Agricultural training for Pakistan's rural women

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Summary

While women play an equally important role as men in Pakistan's farming systems, they typically have little access to information on modern farming techniques due to cultural rules that prevent them interacting with male agricultural extension staff. In 2013 and 2014, CABI initiated farmer training activities specifically targeting women in two areas of the country: Gilgit-Baltistan in the high north, and southern Punjab in the flatter central part of Pakistan. In the north, CABI worked with a local development project to set up farmer field schools for both men and women; these focused on production of tomatoes and dairy livestock. In southern Punjab, CABI's Skills for Farms project ran a series of three-month, village-based training courses in kitchen gardening and grain storage, targeting women between 16 and 35 years old. In each case, the training courses were designed to focus on household farming activities that are typically the responsibility of women.

In Punjab, attitudes towards the training of women had become more positive following the floods of 2010, when numerous development organisations set up support programmes in the area to help communities restore their livelihoods. In Gilgit-Baltistan, there was much greater initial scepticism and criticism of women's involvement in the field schools. However, after the first batch of trainees was seen to make significant progress in their farming knowledge and practices, community attitudes to the programme were transformed. Women's influence and respect within their households also improved. Prior to the training, less than 5% of women interviewed in southern Punjab reported having a say in household spending decisions; that figure rose to almost 50% after the training. Beyond the household, trained women have also become more respected in their communities as a source of knowledge on modern agricultural practice. Importantly, impact research has also revealed different responses among women and men in adopting the new farming methods. In Gilgit-Baltistan, all women trainees were found to be earning more money from their tomato and dairy activities, which they had significantly increased following the training. Men, in contrast, were less interested in the production aspects of the training, which they tended to pass on to female household members, and were more interested in 'monetising' the training, through the marketing skills they were taught. This

finding will help to guide future training work, in selecting appropriate activities for either men or women, according to their roles within their household farming system. Other lessons that can guide CABI's work include: the value to families of training women; the trade-offs between targeting more educated women (of at least 8th Grade) or having mixed groups of educated and uneducated women, in order to maximise the training benefits; the need to encourage provincial agricultural departments to increase their numbers of female extension staff; and the value of working in partnership with local rural development programmes.

Key highlights – Punjab

- Only women with at least 8 years of schooling were trained and this led to the community having a greater appreciation of the households who ensured education for girls. Trained women – especially younger unmarried girls – became a lot more confident after the training.
- Twenty nine percent of women interviewed translated kitchen gardening into income through sales of vegetables and 18% increased their contribution to household expenses, through savings made by growing rather than buying vegetables.
- The number of women able to influence household spending decisions rose significantly following the training, from less than 5% to almost 50%.
- Prior to the kitchen gardening training, home-grown vegetables constituted just 7% of average family diets among trainees in Punjab. This rose to 20% after the training, with 97% of the women reporting an increase in the use of vegetables in their households after the training when specifically asked. In focus group discussions held after the project, all the participants agreed that they and their households had more and healthier food having replaced market-bought vegetables and pulses with home-grown vegetables. Vegetables available in local markets were often stale, rotten or of low quality, they reported. They also felt they had more independence in deciding what to cook, as they were not dependent on male family members buying vegetables for them from markets.

Key highlights – Gilgit-Baltistan

- Eighty per cent of women trainees were uneducated or had received only Madrassa training. Women supported each other in tightly-knit training groups, with the few educated women helping the others to understand the more technical aspects. As a result, the women were seen to be both more interested and learn more from the training than the men (43% of whom had higher education), and successfully apply what they learned.
- Families benefited differently from the training, according to whether a woman or a man in the family had been trained. Men only directly applied the marketing skills they had learned, passing on the production skills, whether for tomatoes or dairy, to the women in the household.
- All of those who received tomato production training reported selling tomatoes and tomato products. Tomatoes became the sole source of income for half of the women, whereas for men tomatoes were just one of their sources of income. 50-60% of the dairy production trainees reported selling milk and milk products as one of their sources of income. Earnings increased more for women compared to men: 70% of women earned more from tomato production compared to 30% of men; 32% of women earned more from dairy production compared to 10% of men. In addition, the dairy training led to significant reductions (31-36%) in spending on dairy products for the trained households. Savings on tomato expenditure were greater for households of women trainees (34%) compared to men (14%) in households that received tomato production training.
- There was no significant change for women in terms of decision-making on household income, although most women (73%) noticed a change in behaviour towards them within the household, following the training, with a majority of these mentioning that they were more respected and their advice on spending money was asked for. In terms of spending of personal income, most of the women (70%) spent the money on the household and children's education, and just 5% reported

using the money to buy things for themselves. Among the male trainees, 55% spent the money they earned on the household, while 20% said they used it to buy personal items.

- Households of trainees who had received training in dairying claimed they were eating more processed dairy products such as butter, ghee and yoghurt, as they had greater milk production; this included women and children in the households. They were also able to buy more food, through having increased income. Similarly, the tomato-producing households were eating more tomatoes and were able to buy more and better food using their income from tomato sales. This included buying vegetables from the market during winter which they were unable to do before the training. Increased use of tomatoes improved the taste of household foods encouraging children to eat more; having fresher tomatoes rather than those from the market (brought from lower-lying areas of Pakistan) also reduced the incidence of food-borne diseases, according to the focus group participants.

Context

Agriculture is the mainstay of Pakistan's economy. It engages nearly half of the country's workforce and accounts for over 20% of GDP, with women playing an equally important role as men. Together with agro-based products, agriculture contributes 80% of the country's total export earnings. But despite the economic importance of agriculture, many young people and women have little access to information that could help them improve their farming careers and livelihoods. Each year, the number of young people and women choosing to farm for a living is going down. Left unchecked, this reduction in the farming workforce will affect the future of sustainable food production and, ultimately, food security in Pakistan.

For research and development organisations like CABI, working with women farmers in Pakistan poses challenges, not least because while agricultural extension and development staff are predominantly male, women are seldom allowed to interact with men outside their family for cultural reasons. As a result of this, in working with various partners in Pakistan to train farmers and improve agricultural production, the majority of CABI's activities have taken place with men. Some training activities have, however, focused on women. High on the Tibetan plateau in the north of Pakistan, a farmer field school programme has been training women farmers in tomato production and dairying. Meanwhile in southern Punjab, towards the centre of the country, a second programme has been training young women in kitchen gardening and stored grain management.

In 2014, CABI commissioned an impact study in order to learn lessons on the effectiveness of these training programmes, in terms of their social and economic impacts on the lives of the women and men who took part. These lessons will be used to design further interventions to improve agricultural productivity, based on an improved understanding of gender roles and responsibilities. The two study

areas represented widely contrasting conditions for resident farmers. Skardu, in the northern province of Gilgit-Baltistan, has a higher level of development than other similar remote, mountainous areas of Pakistan thanks to extensive development work carried out by the Aga Khan Rural Support Program (AKRSP). In contrast, Muzaffargarh in southern Punjab is a riverine district which is prone to repeated floods and marked by high rates of poverty and population density and low levels of education.

Majida Parveen, a young woman from Muzaffargarh, trained under CABI's Skills for Farms project, illustrates the challenges facing her peer group. Most people in her village live on low income and have limited access to education. Her own father has worked as a labourer for more than 30 years, but has seen regular employment steadily diminish over the last two years. With the family struggling to make an income, Majida decided to leave her schooling and take work as a seamstress in order to support her family. But work has been irregular, and without education and skills her chance of finding well paid, regular employment are limited.

As a woman in rural Pakistan, Majida might easily be regarded as marginalised from decision-making power within her family and community. However, gender dynamics within the country are complex and changing. Within a household, decision-making power normally rests with an 'elder', who could be male or female, with female heads of household quite common. Thus, women do sometimes command positions of power within a family, more so if they are educated. This has become more apparent over the last decade as the number of educated wives and mothers has increased following improved education and health opportunities for women. Inflation and higher living costs have also encouraged men to let women in the family participate in household earnings, expenses and savings.

What did we do?

The training programmes in Punjab and Gilgit-Baltistan were not identical, but focused on different crops and farming practices, as appropriate to the particular region. In Muzaffargarh district, Punjab, the programme set out to train 500 young women in kitchen gardening and stored grain management. This work was able to build on earlier CABI-supported training on kitchen gardening which was carried out in the area after the devastating floods of 2010. At that time, there were over 300 NGOs working in different villages, and people's need for support was so great that traditionally cautious attitudes about allowing women to attend training were partially overcome. In 2013, in preparing for its Skills for Farms training programme, CABI was also able to recruit female trainers who had been involved in this earlier work, and who thus had experience of training women.

Skills for farms in South Punjab: Kitchen gardening and grain storage

In 2013, with funding from the Punjab Skills Development Fund (PSDF), CABI launched the Skills for Farms project, establishing a support office and five training centres in five villages of Muzaffargarh district. Each training centre hosted groups of 25 women, recruited from the five villages. These were nominated by senior figures in each community in accordance with several criteria: being between 15 and 35 years old; having achieved 8$_{th}$ grade at school (i.e. in education up to around 15-16 years); and ideally coming from the poorest families. The first batch of 123 young women was trained over a three-month period between September and December 2013, with the participants receiving a stipend of 3000 to 4000 rupees (US$50-65) per month. A second batch, of 125, undertook the training from January to March 2014. A further two batches of trainees brought the total number to 500 by the end of the project.

Two courses were delivered under the training, both selected as being typical areas of women's responsibility in farming households; each participant took one of the two courses offered. The kitchen gardening course included identifying good quality seed, appropriate use of water and fertiliser, soil preparation, and pest, disease and weed management. A course on management of stored grain studied insect pest life cycles and modes of damage, effective storage planning, and adaptation of appropriate management methods to reduce grain losses.

While training for men typically takes place in the field, with trainers and trainees working together on practical activities, training for the young women needed to be planned differently. Practical activities were carried out inside the training centre using models, or else in gardens close to the training centre.

The participants were encouraged to practise their new skills at home, but were not required to do this in the presence of male trainers or field assistants. At the end of the course, participants sat an exam

adjudicated by the University of Arid Agriculture, Rawalpindi, and received a certificate to confirm their learning.

Satpara Development Project in Gilgit-Baltistan: tomatoes and dairy management

CABI's work in Gilgit-Baltistan has taken place near the small city of Skardu, under the Satpara Development Project (SDP). It has contributed to a component of the SDP which focusses on enhancing productivity and adding value to agriculture through the introduction of modern farming techniques, and the encouragement of private sector involvement for better processing and marketing of value-added products. CABI was contracted by the Aga Khan Foundation to train 15 farmer field school facilitators for the running of field schools on tomato, vegetable seed and dairy livestock production. The project aims to set up 30 schools in order to train 600 farmers by the end of 2016, with men and women attending separate field schools.

To support the establishment and running of the women's schools, CABI recruited three female trainers who had previously trained women under a CABI programme in Kashmir. Male facilitators were also able to work with the women participants, provided husbands gave their permission. Unlike the Skills for Farms project in Punjab, the SDP training set no minimum education level for participants. Eighty percent of the women who attended the training were uneducated or had received madrassa education only. This was in sharp contrast to the male participants, 43% of whom had undertaken higher education, at either Bachelors or Masters level.

Between September 2013 and October 2014, 339 participants (251 women and 88 men) were trained in the farmer field schools. Five of the schools focused on tomato growing and seed production, training 87 women and 15 men. Ten schools focused on animal husbandry and dairy production, training 164 women and 73 men. Each of the women's schools was conducted at village level, training approximately 20 women over a six-month period. Using the normal farmer field school approach, the

training was participatory and practically oriented, with the participants primarily learning by doing. The livestock schools focused on animal husbandry, animal health and nutrition, while the tomato schools covered seed management, crop production (management of soil, water, pests etc.), post-harvest management and marketing.

What impact was achieved?

One immediate impact of the training was a change in attitude among both men and women towards the training process itself. In Muzaffargarh, initial male hesitance in allowing women to attend the training was replaced by strong approval for the process, once the success of the first group of trainees became apparent. In Skardu, the first batch of women participants were reluctant to fully engage in the training, for example by volunteering to take part in practical activities. This situation improved markedly among the second batch, who were keen volunteers. Similar changes in attitude also took place at community level. In Skardu, some household heads faced severe criticism for allowing their women to be trained, but subsequently gained community approval when the training was deemed a success.

Feedback on the three-month kitchen gardening training in Muzaffargarh was overwhelmingly positive, according to CABI's gender impact study, completed in December 2014. All those surveyed had implemented the training in their homes, with 29% of women interviewed having generated income through sales of vegetables, either from their homes or in the markets. Najma Shaheen, for example, who runs a canteen in a girls' high school in Mouza Budh, has started supplying vegetables for the canteen from her own garden. This has brought nutritional benefits for the students as well as financial rewards for her.

Similarly in Skardu, all surveyed participants of the tomato production training reported to be selling tomatoes and tomato products either from home or in the markets; over half the dairy production trainees reported to be selling milk and milk products. In addition to improved income, women also reported gaining greater access to household resources such as land. In the case of Majida from Muzaffargarh, her father set aside 2 acres of land, on which they now work together growing a selection of local vegetables. "I am playing my part to make food security in my family and village a reality," she says. "I no longer need to work as a seamstress, and am back in education."

In focus group discussions, women in Muzaffargarh were excited that they had gained significant knowledge and technical skills through the training. While most had already been growing vegetables in their homes, after the training they reported growing a wider range and increasing their yields, enough to share with family or friends, or sometimes sell. But the increase in women's technical skills also made a significant difference to their standing and participation in decision-making within the household. Prior to the training, less than 5% of women in Muzaffargarh reported having a say in household expense decisions, but that figure rose to almost 50% after the training. There was also an increase (from 22% to 52%) in the percentage of women who no longer required permission from a male family member in order to leave their house, although most of these women also stated that they chose not to leave their homes, continuing to adhere to their culture. In Skardu, there was no measurable change in women's mobility, although in both areas, mobile phone ownership among women increased following the training.

As well as gaining respect within the family, recognition among the wider community has also been enhanced. Trained women are now being approached as a source of knowledge on kitchen gardening, tomato production and dairy livestock management, skills they are passing on to family members and close friends. Qalsoom Bibi, who received training in grain storage reports that she has passed her new knowledge on to other women in her village, just one example of how the impacts of the training are now spreading.

One finding of the impact study in Skardu was the greater commitment of women to gaining and applying new knowledge compared to men. Here, the impact study revealed that, while all women trainees were earning more from their tomato and dairy activities following the training, improvements among male participants were much lower. Had the training only been provided to men, as is traditionally the case with agricultural extension in Pakistan, the results might have been extremely

poor. There was also evidence of women passing on the training they had received to others in the community. In most cases this was not a formal process, but simply passing on tips and techniques when asked. One male family member reported that his daughter had trained 60 other women in the village in dairy and livestock production; another reported learning about tomato training from his daughter and applying it himself on an extra piece of land.

Regarding the differences in men and women's attitudes to the training in Skardu, it is also worth noting that tending livestock and growing vegetables are traditionally women's responsibility in the area. Male farmers tend to focus on jobs requiring greater physical strength, such as heavy lifting and ploughing; it is not surprising that they therefore had limited interest in dairying and tomato production, although some did have an interest in the marketing aspects of the training. Those men who attended

the training generally transferred the production-related skills to the women in their families, who were able to successfully adopt them, although the study was not able to compare how well these women did compared to those who were trained directly. These findings do, however, point to the importance of understanding gender differences in terms of roles in agricultural production and the family, in planning training interventions.

Way forward

In developing and expanding its training activities for the improvement of agricultural productivity, the programmes in southern Punjab and Gilgit-Baltistan offer CABI many useful lessons. Selection of trainees and training focus are two key areas. Where farming systems are run by both men and women in the household, there is a clear need to target both groups, according to their differing responsibilities. Thus, women were trained in activities that they were already carrying out, such as vegetable and dairy livestock production. Simply inviting women to participate in training, without reference to their current farming responsibilities in the household, is unlikely to lead to significant improvements in the status and opportunities of those women. Similarly, men were more interested in the marketing elements of their training than the production aspects, and while the findings do not, perhaps, offer a conclusive picture in terms of the value of training either men or women, it could be argued that targeting men with training in marketing, and women with training in production will be most efficient approach.

Another important factor to consider in selecting trainees is their educational attainment. In Muzaffargarh, where selection criteria included reaching 8th Grade, the women participants were found to be more confident and independent than those in Skardu, where no such educational criteria were applied. It could be argued that by including educational level within beneficiary selection criteria, projects can help to promote a culture in which education of girls is seen positively. This can complement other work aimed at improving the role of women in household decision-making. On the other hand, having educationally mixed groups of trainees, as was the case with the women's groups in Skardu, also has positives. Here, 80% of the women were uneducated or had received madrassa education only. However, the women formed close-knit and supportive groups, with the few educated members helping the less educated to understand the more technical aspects of the training. The success of these schools in equipping their female participants to adopt new techniques in tomato and dairy production speaks to the value of this approach as a means of capacity building. It also addresses the problem that the most in need can be discriminated against by training programmes that enforce a minimum educational attainment for their participants. Clearly there are trade-offs that need to be carefully evaluated when choosing which approach to adopt.

While not all those who participated in the training activities went on to increase their income, there was still overwhelming approval for the benefits gained. Household diets at both sites have improved, in terms of increased consumption of healthier and more diverse foods, with the process also contributing to improved social recognition for trainees, and changing attitudes regarding the value of training for women. CABI should be working to encourage a similar change in attitude in provincial agricultural departments; increasing the number of female staff in agricultural extension, for example, would greatly assist in improving the penetration of extension messages and modern agricultural practices.

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