Crises and women’s access to agricultural information: Insights from India and Nepal during the COVID-19 pandemic

Muzna Alvi, Prapti Barooah, Shweta Gupta, and Smriti Saini

SUMMARY
Strict lockdown measures implemented in response to the COVID-19 pandemic had extensive impacts on agriculture, and especially on women farmers. These effects were worsened by a lack of reliable and timely access to agricultural extension. This note summarizes findings from panel phone surveys conducted in India and Nepal on the impacts of lockdown measures on women’s ability to access agricultural extension services and their perceived impact on agricultural productivity. We find that women’s already limited access to formal extension services was further reduced during the pandemic, leading to greater reliance on informal social networks. In both countries, approximately 50 percent of farmers reported negative consequences on productivity due to the unavailability of information during the lockdown. We propose strategies to enhance the inclusivity and resilience of extension systems in India and Nepal in future crises, including through the use of group- and community-based approaches.

INTRODUCTION
Despite the significant role women play in agriculture, adequate gender-responsive extension services are lacking in the South Asia region. Inadequate information access was further exacerbated by the COVID-19 pandemic and subsequent lockdowns, that restricted mobility, disallowed group gatherings, and closed schools and businesses. These lockdowns reduced access to reliable and timely information about market access, diseases, pests, insurance, and credit. The food and energy price crisis that followed the pandemic lockdowns as well as continued climate-related crises further increase the need to develop resilient and inclusive agricultural extension and information systems.

What were the consequences of the lockdowns linked to the COVID-19 pandemic on women’s access to formal and informal sources of agricultural extension services? How did the pandemic impact agricultural productivity? What measures can be implemented to enhance the resilience and gender equity of the agricultural extension system? To answer these questions, we analyze data obtained through a panel phone survey conducted with women farmers in Gujarat, India, and Dang district in Nepal.

DATA
Data were collected through phone surveys carried out during the COVID-19 pandemic in Gujarat, a western state in India, and in Dang district in midwestern
Nepal. The surveys aimed to explore the gender-specific impacts of the lockdowns on food and water security, income, livelihoods, mobility, and instances of household violence and conflict. During 2020 and 2021, five rounds of phone surveys were conducted in both countries. In Gujarat, the first round was administered in May–June 2020, just before Kharif (monsoon) crop sowing, while the last round was conducted in July–August 2021. In Dang district, the first round took place in early July 2020, and the final round a year later.

In Gujarat, our sample are members of the Self-Employed Women’s Association (SEWA), a trade union of women engaged in informal work, including agriculture. The surveys were conducted in nine districts of Gujarat, where SEWA has a significant presence. The sample consists of 627 women, covering rural and urban respondents. Our findings are derived from 228 women who identified farming as their primary agricultural activity. In Nepal, the sample was chosen through systematic random sampling from a listing of maize farmers conducted in-person across four rural municipalities (Lamahi, Shantinagar, Dangisharan, and Rapti) in Dang district in February 2020. The first round of the survey covered 759 respondents, including 540 women and 219 men. We focus our results on the women’s sample and draw comparisons with the men’s sample where appropriate.

Our findings are based on the agricultural extension module of the survey, and whenever possible, we incorporate findings from other sections of the survey to shed light on issues related to access to agricultural inputs and markets. The agriculture extension module asked respondents about their primary source of agricultural information and whether it remained accessible to them during and after the lockdown. For those who reported that their main source was unavailable, we inquired about the alternative sources of information they relied on. In both cases, respondents were asked to provide feedback on the quality, frequency, and timeliness of the received information. Additionally, we asked respondents whether their farms experienced any negative consequences due to the inability to access timely extension services and information. To observe changes over time, the same module was administered during subsequent rounds of the survey in both locations.

RESULTS

During the first round of the survey, 27 percent of women in Gujarat and 29 percent in Dang reported that their primary or regular source of agricultural information was unavailable or inaccessible due to the lockdowns. Within this subsample, the immediate impact of the lockdown was a reduced reliance on group-based sources of information such as group meetings and field days. Instead, these women shifted toward obtaining information from own social networks, including family members and friends. In Dang district, sources of information that relied on in-person interactions—such as agricultural input dealers and meetings organized by self-help groups (SHGs), cooperatives, and other farmer groups—experienced a decline during the lockdown. Conversely, the proportion of farmers who reported relying on traditional knowledge and information from family members or neighbors increased, as also seen in Gujarat. This trend persisted into the last round of the survey, with traditional knowledge replacing local input dealers as the most important source of information. Access to government extension services by women was already low before the lockdown and declined to nil in Gujarat in response to the lockdown, but slightly increased in Dang district (Figure 1).

During the initial phase of the lockdown, respondents in Dang district also expressed heightened concerns regarding the quality of information they received. In round 1 of the survey, 53 percent of respondents reported that the overall quality of information received from various sources had deteriorated since implementation of the lockdown measures; and 62 percent of respondents felt that they were unable to access timely information, as the frequency of information dissemination was lower compared to the pre-lockdown period.

As part of the survey, we asked about the impact of limited access to information on farmers’ output, based on their self-reported agriculture productivity. In Gujarat, 49 percent of all farmers surveyed reported negative effects on their farms. Similarly, in Nepal, around 57 percent of women farmers stated that agricultural productivity had declined due to their inability to access timely and high-quality agricultural information during the lockdown, manifested in lower yield quality and quantity, lack of input availability, and pest attacks.
These challenges persisted into the second round of the survey. In Gujarat, 42 percent of farmers reported experiencing low productivity because of lack of timely information. In Dang, the figure was slightly higher, with 56 percent of women farmers reporting reduced productivity due to limited access to timely and quality agricultural information. As movement restrictions were lifted, the share of respondents reporting negative impacts on their farms because of lack of information declined. By the last round, the share had fallen to 16 percent in Gujarat and 30 percent in Dang district.

It is important to consider heterogeneities of these impacts, as they are mediated through differences in access to economic and social capital. In South Asia, and elsewhere, certain castes and ethnic groups face social and economic inequalities, which can manifest in limited access to agricultural information and extension services. Discrimination and unequal distribution of resources can restrict the opportunities available to these marginalized groups, thereby hindering their ability to cope with and recover from crises. In India we found that respondents from historically disadvantaged ethnic communities were more likely to depend on social networks and traditional knowledge as sources of information, and less likely on formal sources of extension. We find no such results in Dang, where like India, caste- and tribe-based social hierarchies are widely entrenched and practiced.

In Nepal, women educated beyond primary level were more likely to rely on government sources than traditional knowledge as a primary source of information. Similarly, women in Nepal who were primary decision makers were less likely to report negative impacts (52 percent) due to information access issues, compared to those who said their spouse was the main decision maker (63 percent). This suggests that women are better able to cope with shocks when they have more agency to take decisions.

**WAY FORWARD**

We already know that periods of crisis affect vulnerable populations disproportionately, as they do not have the resources or social capital to adequately deal with shocks. As periods of crisis—human-made, natural disasters, and climate change-induced extreme weather events—become more prevalent, there is a need to invest in systems of extension that are crisis-resilient, reliable, and inclusive, especially for historically marginalized groups. Women’s engagement in agricultural extension activities and programs can be hindered by various factors, including limited access to assets and resources, barriers related to information access (such as delivery channels, timing, language, location, and duration), and prevailing gender roles in agriculture.

Interventions based on information and communications technology (ICT) hold promise as they can be upscaled at low-cost and delivered remotely, are easily adaptable and dynamic, and can quickly respond to emerging threats. However, women’s access to phones remains much lower than that of men in South Asia, and heterogeneities arise in technology access and literacy across other dimensions of social identity. Delivering
extension through ICT-based methods might therefore reinforce existing inequalities.

Farmer field schools, led by and targeting women, are another way to reach women, who are often excluded from interventions that typically target men farmers. However, women already have a high care burden and time poverty, and interventions that require investment of time will have to be thoughtfully designed to ensure equitable participation.

Because of existing social norms and lack of recognition of women’s roles in agriculture, men extension workers may not be able to reach women farmers adequately. However, the number of women extension workers in India and Nepal remains very low. Indeed, recent research conducted in Africa has highlighted the importance of extension agents’ gender in agricultural outreach and behavior change among farmers (Azzarri and Nico 2023). Training and deploying women extension workers within the formal extension system can help in improving targeting of women.

Group-based approaches to extension delivered through women’s groups have been proven to increase knowledge and adoption of innovative extension practices. SEWA itself routinely delivers information to its farmer members through various in-person and ICT-based tools, and reliance on SEWA as the primary source of information increased dramatically during our surveys, from 18 percent in the first round to 33 percent in the fifth round.

Finally, community-based frontline workers have been at the forefront of health and nutrition information and service delivery in both India and Nepal. More recently, kisan sakhis (friends of farmers) and pashu sakhis (friends of animal/livestock) have been deployed to deliver information on agriculture and livestock health, respectively, in some states in India with considerable success. Training a cadre of such frontline workers, and adequately compensating them for their time and effort, is a model of agriculture extension delivery that could be rapidly deployed in times of crisis, as was done most recently in India for distributing relief measures during the pandemic.

FOR FURTHER READING


Muzna Alvi is a Research Fellow and Prapti Barooah and Shweta Gupta are Senior Research Analysts in the Natural Resources and Resilience Unit of IFPRI, based in New Delhi, India. Smriti Saini is a MPP student at Harvard Kennedy School, Harvard University, USA.

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