Nepalese Rupees
PMAMP	Prime minister Agriculture Modernization Project
PR	Participatory Research
SAARC	South Asian Association for Regional Cooperation
SAC	SAARC Agriculture Centre
SDF	SAARC Development Fund
TPR	Transplanted Rice
ZT	Zero Tillage

Executive Summary

This study focuses on the implementation and impact of Climate-Smart Agriculture (CSA) practices in Pakistan, particularly in rainfed-mix and rice-wheat cropping systems of the Punjab province. In the rainfed-mix cropping system the inclusion of leguminous crops like sesbania, mungbean and soybean significantly increased the yield of the succeeding crops, particularly wheat. Additionally, these legumes helped reduce soil erosion, improve soil health, increase cropping intensity by 200%, and consequently it improved socio-economic conditions of the farmers. Similarly, in the rice-wheat cropping system, CSA technologies such as Direct Seeded Rice (DSR), Alternate Wetting and Drying (AWD), Mechanically Transplanted Rice (MTR), and Zero-till Drill sowing of wheat exhibited significant potential in enhancing crop productivity and sustainability. DSR, AWD and MTR remarkably increased rice yield and farm profitability by reducing water requirement, saving labor, helping early crop establishment, as well as early crop maturity as compared to conventional method of cultivation. Wheat sown with Happy Seeder/Super Seeder and Zero-till Drill, after rice crop, helped resolve the issues like rice crop residue management and delayed wheat sowing. This study revealed that farmers adopting CSA practices, in the rice-wheat cropping system, achieved a 30-40% higher yield, translating to additional income of around PKR 60,000 per hectare. For instance, Mr. Ali Hussain, a rice farmer, reported a net income increase of PKR 50,000 on the adoption of these practices, despite a rise in operational costs. The study emphasizes that CSA not only improves economic viability for farmers and addresses environmental challenges, making it essential for sustainable agricultural development in Pakistan. Overall, it underscores the importance of scaling up CSA practices to bolster food security and resilience against climate change.

Chapter 1

Introduction

Pakistan spread over 79.9 million hectares area, inhibited by 244 million population. The total cultivated area of the country stands 24.1 million hectares. Southwest summer monsoon (June-September) showers Eastern areas of the southern half, while other southern half of the northern and western areas get rain through western winter disturbances (December to March). The summer monsoon accounts for around 60% of the total annual precipitation.

The climate varies from arid to semiarid where three-fourths of the country receive rainfall of less than 250 millimeters (mm) annually, except in the southern slopes of Himalaya and the submountain region in the northern segment of the country, where annual rainfall ranges from 760 mm to 2,000 mm. The country features diverse climates, from the humid in the northern Himalayas to the coastal regions along the Arabian Sea.

Agriculture is vital to Pakistan's economy, contributing 24% to GDP and employing 37.4% of the labor force. In 2023-24, the major crops contributed 20.6% to agricultural value addition, while livestock accounted for 60.84% of agricultural value and 14.63% of GDP. The poultry sector employs over 1.5 million people, and other sectors like fishing and forestry contribute 1.39% and 2.14% to agricultural value addition, respectively.

Total fertilizer offtake in the last season was 3,957,000 tons, with a significant portion imported. Water availability for irrigation, covering 18.86 million hectares, is declining. Environmental challenges include insufficient rainfall, decreasing soil organic matter, over-extraction of groundwater, and increasing input costs. These issues obstruct the ability of farming community to sustain conventional agricultural practices, threatening food security and agricultural sustainability.

1.1. Purposes of CSA Participatory Research (PR)

The following are the purposes of Climate-Smart Agriculture (CSA) Participatory Research:

- Local Adaptation
- Knowledge Sharing
- Capacity Building
- Evidence-Based Practices
- Community Engagement and Sustainable Agricultural Growth

By integrating the perspectives and experiences of local communities, CSA participatory research aims to create more effective and sustainable agricultural practices that can withstand the impacts of climate change. Climate-smart agricultural practices help in boosting farm productivity, managing water resources efficiently, reducing crop losses, increasing Income & reducing costs, building resilience in cropping system, improving knowledge and skills, and supporting community collaboration.

1.2 Climate-Smart Agricultural Practices in Pakistan

In the project 'consortium on scaling up climate smart agriculture in South Asia (C-SUCSeS)' participatory research was conducted on two sites: rainfed-mix cropping system and rice-wheat cropping system. Both cropping systems are described below:

1.3 Rainfed Mixed Cropping System

Rainfed agriculture is practice on 25% of the total cultivated area of Pakistan (Baig et al., 2013). Based on rainfall frequency it can be either low, medium, and high rainfall areas. Rainfed agriculture is predominantly monocropping, and low productivity ascribed by poor soil fertility, high soil erosion and nutrient loss coupled with low soil organic matter (<1%). To address these issues, leguminous crops like Sesbania, Mungbean, and Soybean were introduced in the rainfed areas. Under participatory research these were tested at 100 different locations across the rainfed area to enhance crop productivity and soil health by incorporating the best match leguminous crop in the existing cropping pattern.

Besides participatory research demonstrations, the knowledge sharing of climate smart agriculture technologies and practices hand on training, seminars, workshops focusing multifacets advantages with the inclusion of different legumes grown as an intercrop, green manure and sole crop in a wheat-legume cropping system instead of

fallow-wheat cropping. Such CSA practices not only enhance cropping intensity but provide soil cover against erosion and soil organic matter loss.

1.4 Rice-Wheat Cropping System

The rice-wheat cropping system as the most dominant cropping system in Pakistan encounters several challenges, and rice residue management, water shortage, nutrient loss, low rice productivity, and delayed wheat sowing are some of those. To address these issues, climate smart technologies such as Alternate Wetting and Drying (AWD), Direct Seeded Rice (DSR), Wheat sowing with Happy Seeder/Super Seeder and Zero-till Drill were demonstrated at 60 different locations across rice-wheat cropping system. All these demonstration trials were supervised and monitored. Adoption of these sowing methods resulted in higher crop harvest, conserved resources, and saved time.

Chapter 2

Participatory Research

The Participatory Research (PR) tools used in this project included workshops, focus group discussions (FGD), on-farm trials, surveys, seed provision of different crops (wheat, rice, mungbean, soybean, sesbenia), and training sessions which all designed to actively engage the farmers in the Punjab province. Workshops and focus groups facilitated discussions about local agricultural practices and challenges, ensuring the relevance of the Climate-Smart Agriculture (CSA) technologies developed. On-farm trials allowed the farmers to observe the benefits of using those technologies, while surveys and interviews helped to obtain valuable feedback on their (farmers) experiences. The specific sites in Punjab were chosen based on their representative agricultural conditions and the willingness of farmers to participate, making it an ideal setting to demonstrate and promote CSA practices effectively.

Objectives

- To carry out validation and viability assessment of selected CSA technologies through participatory research
- To scale up promising CSA technologies in targeted ecologies of Pakistan

Methodology

The Participatory Research (PR) approach as corner stone of C-SUCSeS project was used to engaging farmers in the different locations of Punjab province, Pakistan primarily aimed as adoption of Climate-Smart Agriculture (CSA) technologies to trigger climate resilience in farming practices and upscale their perception about climate change. Farmers were approached and engaged through workshops and focus group discussions, getting their know-how about local agricultural practices and challenges, and their understand about climate change impacts on agriculture and farming system. On-farm trials and demonstrations of CSA technologies were conducted, enabling farmers to observe effectiveness of the technologies and encouraging adoption based on visible benefits.

Continuous feedback from the participating farmers was collected throughout the project period to assess and refine the technologies in real-world situations. Additionally, training sessions were provided to equip farmers with the necessary knowledge and skills to implement CSA practices effectively. This approach helps create a sense of ownership for smooth adoption of CSA technologies well aligned with local conditions.

Chapter 3

Results and Discussion

Results of Participatory Research trials demonstrated that the adoption of CSA technologies significantly benefited farmers of Punjab province. The farmers experienced an increase of crop yield by 30-40%, which produced an additional income of approximately PKR 60,000 per hectare. The implementation of efficient irrigation practices: Alternate Wetting and Drying (AWD), resulted in 20-40% water savings allowing farmers to manage their water more efficiently. Though initial installation cost is more afterward the technology can improve the overall profitability by 30-50%, showcasing the economic viability of these practices. Besides economic viability, AWD technology helps improve soil health and soil productivity in long-term benefits, further enhancing their resilience to climate-related challenges.

The CSA based participatory research demonstrations were carried out in two cropping patterns; Rainfed Mixed and Rice-Wheat Cropping Systems. Detailed results are discussed as below:

3.1 Participatory Research based Field Demonstrations in Rainfed Mix Cropping System

Participatory research carried out in rainfed mix cropping system during 2022–2023 and 2023–2024 involving different cropping systems such as wheat preceded by sesbenia, soybean, mungbean and no crop (Fallow) showed that the sesbania-wheat cropping system consistently showed better results as compared to the conventional cropping system comprising fallow-wheat. In the 2022–2023 season, the sesbania-wheat cropping system produced the highest wheat grain yield of 4062 kg/ha, surpassing the 3683 kg/ha in fallow-wheat system (Table 3.1, Table 3.2; Figure 3.1).

Similar trends have been observed during 2023–2024, where sesbania-wheat gave grain yield of 3285 kg/ha, despite some seasonal variability. The higher grain yield in sesbania-wheat cropping system is attributed to the ability of sesbania to fix atmospheric nitrogen, and improved soil organic matter contents on incorporation into soil,

improved soil health and hence better root development in subsequent wheat crops (Khan et al., 2020; Ali et al., 2021).

These findings are aligned with previous studies that highlighted the benefits of integrating legumes into cereal cropping systems to enhance soil nutrients content and overall crop performance (Liu et al., 2017).

Field trials carried out at the National Agricultural Research Center where among different cropping systems, the sesbania-wheat cropping system showed the highest average yield (5420 kg/ha), followed by the fallow-wheat cropping system (4650 kg/ha), as shown in Table 3.1, Table 3.2 2; Figure 3.2, Figure 3.3.

Table 3. 1: Grain yield (kg/ha) of wheat in different cropping systems

Year	S-W	M-W	S-W	F-W
2022–2023	4062	3610	2843	3683
2023–2024	3285	2969	2895	2980

W-S=Wheat-sesbenia, W-M= Wheat – Mungbean, W-S= Wheat-Soybean, W-F= Wheat-Fallow

Table 3.2: Grain yield (kg/ha) of wheat at NARC

Cropping system	Grain Yield (kg/ha)
Sesbania-Wheat	5420
Mungbean-Wheat	3700
Soybean- Wheat	4100
Fallow- Wheat	4650

Figure 3.1: Wheat sowing in rainfed mixed cropping system

Figure 3.2: Sesbenia sowing in rainfed mixed cropping system

Figure 3.3: Soybean sowing in rainfed mixed cropping system within crop residues

3.2 Participatory Research based Field Demonstrations in Rice-Wheat Cropping System

Rice sown in the rice-wheat cropping system by three sowing techniques; Direct Seeded Rice (DSR), Mechanical Transplanted Rice (MTR), and Conventionally Transplanted Rice (CTR) were tested through participatory research. The succeeding wheat crop was sown with Happy Seeder/Super Seeder and Zero-till Drill. All these techniques showed promising results as discussed below:

The maximum plant height of rice crops was recorded under DSR (130 cm) and CTR (130cm) sowing techniques while least average plant height (129 cm) was observed with MTR (129 cm). Earlier work of Ehsanullah et al. (2007), also confirms that DSR showed the highest plant height. Similarly, the maximum tillers/m2 (373) were noted for CTR, while the minimum tillers (301) was found in DSR (Figure 3.3).

These findings confirm earlier work (Ehsanullah et al. 2007), reported the benefits of different sowing methods of rice indicating that the yield and yield components responded differently to different rice

transplanting techniques. The maximum number of grains/panicles was recorded in CTR while the maximum 1000-grain in and maximum paddy yield (4192 kg/ha) were recorded with MTR. Similarly, the maximum tillers/m2 were noted in CTR. The study underscores how various rice cultivation techniques influence growth parameters, yield metrics, and economic viability (Figure 3.4).

While MTR demonstrated higher yields, DSR emerged as the most economically efficient method, highlighting the importance of considering not just crop yield but also economic returns when determining the optimal cultivation technique. These findings provide valuable insights to farmers and policymakers in making informed decisions regarding rice cultivation keeping in context both yield and economic returns.

Table 3.3: Effects of different crop establishment techniques on plant height, tillers and panicle length of rice

Result	Plant height	Tillers					Panicle length		
	cm			m^2			cm		
	DSR	MTR	CTR	DSR	MTR	CTR	DSR	MTR	CTR
Mean	130	129	130	301	368	373	26	28	27

DSR=Direct seeded rice, MTR=Machine transplanted rice, CTR=Conventionally transplanted rice

Table 3.4: Effects of different crop establishment techniques on the yield and yield components of rice

	Grains/panicle			1000-grain wt. (g)			Rice yield (kg/ha)		
	DSR	MTR	CTR	DSR	MTR	CTR	DSR	MTR	CTR
Mean	83	82	94	21	22	21	3922	4192	3655

DSR=Direct seeded rice, MTR=Mechanically transplanted rice, CTR=Conventionally transplanted rice

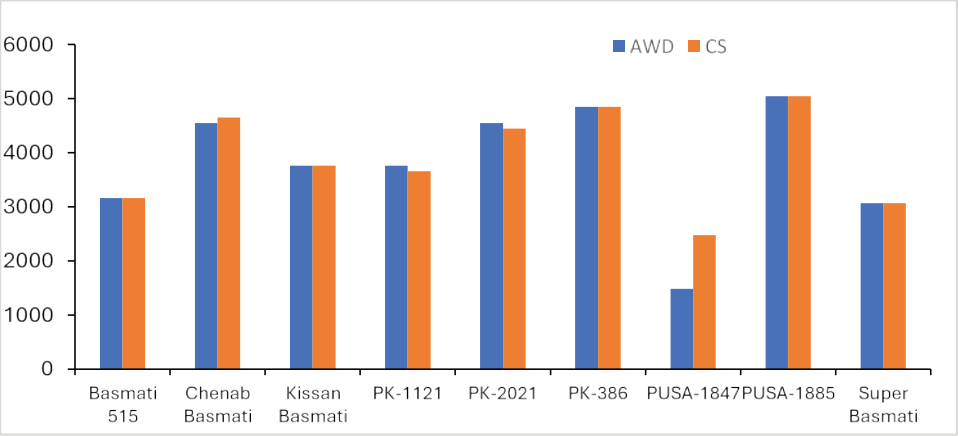

Figure 3.4: Yield Comparison of different rice varieties sown by AWD and CS

Wheat was sown in rice-wheat cropping system after the harvest of rice crop by following different methods including Conventional Sowing (CS), Happy Seeder/Supper Seeder (HSSS) and Zero-till Drill (ZTD). Results showed that maximum plant height (84 cm) was recorded with HSSS sowing followed by CS method (83 cm) . Shown in Table 3.5 the plant with maximum height in HSSS can be ascribed to improvement in soil fertility and soil productivity due to the incorporation of rice crop residues. Similarly, the maximum number of tillers (266/m2) were counted in the CS method, followed by HSSS (231 m-2). The highest grain yield of wheat (4109 kg/ha) was recorded with HSSS, followed by CS method (4009 kg/ha) as shown inError! Reference source not found.3.5.

Yield is the ultimate objective of any sowing method. The HSSS sowing method showed slightly better yield over the CS method, However the differences are not significant, they may still be economically significant, especially on a larger scale. Despite marginal gain, HSSS was found to be a more cost-effective and resource-efficient sowing method. These findings are in line with that of Dhillon (2016), reported that HSSS gave the maximum grain yield of wheat in comparison to other sowing methods like zero tillage and conventional sowing methods. As cited earlier, the higher grain yield in HSSS could be ascribed to which improved soil nutrient profile and soil aggregation due to the incorporation of rice residues into soil. Besides safe disposal of rice residues, farmers prevent Greenhous gases emission by avoiding open air burning of rice residues (Figure 3.4).

Table 3.5: Yield and yield components of wheat sown in rice-wheat cropping system

Sowing method	Plant height	Tillers	Grain yield
	(cm)	(m^2)	(kg/ha)
Zero tillage drill	77	266	3981
Happy Seeder/Super Seeder	84	231	4109
Conventional sowing (broad casting)	83	218	4009

Figure 3.5: Wheat sown in in rice-wheat cropping systems

3.3 Cost-benefit of using CSA technologies – A case study

Mr. Ali Hussain, a progressive rice farmer practices Climate-Smart Agriculture (CSA) practices, particularly using direct seeded rice (DSR), Mechanical Transplanting Rice (MTR), and wheat sowing methods- Happy Seeder/Super Seeder by investment PKR

50,000-100,000 shooting up his operational costs to PKR 25,000 per hectare. While on hand he got PKR 60,000 annually more income due to yield increase. In this way his net profit stands at PKR 50,000. This case study showcased the cost-effectiveness of CSA technology in rice farming. The farmers also experienced cost reduction of irrigation water by 30% primarily due to increases water use efficiency. In direct-seeded rice (DSR).

Moreover, seed and planting efficiency increased through wheat sowing by drill.

All these benefits advocate that CSA technologies and practices are both economic feasibility and environment friendly.

3.4 Participants' Responses to the Technologies (Especially Women)

Participants' responses to Climate-Smart Agriculture (CSA) technologies, particularly among women, have been generally positive, reflecting a strong interest in practices that enhance productivity and resilience. Women often express appreciation for technologies that reduce labor intensity and improve access to resources, enabling them to manage their agricultural responsibilities more effectively. Many reports increased confidence and empowerment as they gain knowledge and skills through training programs, which allow them to participate more actively in decision-making processes related to farming. However, some women also highlight challenges, such as limited access to financial resources and social barriers that hinder their full participation. Overall, the feedback indicates a desire for continued support and adaptation of technologies to better meet their specific needs and contexts, emphasizing the importance of inclusive approaches in promoting CSA.

Chapter 4

Capacity Building and Trainings on CSA technologies

Training and capacity building in CSA play a pivotal role in generating awareness and resolving bottleneck in adoption of CSA technologies and practices. In this connection several onsite training events were organized at different locations of mixed-cropping and rice-wheat cropping systems (Figure 4.1, Figure 4.2). In these trainings farmers were made realize the changing pattern of climate variables like rainfall, heatwaves and drought usually encounter by farming community, and ways and means to affronts such challenges.

Farmers showed their interest by sharing their generation old experience and their perception about climate change impact. Farmers were advised to have strong interactions with regional agriculture services providers and extension offices to timely sortout the issue and get recommendation well intime.

Figure 4.2: Farmer training in rainfed mix cropping system, and rice wheat system

Chapter 5

Monitoring and Evaluation of Participatory Research Sites

Carried out Monitoring and Evaluation (M&E) visit of the participatory Research (PR) sites in different parts of Pakistan such as Rawalpindi and Gujranwala districts. The M&E exercise aimed at tracking the implementation of project activities to ensure the on-time accomplishment of committed deliverables. Cropping patterns such as legume-cereal cropping and fallow-cereal based CSA technologies tested under farmer field were evaluated for crop productivity and farmer perception and future adoptability.

On 15th April 2025, the PR sites at different locations of district Rawalpindi; Taxila, Wah areas were visited by Dr. Raza Ullah Khan, SPS (NRM) and RPC (AC), C-SUCSeS along with Mr. Haseeb, ASO, PSD, PARC and Mr. Idress, Deputy Director, Agriculture Extension, Taxila. In the Balar thup area farmer Mr. Javid following the incorporation of Sesbenia (Janther) before wheat sowing. The farmers were provided with seed of improved variety wheat variety Bourlogu-16. Normal seed rate is used as 1.25 bag/acre. It was observed that the crop growth was good, however non uniform. The farmer was asked about his perception of climate change, and its impact on wheat productivity. Farmer

expressed his desire to continue the practice even though the project finished and that the seed would be kept for sowing and further distribution among the farmers of the area. The farmer was guided to keep health wheat seed separately from diseased seed.

Farmer Haji sahib's wheat crop was excellent; however some loose smut plants were seen near the border. Farmer was advised to uproot the plant carefully, put it in the shopping bags and burn it, so that it could not be further spread out to the health crop and report the disease to regional agriculture station. Farmer was happy with the services and help provided by PARC and regional agriculture institutes under the C-SUCSeS project and assured to continue the practice and distribute the seed among the farmers of the region. Site 3 and site 4 under rainfed (Barani area) were also visited. At site 3 wheat variety Pakistan-13 was sown after maize following wheat-maize cropping pattern. The number of tillers were found less, primarily due to rainfall quite late stage of the growth. At site 4 of the Wah area of Rawalpindi region, wheat variety Markaz-19 was sown on farmer field. The wheat crop was still green due to late sowing. The crop growth in comparison to nearby farmer fields was found good and health.

On 17th April 2025 the two members team was accompanied by Dr. Shahbaz Ahmad, PSO, PARC-RRI, Kalashaha Kaku to visit different PR sites in the rice-wheat cropping system of Gujranwala region.

At site 1, wheat variety NARC super after rice harvest, residues were incorporation by happy seeder machine. Happy seeder chopped the rice resides and incorporated it at some soil depth to facilitate wheat seed sowing with minimum tillage. As disposal of rice residues is a challenge in the rice-wheat cropping system. Farmer usually get rrid by setting fire to residues generate the smog and creates several respiratory disease in the region. The incorporation of rice resiudes not only pave the way for safe disposal of rice resiudes, but also improve soil organic matter contents and water rention capapcty of the soil.

Latter on hold a meeting with the farming community of the region wher farmer shared their experienced of sowing with happy seeder. It was learnt that with happy seeder instead of 50 kg/ha seed rate, only 30-35 kg/ha seed are used, and the respons at lower seed rate was found effective and efficient. One of the possible reason could be the optimum seed to nutrient availability ratio at lower seed rate. Such practice would help address the issue of scarcity in availablity of good quality and high yield wheat varieties. Farmer added that the respons of happy seeder was desirable in case of good/optimim soil moisture contents, and as the soil moisture contents decreases, the germination and crop yield reduces.

On all sites it was noticed that there was found no board, or other communication tools that could easily communicate the message to any bypasser and help in diffusion of CSA technology in rice-wheat growing areas. The collaborating partners have been advised to keep these points in mind.

Chapter 6

Prospectus, Challenges and Recommendations for CSA technologies and Conclusion

Scaling up of CSA Scaling up of CSA technologies is really a real world challenge. Keeping in context the climate changing pattern emphasized on adoption of CSA as quickly as possible to ensure that CSA technologies are practiced are well adopted at regional, sub-regional and national level.

6.1 Prospect of Scaling Up of CSA Technologies and practices

The scaling up of CSA technologies involves broadening the adoption by involving more farmers so that ensure the across larger geographic areas. The upscale has always been a challenge hampered by unfavorable institutional policies and lack of support. The driving force behind scaling up are policy and political support to facilitate CSA intervention at gross root level. It may involve pumping finance by subsidizing input, slashing down import duties on importing the import of efficient CSA machinery and tools.

Prioritized marketplace for the produce. It should be supported by favorable policies and frameworks that include incentives and technical assistance. Scaling up also requires investments in building necessary infrastructures, ongoing research and innovation to adapt practices to local contexts, and capacity building through farmers' training. Collaboration among various stakeholders, such as governments, NGOs, and private sectors, is essential for resource sharing and effective up scaling of technologies and practices. Additionally monitoring and evaluation systems are crucial to assessing the impact of these practices and refine approaches. Improving market access for CSA products further incentivizes adoption, making these technologies more appealing and feasible. Ultimately, scaling up CSA technologies represents a strategic opportunity to sustain food security, mitigate climate change effects, and promote sustainable agricultural practices on a larger scale.

6.2 Challenges to upscaling CSA technologies and practices

The scaling up of CSA technologies and practices involved several challenges of socio-economic nature which are listed below:

- Access to financial resources and inputs remains a critical barrier, particularly for smallholder farmers and women, undermining adoption of CSA technologies at gross root level.
- Knowledge and awareness gaps in knowledge and training hinder effective adoption, as many farmers lack awareness of CSA benefits.
- Infrastructure limitations (AWD pipe), such as inadequate irrigation systems impede implementation.
- The unpredictable nature of climate change adds complexity to planning and implementation of CSA at farmers' field.
- Insufficient monitoring and evaluation systems make it difficult to assess the impact and success of CSA technologies and practices.

To address these interlined and interdependent challenges there is a need for more collaborative and holistic effort by multi stakeholders: governments, NGOs, research institutions, and private sectors to create an enabling proliferation for CSA adoption at grass root level.

6.3 Gender balance in adoption of Climate Smart technologies

The suitability of Climate-Smart Agriculture (CSA) technologies for women folk is essential for promoting gender equity and sustain natural resources productivity. These technologies must be accessible to women, so that gender balance is maintained in decision making process.

Capacity building and providing technology specific training to women in efficient labor-management, irrigation, can significantly ameliorate the work burden and improve outcomes. Additionally, these technologies should be adaptable to the specific socio-cultural and environmental contexts that women operate in ensuring their relevance and benefits. By promoting diverse cropping systems, CSA can improve food security and nutrition, particularly important for women managing household supplies. Involving women in

decision-making processes related to CSA implementation leads to better outcomes, as their unique insights can shape more effective strategies. Furthermore, technologies that enhance productivity and income contribute to women's economic empowerment, allowing them to invest in their families' health and education. Lastly, fostering a supportive community environment where women can share experiences and resources enhances the adoption and success of CSA technologies, ultimately contributing to sustainable development and gender equality.

6.4 Recommendations for Scaling up CSA Technologies and Practices

To facilitate the scaling up of CSA technologies and practices the following recommendations are suggested:

- Facilitate access of smallholder farmers, particularly women farmers to financial support for examples subsidizes on zero till drill, installation of irrigation system in AWD.
- Provision of training on CSA technologies and practices both country and technology specific.
- Incentivize gender involvement in CSA farming activities and resolved issues hampering socio-economic issues in this regards.
- Fostering collaboration among governments, NGOs, research institutions, and private sector can enhance resource sharing and knowledge exchange.
- Strengthen monitoring and evaluation to ensure in time completion of project deliverables and make adjustment as and when needed to expedite adoption of CSA technologies and practices.

It is anticipated that following these recommendations, the farming system can become more resilient and robust to face the climate change impacts and ensure food security in changing climate change scenario.

6.5 Conclusions

The C-SUCSeS project is project involving participatory research underscores the critical importance of Climate-Smart Agriculture (CSA) in addressing the multifaceted challenges faced by Pakistan's agriculture sector. The successful implementation of CSA practices, such as Direct Seeded Rice (DSR), Alternate Wetting and Drying (AWD), and Zero-till Drill (ZTD) sowing demonstrates significant potential for enhancing productivity, increasing farmers' incomes and livelihood, and promoting environmental sustainability. The findings indicate that farmers who adopt these technologies can experience substantial yield improvements and economic benefits, while also contributing to more efficient water use and improving soil health.

As Pakistan confronts issues such as climate change, water scarcity, and soil degradation, scaling up CSA practices becomes essential for ensuring food security and resilience in the agricultural landscape. This project not only highlights the immediate economic advantages for farmers, but it also illustrates a viable pathway towards sustainable development of agriculture in the region. Continued support for CSA through policy frameworks, training, and infrastructure development is vital in achieving long-term agricultural sustainability and improving farmers' livelihoods in Pakistan.

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Annexures

Annexure-1

Purpose of the survey

A survey has been conducted on behalf of the International Food Policy Research Institute (IFRPI), Pakistan. The purpose of this survey is to collect information on the costs and benefits associated with the use of Climate-Smart Agriculture (CSA) practices. Your participation is voluntary, and all the information you provide will be kept confidential.

The respondents for this survey should be decision makers regarding production and other agricultural activities in the household and must be at least 18 years old. This survey will take approximately one and a half hours to complete, and your participation will be highly appreciated.

Your input is crucial to our research, and we thank you for your time and effort in completing this questionnaire.

Please proceed with the consent form if the individual is willing to participate.

Consent

We would like to thank you for your willingness to participate in this survey.

By signing this form, I agree that

(Please take verbal consent if the farmer is reluctant to sign the form)

1. I am voluntarily taking part in this survey. I can stop the interview at any time or refuse to answer a question.
2. I don't expect to receive any benefit or payment for my participation.
3. I have been able to ask any questions that I have, and I understand that I am free to contact the researcher with any questions I may have in the future.

Participant's name: _____

Signature .....

Date [/ /]
(day/month/year

1. Enumerator's information

Questionnaire ID number	
Name of the enumerator	
Date of interview	
Interview start time	
Interview end time	

2. Respondent's information

Name of the respondent	
Household Head	*(1=yes, 2=no)*
Sex	*(1=Male, 2=Female)*
Age	
Total land area under cultivation [Owned + Rented (with rent/acre)] If rented what is the rent per acre?	Owned _____(acre) Rented_____(acre) Rent _____PKR
Village	
Block/Union Council	
Tehsil /	
District	
Farmer's phone number:	

Annexure-2

List of farmers involved in CSA Participatory Research-Rainfed Mixed Cropping System

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
1.	Arshad Khan	M	Garhi Afghana, Taxila	Mungbean Seed	Rainfed-Mix Cropping
2.	Khizer Hayat	M	Attock	Mungbean Seed	Rainfed-Mix Cropping
3.	Tauqeer Ahmed	M	Attock	Mungbean Seed	Rainfed-Mix Cropping
4.	Ghulam Haider	M	Karsal/ Chakwal	Mungbean Seed	Rainfed-Mix Cropping
5.	Saqib Sohail	M	Village Avori, Attock	Mungbean Seed	Rainfed-Mix Cropping
6.	Mohammad Afrasyab	M	Baba Fateh/ Gujjar Khan	Mungbean Seed	Rainfed-Mix Cropping
7.	M. Rizwan	M	Tikkal/Kallar Sydan	Mungbean Seed	Rainfed-Mix Cropping
8.	Ahmed	M	Choa Khalisa/ Kallar Sydan	Mungbean Seed	Rainfed-Mix Cropping
9.	Hamid Ali Khan	M	Salar/ Attock	Mungbean Seed	Rainfed-Mix Cropping
10.	Raja Muhammad Mukhtair	M	MandraGujar Khan	Mungbean Seed	Rainfed-Mix Cropping
11.	Amjad Mahmood	M	Sukhoo/ Gujjar Khan	Mungbean Seed	Rainfed-Mix Cropping
12.	Faiq Siddique	M	Dhoke Mirza GujjarKhan/ Rawalpindi	Mungbean Seed	Rainfed-Mix Cropping
13.	Aqeel Abbass	M	Karsal, District Chakwal	Mungbean Seed	Rainfed-Mix Cropping
14.	Tariq Hussain	M	Mandra Gujar Khan	Mungbean Seed	Rainfed-Mix Cropping
15.	Raja Abdul Waheed	M	Village Doultala GujarKhan	Mungbean Seed	Rainfed-Mix Cropping
16.	Mr Muneer Ahmed	M	Choa Khalisa, Kallar Syedan	Mungbean Seed	Rainfed-Mix Cropping
17.	Mr Liaqat Ali	M	Takkal, Kallar Syedan	Mungbean Seed	Rainfed-Mix Cropping
18.	Ch M Jaleel	M	Dobairan Kalan, Kallar Syedan	Mungbean Seed	Rainfed-Mix Cropping
19.	Ch. Afrasyab	M	Baba Fateh, Gujar Khan	Mungbean Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
20.	Mr. Ghulam Haider	M	Kirsal, Chakwal	Mungbean Seed	Rainfed-Mix Cropping
21.	Mr. Khizer Hayat	M	Attock	Mungbean Seed	Rainfed-Mix Cropping
22.	Mr. Hamid Ali Khan	M	Salar, Attock	Mungbean Seed	Rainfed-Mix Cropping
23.	Anees Khan	M	Jatial, Attock	Mungbean Seed	Rainfed-Mix Cropping
24.	Mr. Arshad Khan	M	Garhi Afghan, Taxila	Mungbean Seed	Rainfed-Mix Cropping
25.	Sajid Khan	M	Bhallar Tope, Taxila	Mungbean Seed	Rainfed-Mix Cropping
26.	Jibran	M	Takkal, Kallar Syedan	Mungbean Seed	Rainfed-Mix Cropping
27.	Mr. Faiq Siddiqui	M	Mughal Colony, Sukho, Gujar Khan	Mungbean Seed	Rainfed-Mix Cropping
28.	Mr. Tariq Hussain	M	Sukho, Gujar Khan	Mungbean Seed	Rainfed-Mix Cropping
29.	Mr. Amjad Mahmood	M	Sukho, Gujar Khan	Mungbean Seed	Rainfed-Mix Cropping
30.	Mr. Aqeel Abbas	M	Kirsal, Chakwal	Mungbean Seed	Rainfed-Mix Cropping
31.	Mr. Saqib Sohail	M	Akhori, Attock	Soybean seed	Rainfed-Mix Cropping
32.	Mr. Hamid Ali Khan	M	Salar, Attock	Soybean seed	Rainfed-Mix Cropping
33.	Shahid Mahmood	M	Gujjar Katarian, Jehlum	Soybean seed	Rainfed-Mix Cropping
34.	Raja Rabnawaz	M	Kiryala, Jehlum	Soybean seed	Rainfed-Mix Cropping
35.	Raja Zahidnawaz	M	Kiryala, Jehlum	Mungbean seed	Rainfed-Mix Cropping
36.	Abdul Ghafoor Khan	M	Burra Gawah, Jehlum	Mungbean seed	Rainfed-Mix Cropping
37.	Adeel Anwar	M	Doongi, Jehlum	Soybean seed	Rainfed-Mix Cropping
38.	Shujat Ali	M	Doongi, Jehlum	Mungbean seed	Rainfed-Mix Cropping
39.	Malik Sohail	M	Village Gaango, Taxila	Soybean seed	Rainfed-Mix Cropping
40.	Muhammad Ayub	M	Village Bal, Taxila	Soybean seed	Rainfed-Mix Cropping
41.	Ali Aksar Awan	M	Village Lab Thatoo, Taxila	Soybean seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
42.	Anwar Khan	M	Garhi Afghana, Taxila	Soybean seed	Rainfed-Mix Cropping
43.	Dr Adnan	M	Attock salaar	Mungbean seed	Rainfed-Mix Cropping
44.	Muhammad Ali	M	Attock, Haji Shah	Mungbean seed	Rainfed-Mix Cropping
45.	Muhammad khan	M	Attock, Surwala	Mungbean seed	Rainfed-Mix Cropping
46.	Muhammad Khan	M	Attock, Surwala	Mungbean seed	Rainfed-Mix Cropping
47.	Attar khan	M	Akhoori, Attock	Soybean seed	Rainfed-Mix Cropping
48.	Muhammad Arif	M	Akhoori, Attock	Soybean seed	Rainfed-Mix Cropping
49.	Sajjad Ali	M	Akhoori, Attock	Soybean seed	Rainfed-Mix Cropping
50.	Safa Zehra	M	Kot Nawab Khan, Attock	Soybean seed	Rainfed-Mix Cropping
51.	Muhammad Akram	M	Jand, Attock	Soybean seed	Rainfed-Mix Cropping
52.	Muhammad Tahir Javed	M	Attock	Soybean seed	Rainfed-Mix Cropping
53.	Zeeshan Nazeer	M	Attock	Soybean seed	Rainfed-Mix Cropping
54.	Muhammad Sohail Akbar	M	Attock	Soybean seed	Rainfed-Mix Cropping
55.	Zeeshan Akbar	M	Attock	Soybean seed	Rainfed-Mix Cropping
56.	Ghulam Hussain	M	Kirsal, Chakwal	Mungbean seed	Rainfed-Mix Cropping
57.	Muhammad Azad	M	Bheen, Chakwal	Mungbean seed	Rainfed-Mix Cropping
58.	Muhammad Pervaiz	M	Dhudial, Chakwal	Mungbean seed	Rainfed-Mix Cropping
59.	Muhammad Afrasyab	M	Baba Fateh Mor, Gujar Khan	Soybean seed	Rainfed-Mix Cropping
60.	Hamid Ali Khan	M	Salar, Attock	Soybean seed	Rainfed-Mix Cropping
61.	Sohail Ejaz	M	Dhoke Bhudial, Gujar Khan	Soybean seed	Rainfed-Mix Cropping
62.	Aamir Saleem	M	Dhoke Bhudial, Gujar Khan	Mungbean seed	Rainfed-Mix Cropping
63.	Qaiser Mahmood	M	Dhoke Bhudial, Gujar Khan	Mungbean seed	Rainfed-Mix Cropping
64.	Muhammad Rashid	M	Khadut, Kahuta	Soybean seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
65.	Muhammad Kabeer	M	Khadut, Kahuta	Mungbean seed	Rainfed-Mix Cropping
66.	Naseer Ahmed	M	Khadut, Kahuta	Mungbean seed	Rainfed-Mix Cropping
67.	Sultan Pervaiz	M	Pinaam, Kallar Syedan Rawalpindi	Mungbean seed	Rainfed-Mix Cropping
68.	Raja Mumtaz Rafeeq	M	Bhikral, Kallar Syedan	Mungbean seed	Rainfed-Mix Cropping
69.	Imran Ulfat	M	Dhoke Bhudial, Gujar Khan	Mungbean seed	Rainfed-Mix Cropping
70.	Demonstrations at NARC	NARC Islamabad		Soybean seed Soybean seed	Rainfed-Mix Cropping
71.	Muddasir Hussain	M	Gujjar Katarian, Jehlum	Sesbania seed	Rainfed-Mix Cropping
72.	Muhammad Usman	M	Burra Gawah, Jehlum	Sesbania seed	Rainfed-Mix Cropping
73.	Mujtaba Saeed	M	Kot Dhaik, Jehlum	Sesbania seed	Rainfed-Mix Cropping
74.	Malik Sohail	M	Village Gaango, Taxila	Sesbania seed	Rainfed-Mix Cropping
75.	Mushtaq Haider	M	Village Bhallar top	Sesbania seed	Rainfed-Mix Cropping
76.	Afzaal Ahmad	M	Village Garhi Afghana	Sesbania seed	Rainfed-Mix Cropping
77.	Faisal Hayat	M	Surwala, Attock	Sesbania seed	Rainfed-Mix Cropping
78.	Mohsin Khan	M	Surwala, Attock	Sesbania seed	Rainfed-Mix Cropping
79.	Ferman Elahi	M	Surwala, Attock	Sesbania seed	Rainfed-Mix Cropping
80.	Mian Muhammad Abid	M	Surwala, Attock	Sesbania seed	Rainfed-Mix Cropping
81.	Ghulam Haider	M	Kirsal, Chakwal	Sesbania seed	Rainfed-Mix Cropping
82.	Haji Habib Khan	M	Chawli, Chakwal	Sesbania seed	Rainfed-Mix Cropping
83.	Yasir Nawaz	M	Dhudial, Chakwal	Sesbania seed	Rainfed-Mix Cropping
84.	Hamid Ali Khan	M	Salar, Attock	Sesbania seed	Rainfed-Mix Cropping
85.	Dr. Abrar Hussain	M	Doungi, Daultala, Gujar Khan	Sesbania seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
86.	S. Liaqat Shah	M	Doungi, Daultala, Gujar Khan	Sesbania seed	Rainfed-Mix Cropping
87.	S. Iftikhar Hussain	M	Doungi, Daultala, Gujar Khan	Sesbania seed	Rainfed-Mix Cropping
88.	Muhammad Zaheer	M	Khadut, Kahuta	Sesbania seed	Rainfed-Mix Cropping
89.	Changeiz Mansoor	M	Pinaam, Kallar Syedan Rawalpindi	Sesbania seed	Rainfed-Mix Cropping
90.	Demonstrations at NARC	Sesbania seed	Rainfed-Mix Cropping		
91.	Shahid Mahmood	M	Gujjar Katarian, Jehlum	Wheat Seed	Rainfed-Mix Cropping
92.	Muddasir Hussain	M	Gujjar Katarian, Jehlum	Wheat Seed	Rainfed-Mix Cropping
93.	Raja Rabnawaz	M	Kiryala, Jehlum	Wheat Seed	Rainfed-Mix Cropping
94.	Raja Zahidnawaz	M	Kiryala, Jehlum	Wheat Seed	Rainfed-Mix Cropping
95.	Abdul Ghafoor Khan	M	Burra Gawah, Jehlum	Wheat Seed	Rainfed-Mix Cropping
96.	Muhammad Usman	M	Burra Gawah, Jehlum	Wheat Seed	Rainfed-Mix Cropping
97.	Abdul Rehman	M	Hathiya, Jehlum	Wheat Seed	Rainfed-Mix Cropping
98.	Adeel Anwar	M	Doongi, Jehlum	Wheat Seed	Rainfed-Mix Cropping
99.	Shujat Ali	M	Doongi, Jehlum	Wheat Seed	Rainfed-Mix Cropping
100.	Malik Sohail	M	Village Gaango, Taxila	Wheat Seed	Rainfed-Mix Cropping
101.	Muhammad Ayub	M	Village Bal, Taxila	Wheat Seed	Rainfed-Mix Cropping
102.	Mushtaq Haider	M	Village Bhallar top	Wheat Seed	Rainfed-Mix Cropping
103.	Afzaal Ahmad	M	Village Garhi Afghana	Wheat Seed	Rainfed-Mix Cropping
104.	Ali Aksar Awan	M	Village Lab Thatoo, Taxila	Wheat Seed	Rainfed-Mix Cropping
105.	Anwar Khan	M	Garhi Afghana, Taxila	Wheat Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
106.	M. Azam Khan	M	Garhi Afghana, Taxila	Wheat Seed	Rainfed-Mix Cropping
107.	Azam Khan	M	Attock	Wheat Seed	Rainfed-Mix Cropping
108.	Muhammad Arif	M	Akhoori, Attock	Wheat Seed	Rainfed-Mix Cropping
109.	Sajjad Ali	M	Akhoori, Attock	Wheat Seed	Rainfed-Mix Cropping
110.	Muhammad Akram	M	Jand, Attock	Wheat Seed	Rainfed-Mix Cropping
111.	Muhammad Tahir Javid	M	Attock	Wheat Seed	Rainfed-Mix Cropping
112.	Zeeshan Nazir Malik	M	Attock	Wheat Seed	Rainfed-Mix Cropping
113.	Faisal Iqbal Khan	M	Surwala, Attock	Wheat Seed	Rainfed-Mix Cropping
114.	Zaheer Khan	M	Attock	Wheat Seed	Rainfed-Mix Cropping
115.	Ahmed Nawaz	M	Attock	Wheat Seed	Rainfed-Mix Cropping
116.	Mohsin Khan	M	Surwala, Attock	Wheat Seed	Rainfed-Mix Cropping
117.	Zubair Khan	M	Salar, Attock	Wheat Seed	Rainfed-Mix Cropping
118.	Saqlain Ahmed	M	Attock	Wheat Seed	Rainfed-Mix Cropping
119.	Faisal Hayyat	M	Akhoori, Attock	Wheat Seed	Rainfed-Mix Cropping
120.	Muhammad Riyast	M	Attock	Wheat Seed	Rainfed-Mix Cropping
121.	Muhammad Zeeshan Akbar	M	Attock	Wheat Seed	Rainfed-Mix Cropping
122.	Muhammad Sohail Akbar	M	Attock	Wheat Seed	Rainfed-Mix Cropping
123.	Javid Khan	M	Surwala, Attock	Wheat Seed	Rainfed-Mix Cropping
124.	Ghulam Hussain	M	Kirsal, Chakwal	Wheat Seed	Rainfed-Mix Cropping
125.	Ghulam Haider	M	Kirsal, Chakwal	Wheat Seed	Rainfed-Mix Cropping
126.	Haji Habib Khan	M	Chawli, Chakwal	Wheat Seed	Rainfed-Mix Cropping
127.	Muhammad Nawaz	M	Bheen, Chakwal	Wheat Seed	Rainfed-Mix Cropping
128.	Muhammad Pervaiz Ahmad Khan	M	Dhudial, Chakwal	Wheat Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
129.	Yasir Naveed	M	Dhudial, Chakwal	Wheat Seed	Rainfed-Mix Cropping
130.	Sohail Ejaz	M	Dhoke Bhudial, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
131.	Aamir Saleem	M	Dhoke Bhudial, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
132.	Qaiser Mahmood	M	Dhoke Bhudial, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
133.	S. Abrar Hussain	M	Daultala, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
134.	S. Liaqat Shah	M	Daultala, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
135.	S. Iftikhar Hussain	M	Daultala, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
136.	Muhammad Rashid	M	Khadut, Kahuta	Wheat Seed	Rainfed-Mix Cropping
137.	Muhammad Kabeer	M	Khadut, Kahuta	Wheat Seed	Rainfed-Mix Cropping
138.	Muhammad Zaheer	M	Khadut, Kahuta	Wheat Seed	Rainfed-Mix Cropping
139.	Naseer Ahmed	M	Khadut, Kahuta	Wheat Seed	Rainfed-Mix Cropping
140.	Sultan Pervaiz	M	Pinayam, Kallar Syedan Rawalpindi	Wheat Seed	Rainfed-Mix Cropping
141.	Changeiz Mansoor	M	Pinyam, Kallar Syedan Rawalpindi	Wheat Seed	Rainfed-Mix Cropping
142.	Raja Mumtaz Rafeeq	M	Bhikral, Kallar Syedan	Wheat Seed	Rainfed-Mix Cropping
143.	Mr. Hamid Ali Khan	M	Salar, Attock	Wheat Seed	Rainfed-Mix Cropping
144.	Ch. Afrasyab	M	Lilyal, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
145.	Mr. Hamid Ali Khan	M	Salar, Attock	Wheat Seed	Rainfed-Mix Cropping
146.	Muhammad Shafique	M	Kahuta, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
147.	Muhammad Siab	M	Kahuta, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
148.	Muhammad Khalil	M	Kahuta, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
149.	Muhammad Riaz	M	Kahuta, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
150.	Muhammad Munir Ahmed	M	Kahuta, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
151.	Asad Qayyum	M	Taxila, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
152.	Muhammad Imran	M	Taxila, Rawalpindi	Soybean Seed	Rainfed-Mix Cropping
153.	Yasir Mahmood	M	Taxila, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
154.	Mehrab Shah	M	Taxila, Rawalpindi	Mungbean Seed	Rainfed-Mix Cropping
155.	Raja Kashif	M	Taxila, Rawalpindi	Soybean Seed	Rainfed-Mix Cropping
156.	Raja Zahid	M	Taxila, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
157.	Zahoor Ahmad	M	Taxila, Rawalpindi	Mungbean Seed	Rainfed-Mix Cropping
158.	Muhammad Ulfat	M	Taxila, Rawalpindi	Soybean Seed	Rainfed-Mix Cropping
159.	Muhammad Anwar	M	Taxila, Rawalpindi	Mungbean Seed	Rainfed-Mix Cropping
160.	Zaheer Ahmad	M	Taxila, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
161.	Afzaal Ahmad	M	Taxila, Rawalpindi	Soybean Seed	Rainfed-Mix Cropping
162.	Nusrat Mahmood	M	Taxila, Rawalpindi	Soybean Seed	Rainfed-Mix Cropping
163.	Imran Mahmood	M	Taxila, Rawalpindi	Mungbean Seed	Rainfed-Mix Cropping
164.	Kamran Mahmood	M	Taxila, Rawalpindi	Sesbania Seed	Rainfed-Mix Cropping
165.	Akhtar Mahmood	M	Taxila, Rawalpindi	Mungbean Seed	Rainfed-Mix Cropping
166.	Arsalan Khan	M	Fatehjang, Attock	Sesbania Seed	Rainfed-Mix Cropping
167.	Fazal Ameen	M	Fatehjang, Attock	Sesbania Seed	Rainfed-Mix Cropping
168.	Noor Muhammad	M	Fatehjang, Attock	Sesbania Seed	Rainfed-Mix Cropping
169.	Muhammad Khalid	M	Chakwal	Sesbania Seed	Rainfed-Mix Cropping
170.	Haji Naeem Baig	M	Chakwal	Sesbania Seed	Rainfed-Mix Cropping
171.	Askar Bilal	M	Chakwal	Sesbania Seed	Rainfed-Mix Cropping
172.	Painda Khan	M	Chakwal	Sesbania Seed	Rainfed-Mix Cropping
173.	Amjad Javaid	M	Chakwal	Sesbania Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
174.	Waqas Ali Ahmed	M	Kalar Syedian	Sesbania Seed	Rainfed-Mix Cropping
175.	Rab Nawaz	M	Kalar Syedian	Sesbania Seed	Rainfed-Mix Cropping
176.	Huzaifa	M	Kalar Syedian	Sesbania Seed	Rainfed-Mix Cropping
177.	Muhammad Hamza	M	Kalar Syedian	Sesbania Seed	Rainfed-Mix Cropping
178.	Ayaz Ahmed	M	Kalar Syedian	Sesbania Seed	Rainfed-Mix Cropping
179.	Wakalat	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
180.	Abdullah	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
181.	Bashir	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
182.	Jalal Hayat	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
183.	Muhammad Mushtaq	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
184.	Ijaz Ahmed	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
185.	Usman Hussain	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
186.	Dilnawaz	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
187.	Sahibzada	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
188.	Muhammad Siddique Urf Sudheer	M	Hazro/Attock	Soybean Seed	Rainfed-Mix Cropping
189.	Muhammad Anas Hayat Khan	M	Hazro/Attock	Sesbania Seed	Rainfed-Mix Cropping
190.	Shafiqe-ur-Rehman	M	Hazro/Attock	Sesbania Seed	Rainfed-Mix Cropping
191.	Iftikhar Sultan	M	Hazro/Attock	Sesbania Seed	Rainfed-Mix Cropping
192.	Umer Farooq	M	Hazro/Attock	Sesbania Seed	Rainfed-Mix Cropping
193.	Waqas	M	Hazro/Attock	Sesbania Seed	Rainfed-Mix Cropping
194.	Muhammad Nawaz	M	Hazro/Attock	Sesbania Seed	Rainfed-Mix Cropping
195.	Hassan Usman	M	Hazro/Attock	Mungbean Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
196.	Umer Zaman	M	Hazro/Attock	Mungbean Seed	Rainfed-Mix Cropping
197.	Muhammad Sadaqat Khan	M	Hazro/Attock	Mungbean Seed	Rainfed-Mix Cropping
198.	Sajawal	M	Hazro/Attock	Mungbean Seed	Rainfed-Mix Cropping
199.	Waqas	M	Hazro/Attock	Mungbean Seed	Rainfed-Mix Cropping
200.	Ch. M. Saeed	M	Jhelum, Sohawa	Mungbean Seed	Rainfed-Mix Cropping
201.	Shujat Ali	M	Jhelum, Sohawa	Mungbean Seed	Rainfed-Mix Cropping
202.	Adeel Anwar	M	Jhelum, Sohawa	Sesbania Seed	Rainfed-Mix Cropping
203.	Yasir Mehmood	M	Jhelum,Sohawa	Mungbean Seed	Rainfed-Mix Cropping
204.	M. Adil. Saleem	M	Jhelum,Sohawa	Mungbean Seed	Rainfed-Mix Cropping
205.	Abdul Majeed	M	Jhelum, Sohawa	Mungbean Seed	Rainfed-Mix Cropping
206.	M. Sageer	M	Jhelum, Sohawa	Sesbania Seed	Rainfed-Mix Cropping
207.	Junaid Afzal	M	Jhelum, Sohawa	Sesbania Seed	Rainfed-Mix Cropping
208.	Abdul Waheed CH.	M	Jhelum, Sohawa	Sesbania Seed	Rainfed-Mix Cropping
209.	M. Aslam	M	Jhelum, Sohawa	Mungbean Seed	Rainfed-Mix Cropping
210.	Saeed Ahmed	M	Dhoke Bhudal, G. Khan	Sesbania Seed	Rainfed-Mix Cropping
211.	Faisal Sajjad	M	Dhoke Bhudal, G. Khan	Sesbania Seed	Rainfed-Mix Cropping
212.	Syed Ali Hassan	M	Hisaal, Gujar Khan	Sesbania Seed	Rainfed-Mix Cropping
213.	Nawazish Ali	M	Attock	Sesbania Seed	Rainfed-Mix Cropping
214.	Muhammad Mudassar	M	Attock	Sesbania Seed	Rainfed-Mix Cropping
215.	Amjad Mahmood	M	Gujjar Khan	Sesbania Seed	Rainfed-Mix Cropping
216.	Zahid	M	Gujjar Khan	Sesbania Seed	Rainfed-Mix Cropping
217.	Mr. Jibran	M	Takkal, Kallar Syedan	Wheat Seed	Rainfed-Mix Cropping
218.	Mr. Muneer Ahmed	M	Choa Khalisa, Kallar Syedan	Wheat Seed	Rainfed-Mix Cropping

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
219.	Mr. Liaqat Ali	M	Takkal, Kallar Syedan	Wheat Seed	Rainfed-Mix Cropping
220.	Ch. M. Jaleel	M	Dobairan Kalan, Kallar Syedan	Wheat Seed	Rainfed-Mix Cropping
221.	Mr. Faiq Siddiqui	M	Mughal Colony, Sukho, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
222.	Mr. Tariq Hussain	M	Sukho, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
223.	Ch. Afrasyab	M	Baba Fateh, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
224.	Mr. Amjad Mahmood	M	Sukho, Gujar Khan	Wheat Seed	Rainfed-Mix Cropping
225.	Mr. Ghulam Haider	M	Kirsal, Chakwal	Wheat Seed	Rainfed-Mix Cropping
226.	Mr. Aqeel Abbas	M	Kirsal, Chakwal	Wheat Seed	Rainfed-Mix Cropping
227.	Mr. Khizer Hayat	M	Attock	Wheat Seed	Rainfed-Mix Cropping
228.	Mr. Saqib Sohail	M	Akhori, Attock	Wheat Seed	Rainfed-Mix Cropping
229.	Mr. Hamid Ali Khan	M	Salar, Attock	Wheat Seed	Rainfed-Mix Cropping
230.	Mr. Hamid Ali Khan	M	Salar, Attock	Wheat Seed	Rainfed-Mix Cropping
231.	Anees Khan	M	Jatial, Attock	Wheat Seed	Rainfed-Mix Cropping
232.	Mr. Arshad Khan	M	Garhi Afghan, Taxila	Wheat Seed	Rainfed-Mix Cropping
233.	Sajid Khan	M	Bhallar Tope, Taxila	Wheat Seed	Rainfed-Mix Cropping

ii. List of farmers involved in CSA Participatory Research-Rice-Wheat Cropping System

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
1.	Abid Hussain Aulakh	M	Lalupur/ Gujranwala	Seed (Wheat/Rice) Fertilizer Transplantatin	Rice-Wheat
2.	Naseer Bhindar	M	Lalupur/ Gujranwala	Seed (Wheat/Rice) Fertilizer Transplantation	Rice-Wheat
3.	Saif Ullah	M	Wandho / Gujranwala	Seed (Wheat/Rice) Fertilizer Transplantation	Rice-Wheat
4.	Ch. Khalid Mahmood	M	Wandho / Gujranwala	Seed (Wheat/Rice) Fertilizer Transplantation	Rice-Wheat
5.	Muhammad Riaz	M	Lalupur/ Gujranwala	Seed (Wheat/Rice) Fertilizer Transplantation	Rice-Wheat
6.	Jamil Chatta	M	Chak 34, Sheikhupura	Demonstration of Happy Seeder/Super Seeder	Rice-Wheat
7.	Shahzad Ali	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/Super Seeder	Rice-Wheat
8.	Abid Aulakh	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/Super Seeder	Rice-Wheat
9.	Rashid Advocate	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
10.	Saif Ullah	M	Wahndo, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
11.	Sulman Nasir	M	Wahndo, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
12.	Rana Qurban Ali	M	Wahndo, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
13.	Umar Khan	M	Eminabad, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
14.	Sabtain Mahli	M	Eminabad, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
15.	Malik Waseem	M	Eminabad, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
16.	Rana Riasat Ali	M	Nandi Pur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
17.	Rao Ayaz	M	Nandi Pur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
18.	Mian Mushtaq bin Yousaf	M	Tatly Mali Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
19.	M. Ashraf S/O M. Shafi	M	Tatly Mali, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
20.	Haji Zaheer	M	Maryke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
21.	Ch. Safdar Hussain Chatta	M	Alipur Chatta, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
22.	Haji Arshad Seikhu	M	Phalloke, Qila Didar Singh, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
23.	Muhammad Nawaz Mitho	M	Phalloke, Near Canal Pull, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
24.	Bilal Tatla	M	Harchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
25.	Qasim Gujjar	M	Harchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
26.	Jamil Chatta	M	Chak 34, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
27.	Ch. Imtiaz Chatta	M	Chak 34, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
28.	Ijaz Chatta	M	Chak 34, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
29.	Shahzad Ali	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
30.	Abdullah Riasat	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
31.	Muhammad Nawaz	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
32.	Muhammad Afzal	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
33.	Anayat Gujjar	M	Baghdad, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
34.	Usman Aslam	M	Baghdad, Sheikhupura	Demonstration of Happy Seeder/Super Seeder	Rice-Wheat
35.	Shakeel Ahmed	M	Baghdad, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
36.	Munir Ahmed	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
37.	Amanat Ali	M	Alipur Tiba, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
38.	Abid Aulakh	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
39.	Rashid Advocate	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
40.	Nasir Bhinder	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
41.	Maqsood Bhinder	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
42.	Muhammad Riaz	M	Lalupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
43.	Umar Khan	M	Eminabad, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
44.	Sabtain Mali	M	Eminabad, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
45.	Mian Mushtaq Bin Yusaf	M	Tatly Mali, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
46.	Muhammad Imran	M	Tatly Mali, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
47.	Usman Dilshad Khan	M	Tatly Mali, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
48.	Dr. Naeem	M	Tatly Mali, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
49.	Haji Zaheer	M	Maryke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
50.	Rao Ayaz	M	Nandi Pur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
51.	Rana Riasat Ali	M	Nandi Pur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
52.	Muhammad Akram	M	Nandipur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
53.	Haji Arshad Seikhu	M	Qila Didar Singh, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
54.	Zubair Seikhu	M	Phalloke, Qila Didar Singh, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
55.	Muhammad Nawaz Mitho	M	Phalloke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
56.	Qasim Gujjar	M	Harchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
57.	Bilal Tatla	M	Harchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
58.	Akram Gujjar	M	Herchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
59.	Ehsan Ullah	M	Herchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
60.	Munir Jagh	M	Harchoke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
61.	Ch. Muhammad Nawaz	M	Hamboke, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
62.	Rana Shahzad	M	Baghdad, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
63.	Muhammad Yousaf	M	Baghdad, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
64.	Mr. Nasir	M	Kalaske, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
65.	Mirza Zaheer	M	Kalaske, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
66.	Fiaz Ahmed Proya	M	Kot Proya, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
67.	Haji Iftikhar Ahmed	M	Kot Proya, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
68.	Ehsan Ullah Meher	M	Kot Proya, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
69.	Dawood Iqbal	M	Kalaske, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
70.	Ghazanfar Ali	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
71.	Fiaz Akram	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
72.	Hassan Cheema	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
73.	Faisal Cheema	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
74.	Azhar Abbass	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
75.	Ali Raza	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
76.	Ijaz Ahmed	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
77.	Muhammad Iqbal	M	Bhoma Bath, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
78.	Muhammad Arshad	M	Hardupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
79.	Zia Ullah	M	Hardupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
80.	Muhammad Rashid	M	Hardupur, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
81.	Adnan Ashraf	M	Laweray, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
82.	Irfan Ashraf	M	Laweray, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
83.	Rafaqat Ali	M	Laweray, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
84.	Mr. Sufyan	M	Laweray, Gujranwala	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
85.	PARC KSK Farm		KSK, Lahore	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
86.	Jamil Chatta	M	Chak 34, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
87.	Ch. Imtiaz Chatta	M	Chak 34, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
88.	Shahzad Ali	M	Seikhum, Sheikhupura	Demonstration of Happy Seeder/ Super Seeder	Rice-Wheat
89.	Muhammad Nawaz	M	Seikhum, Sheikhupura	Demonstration of DSR/AWD techniques	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
90.	Muhammad Afzal	M	Seikhum, Sheikhupura	Demonstration of DSR/AWD techniques	Rice-Wheat
91.	Muhammad Yousaf	M	Baghdad, Sheikhupura	Demonstration of DSR/AWD techniques	Rice-Wheat
92.	Rana Shahzad	M	Baghdad, Sheikhupura	Demonstration of DSR/AWD techniques	Rice-Wheat
93.	Haroon Bhatti	M	UC Kakar Gill, Sheikhupura	Demonstration of DSR/AWD techniques	Rice-Wheat
94.	Inam Ullah Bhutta	M	Near Darbar, Chandhali, Sadhoke	Demonstration of DSR/AWD techniques	Rice-Wheat
95.	Safdar Dogar	M	Near Tower, Chandhali, Sadhoke	Demonstration of DSR/AWD techniques	Rice-Wheat
96.	Muhammad Mehmood	M	Tamboli, Sadhoke	Demonstration of DSR/AWD techniques	Rice-Wheat
97.	Ehsan Ullah Aulakh	M	Lalupur Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
98.	Rana Sagheer Ahmed	M	Lalupur Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
99.	Nasir Bhinder	M	Lalupur Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
100.	Qudrat Ullah Aulakh	M	Lalupur Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
101.	Rashi Advocate	M	Lalupur, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
102.	Muhammad Zafar	M	Lalupur, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
103.	Haji Zaheer	M	Tatly Aali Road Mari Khurd, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
104.	Usman Dilshad Khan	M	Tatly Mali, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
105.	Noor Ahmed	M	Nandpur, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
106.	Fiaz Ahmed Proya	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
107.	Naveed Ahmed Proya	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
108.	Sabir Proya	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
109.	Ehsah Ullah	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
110.	Sajjad Ahmed Proya	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
111.	Jamsheer Ali	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
112.	Shamshad Ali	M	Kot Proya, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
113.	Mr. Nasir	M	Kot Bary Khan, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
114.	Zaheer Ahmed Baigh	M	Kot Bary Khan, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
115.	Muhammad Zaman Cheema	M	Bhoma Bath, Gujranwala	Demonstration of DSR/AWD techniques	Rice-Wheat
116.	M. Nawaz Buth	M	Bhoma Bath, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
117.	Muhammad Fiaz Cheema	M	Bhoma Bath, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
118.	Azher Abbass Cheema	M	Bhoma Bath, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
119.	Hassan Nawaz Cheema	M	Bhoma Bath, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
120.	Adnan Qadri	M	Kaler Ucha, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
121.	Azhar Kaler	M	Kaler, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
122.	Mazhar Kaler	M	Kaler, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
123.	Irfan Kaler	M	Kaler, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
124.	Malik Arif	M	Kaler, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
125.	Qasim Chatta	M	Bucha Chatha, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
126.	Zulfiqar jug	M	Dakan Pura, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
127.	Asghar Virk	M	Kasoke, Kamoke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
128.	Mr. Adnan Wasir	M	Molanke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
129.	Master M. Afzal Chatta	M	Molanke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
130.	Shoukat Cheema	M	Muncher Chatta, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
131.	Naveed Anjum	M	Alipur Chatta, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
132.	Yasir Warraich	M	Bajo Mal Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
133.	Nasir Ahmed	M	Baig Chak, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
134.	Nasir Chatha	M	Pandoke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
135.	Master Irfan Raja	M	Verpal Chatha, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
136.	Muhammad Ilyas	M	Kahalakpur, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
137.	Muhammad Tayyab	M	Saharan Chatta, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
138.	Sufyan	M	Gillwala, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
139.	Ashfaq	M	Gaywala Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
140.	Haji Dar	M	Harchoke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
141.	Akram Gujjar	M	Harchoke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
142.	Haji M. Qurban Dogar	M	Hazrat Kalianwala, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
143.	Abdul Raheem Tabani	M	Jokhian Jamke, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
144.	Zahid Nawaz Proya	M	Kalaske, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
145.	Master Ijaz Ahmed Cheema	M	Bhoma Bath, Gujranwala	Demonstration of MTR/CTR	Rice-Wheat
146.	Ali Hassan	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
147.	Muhammad Nadeem	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
148.	Ali Raza	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
149.	Amir Shehzad	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
150.	Rai Ali Raza	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
151.	Rai Arshad	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
152.	Rai Nasrullah	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
153.	Rai Sajid	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
154.	Riasat Ali Foji	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
155.	Arshad Maseh	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
156.	Abid Ali	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
157.	Rafaqat Ali	M	Tunday Guru, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
158.	Shamshair Ali	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
159.	Asif Iqbal	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
160.	Sana Ullah	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
161.	Haseeb Ullah	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
162.	Zahid Abbas	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
163.	Muhammad Fazil	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
164.	Ghareeb Alam	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
165.	Javed Iqbal Bhatti	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
166.	Muhammad Abbas	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
167.	Mudassir Ali	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
168.	Nasir Nadeem	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
169.	Muzaffar Alam Bhatti	M	Gajiana Nau, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
170.	M Haroon Bhatti	M	Bohar Baath, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
171.	Ghulam Mustafa	M	Bohar Baath, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
172.	Zafar Iqbal	M	Bohar Baath, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
173.	Bakhtiar Ahmad	M	Bohar Baath, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
174.	Usman Zulfiqar	M	Bohar Baath, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
175.	Muhammad Afzal	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
176.	Zafar Ullah Khan	M	Gopi Rai, Sheikhupura	Advisory services and necessary input for demonstration of selected techniques	Rice-Wheat
177.	Adnan Ali	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
178.	Wasif Nawaz	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
179.	Riaz Ahmad	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
180.	Muhammad Waqas	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
181.	Muhammad Yaqoob	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
182.	Ali Asad	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
183.	Muhammad Khan	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
184.	Abdul Ali	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
185.	Muhammad Rafique	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
186.	Khuda Bakhash	M	Gopi Rai, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
187.	Sarfraz Hussain	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
188.	Abdul Aleem	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
189.	Muhammad Shafique	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
190.	Anwar Behzad	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
191.	Amjid Ali	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
192.	M Tayyab Younis	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
193.	Adeel	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
194.	Rana Farooq Khan	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
195.	Saifullah	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
196.	Ghulam Murtaza	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
197.	Kamran	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
198.	Rizwan Aleem	M	Mirza Virkan, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
199.	Sagheer Bhatti	M	Baigpur, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
200.	Bashir Ahmed	M	Baigpur, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
201.	Nazir Ahmed	M	Baigpur, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
202.	M Ehsan Bajwa	M	Baigpur, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
203.	Awais	M	Baigpur, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
204.	M Anwar	M	Khairpur Malian, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
205.	Ahmad Raza	M	Khairpur Malian, Sheikhupura	Demonstration of MTR/CTR	Rice-Wheat
206.	Jamil Chatta	M	Chak 34, Sheikhupura	Super Seeder	Rice-Wheat
207.	Ch. Imtiaz Chatta	M	Chak 34, Sheikhupura	Super Seeder	Rice-Wheat
208.	Shahzad Ali	M	Seikhum, Sheikhupura	Super Seeder	Rice-Wheat
209.	Muhammad Nawaz	M	Seikhum, Sheikhupura	Super Seeder	Rice-Wheat
210.	Muhammad Afzal	M	Seikhum, Sheikhupura	Super Seeder	Rice-Wheat
211.	Muhammad Yousaf	M	Baghdad, Sheikhupura	Super Seeder	Rice-Wheat
212.	Rana Shahzad	M	Baghdad, Sheikhupura	Zero tillage	Rice-Wheat
213.	Haroon Bhatti	M	UC Kakar Gill, Sheikhupura	Super Seeder	Rice-Wheat
214.	Inam Ullah Bhutta	M	Near Darbar, Chandhali, Sadhoke	Super Seeder	Rice-Wheat
215.	Safdar Dogar	M	Near Tower, Chandhali, Sadhoke	Zero tillage	Rice-Wheat
216.	Muhammad Mehmood	M	Tamboli, Sadhoke	Zero tillage	Rice-Wheat
217.	Ehsan Ullah Aulakh	M	Lalupur Gujranwala	Happy Seeder/Super Seeder and Zero Tillage	Rice-Wheat
218.	Rana Sagheer Ahmed	M	Lalupur Gujranwala	Zero-till Drill	Rice-Wheat
219.	Nasir Bhinder	M	Lalupur Gujranwala	Zero-till Drill	Rice-Wheat
220.	Qudrat Ullah Aulakh	M	Lalupur Gujranwala	Zero-till Drill	Rice-Wheat
221.	Rashid Advocate	M	Lalupur, Gujranwala	Zero-till Drill	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
222.	Muhammad Zafar	M	Lalupur, Gujranwala	Super Seeder	Rice-Wheat
223.	Haji Zaheer	M	Tatly Aali Road Mari Khurd, Gujranwala	Zero-till Drill	Rice-Wheat
224.	Usman Dilshad Khan	M	Tatly Mali, Gujranwala	Zero-till Drill	Rice-Wheat
225.	Noor Ahmed	M	Nandpur, Gujranwala	Zero-till Drill	Rice-Wheat
226.	Fiaz Ahmed Proya	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
227.	Naveed Ahmed Proya	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
228.	Sabir Proya	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
229.	Ehsah Ullah	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
230.	Sajjad Ahmed Proya	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
231.	Jamsheer Ali	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
232.	Shamshad Ali	M	Kot Proya, Gujranwala	Super Seeder	Rice-Wheat
233.	Mr. Nasir	M	Kot Bary Khan, Gujranwala	Super Seeder	Rice-Wheat
234.	Zaheer Ahmed Baigh	M	Kot Bary Khan, Gujranwala	Super Seeder	Rice-Wheat
235.	Muhammad Zaman Cheema	M	Bhoma Bath, Gujranwala	Super Seeder	Rice-Wheat
236.	M. Nawaz Buth	M	Bhoma Bath, Gujranwala	Super Seeder	Rice-Wheat
237.	Muhammad Fiaz Cheema	M	Bhoma Bath, Gujranwala	Super Seeder	Rice-Wheat
238.	Azher Abbass Cheema	M	Bhoma Bath, Gujranwala	Super Seeder	Rice-Wheat
239.	Hassan Nawaz Cheema	M	Bhoma Bath, Gujranwala	Zero-till Drill	Rice-Wheat
240.	Adnan Qadri	M	Kaler Ucha, Gujranwala	Super Seeder	Rice-Wheat
241.	Azhar Kaler	M	Kaler, Gujranwala	Super Seeder	Rice-Wheat
242.	Mazhar Kaler	M	Kaler, Gujranwala	Super Seeder	Rice-Wheat
243.	Irfan Kaler	M	Kaler, Gujranwala	Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
244.	Malik Arif	M	Kaler, Gujranwala	Super Seeder	Rice-Wheat
245.	Qasim Chatta	M	Bucha Chatha, Gujranwala	Super Seeder	Rice-Wheat
246.	Zulifqar jug	M	Dakan Pura, Gujranwala	Zero-till Drill	Rice-Wheat
247.	Asghar Virk	M	Kasoke, Kamoke, Gujranwala	Super Seeder	Rice-Wheat
248.	Mr. Adnan Wasir	M	Molanke, Gujranwala	Super Seeder	Rice-Wheat
249.	Master M. Afzal Chatta	M	Molanke, Gujranwala	Super Seeder, Zero-till Drill	Rice-Wheat
250.	Shoukat Cheema	M	Muncher Chatta, Gujranwala	Super Seeder	Rice-Wheat
251.	Naveed Anjum	M	Alipur Chatta, Gujranwala	Super Seeder	Rice-Wheat
252.	Yasir Warraich	M	Bajo Mal Gujranwala	Super Seeder	Rice-Wheat
253.	Nasir Ahmed	M	Baig Chak, Gujranwala	Zero-till Drill	Rice-Wheat
254.	Nasir Chatha	M	Pandoke, Gujranwala	Super Seeder	Rice-Wheat
255.	Master Irfan Raja	M	Verpal Chatha, Gujranwala	Zero-till Drill	Rice-Wheat
256.	Muhammad Ilyas	M	Kahalakpur, Gujranwala	Super Seeder	Rice-Wheat
257.	Muhammad Tayyab	M	Saharan Chatta, Gujranwala	Super Seeder	Rice-Wheat
258.	Sufyan	M	Gillwala, Gujranwala	Super Seeder	Rice-Wheat
259.	Ashfaq	M	Gaywala Gujranwala	Super Seeder	Rice-Wheat
260.	Haji Dar	M	Harchoke, Gujranwala	Super Seeder	Rice-Wheat
261.	Akram Gujjar	M	Harchoke, Gujranwala	Zero-till Drill	Rice-Wheat
262.	Haji M. Qurban Dogar	M	Hazrat Kalianwala, Gujranwala	Super Seeder	Rice-Wheat
263.	Abdul Raheem Tabani	M	Jokhian Jamke, Gujranwala	Super Seeder	Rice-Wheat
264.	Zahid Nawaz Proya	M	Kalaske, Gujranwala	Super Seeder	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
265.	Master Ijaz Ahmed Cheema	M	Bhoma Bath, Gujranwala	Super Seeder	Rice-Wheat
266.	Jamil Chatha	M	Chak 34, Sheikhupura	AWD Demonstration	Rice-Wheat
267.	Ch. Imtiaz Chatha	M	Chak 34, Sheikhupura	AWD Demonstration	Rice-Wheat
268.	Ijaz Chatta	M	Chak 34, Sheikhupura	AWD Demonstration	Rice-Wheat
269.	Shahzad Ali	M	Seikhum, Sheikhupura	AWD Demonstration	Rice-Wheat
270.	Abdullah Riasat	M	Seikhum, Sheikhupura	AWD Demonstration	Rice-Wheat
271.	Muhammad Nawaz	M	Seikhum, Sheikhupura	AWD Demonstration	Rice-Wheat
272.	Muhammad Afzal	M	Seikhum, Sheikhupura	AWD Demonstration	Rice-Wheat
273.	Anayat Gujjar	M	Baghdad, Sheikhupura	AWD Demonstration	Rice-Wheat
274.	Usman Aslam	M	Baghdad, Sheikhupura	AWD Demonstration	Rice-Wheat
275.	Shakeel Ahmed	M	Baghdad, Sheikhupura	AWD Demonstration	Rice-Wheat
276.	Munir Ahmed	M	Seikhum, Sheikhupura	AWD Demonstration	Rice-Wheat
277.	Amanat Ali	M	Alipur Tiba, Sheikhupura	AWD Demonstration	Rice-Wheat
278.	Abid Aulakh	M	Lalupur, Gujranwala	AWD Demonstration	Rice-Wheat
279.	Rashid Advocate	M	Lalupur, Gujranwala	AWD Demonstration	Rice-Wheat
280.	Nasir Bhinder	M	Lalupur, Gujranwala	AWD Demonstration	Rice-Wheat
281.	Maqsood Bhinder	M	Lalupur, Gujranwala	AWD Demonstration	Rice-Wheat
282.	Muhammad Riaz	M	Lalupur, Gujranwala	AWD Demonstration	Rice-Wheat
283.	Umar Khan	M	Eminabad, Gujranwala	AWD Demonstration	Rice-Wheat
284.	Sabtain Mali	M	Eminabad, Gujranwala	AWD Demonstration	Rice-Wheat
285.	Mian Mushtaq Bin Yousaf	M	Tatly Mali, Gujranwala	AWD Demonstration	Rice-Wheat
286.	Muhammad Imran	M	Tatly Mali, Gujranwala	AWD Demonstration	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
287.	Usman Dilshad Khan	M	Tatly Mali, Gujranwala	AWD Demonstration	Rice-Wheat
288.	Dr. Naeem	M	Tatly Mali, Gujranwala	AWD Demonstration	Rice-Wheat
289.	Haji Zaheer	M	Maryke, Gujranwala	AWD Demonstration	Rice-Wheat
290.	Rao Ayaz	M	Nandi Pur, Gujranwala	AWD Demonstration	Rice-Wheat
291.	Rana Riasat Ali	M	Nandi Pur, Gujranwala	AWD Demonstration	Rice-Wheat
292.	Muhammad Akram	M	Nandipur, Gujranwala	AWD Demonstration	Rice-Wheat
293.	Haji Arshad Seikhu	M	Qila Didar Singh, Gujranwala	AWD Demonstration	Rice-Wheat
294.	Zubair Seikhu	M	Phalloke, Qila Didar Singh, Gujranwala	AWD Demonstration	Rice-Wheat
295.	Muhammad Nawaz Mitho	M	Phalloke, Gujranwala	AWD Demonstration	Rice-Wheat
296.	Qasim Gujjar	M	Harchoke, Gujranwala	AWD Demonstration	Rice-Wheat
297.	Bilal Tatla	M	Harchoke, Gujranwala	AWD Demonstration	Rice-Wheat
298.	Akram Gujjar	M	Herchoke, Gujranwala	AWD Demonstration	Rice-Wheat
299.	Ehsan Ullah	M	Herchoke, Gujranwala	AWD Demonstration	Rice-Wheat
300.	Munir Jagh	M	Harchoke, Gujranwala	AWD Demonstration	Rice-Wheat
301.	Ch. Muhammad Nawaz	M	Hamboke, Gujranwala	AWD Demonstration	Rice-Wheat
302.	Rana Shahzad	M	Baghdad, Sheikhupura	AWD Demonstration	Rice-Wheat
303.	Muhammad Yousaf	M	Baghdad, Sheikhupura	AWD Demonstration	Rice-Wheat
304.	Mr. Nasir	M	Kalaske, Gujranwala	AWD Demonstration	Rice-Wheat
305.	Mirza Zaheer	M	Kalaske, Gujranwala	AWD Demonstration	Rice-Wheat
306.	Fiaz Ahmed Proya	M	Kot Proya, Gujranwala	AWD Demonstration	Rice-Wheat
307.	Haji Iftikhar Ahmed	M	Kot Proya, Gujranwala	AWD Demonstration	Rice-Wheat
308.	Ehsan Ullah Meher	M	Kot Proya, Gujranwala	AWD Demonstration	Rice-Wheat

Sr. No	Name of the Farmer	Gender	Village/ Locality	Support/ Input provided	Cropping System**
309.	Dawood Iqbal	M	Kalaske, Gujranwala	AWD Demonstration	Rice-Wheat
310.	Ghazanfar Ali	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
311.	Fiaz Akram	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
312.	Hassan Cheema	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
313.	Faisal Cheema	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
314.	Azhar Abbass	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
315.	Ali Raza	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
316.	Ijaz Ahmed	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
317.	Muhammad Iqbal	M	Bhoma Bath, Gujranwala	AWD Demonstration	Rice-Wheat
318.	Muhammad Arshad	M	Hardupur, Gujranwala	AWD Demonstration	Rice-Wheat
319.	Zia Ullah	M	Hardupur, Gujranwala	AWD Demonstration	Rice-Wheat
320.	Muhammad Rashid	M	Hardupur, Gujranwala	AWD Demonstration	Rice-Wheat
321.	Adnan Ashraf	M	Laweray, Gujranwala	AWD Demonstration	Rice-Wheat
322.	Irfan Ashraf	M	Laweray, Gujranwala	AWD Demonstration	Rice-Wheat
323.	Rafaqat Ali	M	Laweray, Gujranwala	AWD Demonstration	Rice-Wheat

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