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# Lab to land: Addressing Indian agriculture's weakest link – Extension

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A kisan pathshala in progress at Jhansi, Uttar Pradesh. (Express photo: Praveen Khanna)

Income from farming depends on many factors, which includes knowledge of improved agronomic practices and also information on agriculture-related government schemes. Agriculture extension is about dissemination of this critical gap-filling knowledge and information, which, in the 1970s and 1980s, was done by the so-called Training and Visit (T&V) workers. The T&V programme, however, went to seed in the early-1990s. The collapse of extension services subsequently led to creation of a district-level Agriculture Technology Management Agency or ATMA system. Its functioning has been far from satisfactory. The work of state agriculture department staff is today largely reduced to input distribution and dishing out small subsidy sums under a plethora of fragmented schemes to farmers, as opposed to extension.

In October 2017, I was reviewing development works at a village near Mathura, as the nodal officer of that district. Sitting in the veranda of a school, I asked the assembled villagers whether they had received any formal training in farming and, if not, does this idea make sense. It had always struck me that a sector providing livelihoods to the maximum number of India's population did not have any arrangement for formally training, skilling and preparing farmers, with everyone learning on the job from the others doing it! What was amazing was the response – everybody present there said that they would welcome any move to train them for scientific farming.

On returning to Lucknow, I discussed the issue with my department officers. We, then, quickly designed a programme, calling it "The Million Farmers' School" (TMFS). As the name suggested, the target was to train more than a million farmers in Uttar Pradesh.

Farmer school, incidentally, isn't a new concept. There are such schools organised under ATMA in farmers' fields. But they haven't been a success. Apart from being run in a haphazard manner sans any real monitoring, their efficacy has depended upon the individual zeal of staff, thereby taking more the shape of an annual ritual. TFMS has been designed differently. We have essentially introduced three new elements – rigorous training of staff to make them function as proper trainers, structured training modules for farmers, and organisation of 'kisan pathshalas' (farmer schools) in a campaign mode.

The UP government's agriculture department currently has around 8,000 field-level functionaries, each possessing a B.Sc. Agriculture degree at the least and with some even Masters or above. We selected a little over 7,500 out of them for special training as trainers of farmers.

For farmers, a module was prepared keeping the 2017-18 rabi planting season in mind. It contained information on major rabi crops – wheat, mustard, chana, masoor and matar – and the scientifically recommended package of practices as well as pest and disease control measures for their cultivation, apart from inputs pertaining to organic farming, animal husbandry, dairying and horticulture for agricultural diversification. Besides, farmers were to be made aware of the Pradhan Mantri Fasal Bima Yojana for crop insurance), Soil Health Card and government subsidies for various inputs under different programmes. We printed over a million copies of the rabi season-specific module and distributed these free to every farmer participating in TFMS kisan pathshalas.

The same module was used for staff training. Senior department officers worked as key resource persons to train district-level master trainers through video conferencing. The National Informatics Centre's infrastructure came handy here, as it saved the cost of travelling and staying at the headquarters. The master trainers, in turn, trained the staff at the local Krishi Vigyan Kendras with the help of scientists there. A district-wise list of trainers was made and each of them given two rounds of training. Video conferences were done after every round, with randomly chosen trainers in the district being asked to participate. Since nobody had any prior idea of who would be called for the conferences, it ensured that everyone took their training seriously. During the sessions, they were even made to take classes just the way they would conduct these for farmers. Two rounds of grilling on a random basis – with the master trainers in all 75 districts and senior officials listening – guaranteed that the trainers were adequately prepared for running the module at the kisan pathshalas.

The pathshalas – again only to keep costs under control – were conducted in government primary/junior school buildings accessible to a cluster of villages. The module incorporated practical demonstrations on seed treatment, germination test, recognition of adulteration in fertilisers and pesticides, use of personal protective equipment for spraying, etc in order to make it meaningful and interesting.

In December 2018, we completed the third edition of TFMS for rabi 2018-19 (and before that for rabi 2017-18 and kharif 2018). In terms of farmer participation, we crossed the million-mark for a third time in a row. In the just-concluded edition, 15,099 pathshalas were organised, every training session running for four days of roughly 90 minutes each. In all, 10.65 lakh farmers were trained this time, out of which more than 16 per cent were women.

## The benefits have been manifold.

When we started, our aim was to disseminate knowledge and information about scientific farming and government schemes. But along the way, we realised that this was also a powerful tool for capacity building of our own officers and staff. Everyone in the department had to go back to the books, which enabled a refreshment of their knowledge even while making it practically relevant. Interacting and explaining to farmers meant a honing of communication skills as well. And farmers, of course, are getting information on many things – from spraying the right kind and quantity of pesticides and fertilisers that is crop-specific and soil health card-based, to the best varieties/hybrids of seeds suited for their agro-climatic zones and the ideal time of sowing.

TMFS has developed into a solid platform for disseminating knowhow to farmers and a unique agriculture extension model that is replicable and scalable. It is, moreover, a low-cost and high-returns programme, which has even helped re-establish contact between farmers and the department. One indicator of it also leading to a better uptake of government schemes is the substantial increase in subsidised seed sales from state-owned/cooperative stores. The International Food Policy Research Institute is now evaluating TMFS for impact assessment, which could take it to other places. We hope to make this programme a mainstream platform for knowledge diffusion among farmers in the years to come.