INITIATIVE ON
Transforming Agrifood Systems in South Asia

CGIAR

Bundling crop diversification, nutrition and market interventions in farmer-led participatory experiments in Bangladesh

Pre- and Post-Season Survey Protocol

Research Protocol 9 November 2023

BACKGROUND

Interdisciplinary research aimed at identifying effective strategies to enhance farmers' profits, improve the yield of nutritious crops, conserve natural resources, and sustain or enhance ecological services, all while mitigating greenhouse gas emissions from agricultural landscapes, is currently underway in Northern Bangladesh. To achieve real-world impact, research aims at generating evidence-based and actionable recommendations that can be being put into practice through both public and private auriculate extension networks, along with support for policy design and reform. Of particular interest is the ways in which farmer participatory research conducted by Transforming Agrifood Systems in South Asia (TAFSSA) can address methods and systems to improve the effectiveness of nutrition awareness and the marketing of diversified and nutritious crop products by farmers. This document provides brief updates on ongoing research while describing and providing the survey instruments and approaches being used.

OBJECTIVES AND APPROACH

Innovating beyond conventional agricultural nutrition programs in South Asia, this action research approach explores diversification options at both the field and landscape scales. These options are co-designed with researchers and farmers selecting alternative crops and cropping patterns together to yield multiple benefits, including the potential enhancement of vitamin, macro- and micro-nutrient production, within the diverse environmental and socio-economic spectrum of rice-based farming systems in Bangladesh. The selection of research learning sites for TAFSSA includes Rangpur and Rajshahi divisions in the northern region of Bangladesh. The identification of these locations was informed by multi-criteria data analysis considering food and nutrition security gaps, environmental stressors, climate-related challenges, and the prevalence of specific commodities and farming systems that offer potential for addressing the research questions posed by the TAFSSA Initiative.

As outlined in Cheesman et al. (2022), an interconnected social-agronomic experiment is being conducted with farmers in these divisions. The objective is to gain insights into the interplay between farm production and the nutritional status of farming households. Research encompasses participatory agronomic experimentation in which farmers receive training on agronomy,

particularly for crops introduced to diversify their cropping patterns. Households also participate in nutrition training, participatory crop budgeting, and market linkage activities. The latter are complemented by high-frequency market surveys.

Farmers' perceptions and their willingness to adopt new practices beyond the experimental context, driven by exposure to information and experience in engaging with researchers and trainers, are assessed through pre- and post-season surveys, as well as ongoing data collection throughout the cropping cycle. The objective is to gauge the impact of various interventions, such as the bundling of agronomy trials with training, nutrition training, and market linkages, on farmers' decisions regarding crop selection and marketing beyond the experimental context itself.

SURVEY DEPLOYMENT

TAFSSA on-farm activities are carried out in 16 villages in 4 districts of Rangpur and Rajshahi Divisions (Figure 1). In each district there are four villages, with each falling in one of the following groups:

- '**Control' villages:** besides the surveying of 60 households (HHs) no intervention is carried out by initiative researchers;
- **Nutrition training ('N') villages:** 60 HH are surveyed, 40 HH receive a nutrition training
- **Agricultural production and marketing ('AgP+')** villages: 60 HHs are surveyed and of those 20 HH are host a farmer managing crop diversification research trials; further trainings on agricultural production and marketing accompany these agronomic experiments.
- **'AgP+&N' villages:** 60 HHs are surveyed; 20 HHs receive a nutrition training and 20 HH host experiments, receive trainings on agricultural production and marketing, and receive nutrition training.

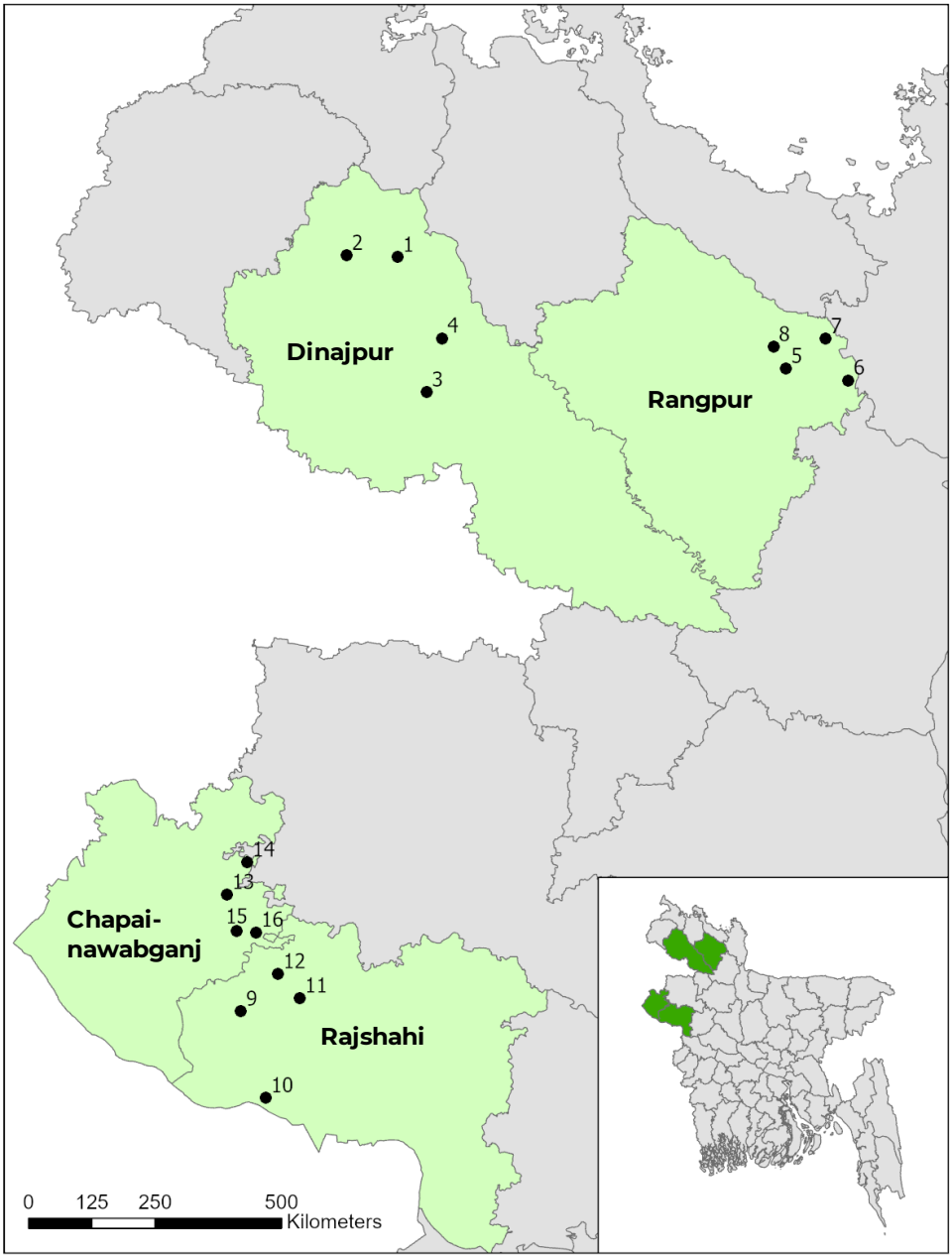
The pre- and post- season surveys cover the following topics:

- Basic socio-economic household characteristics.
- Basic farm and farming information.
- Household consumption.
- Nutritional Knowledge, attitudes and beliefs.
- Experience with cultivating the crops proposed in the on-farm trials
- Farmer's preferences for crop diversification, willingness to adopt and challenges.
- Farmer's expectations towards participating in on-farm research.
- Marketing (*e.g.* what produce do famer sell, via which channels, are they aware of the demand incl. what the quality requirements are, etc.)

These surveys are carried out using kobo toolbox, coded based on the outlines in Annex 1.

REFERENCES

Cheesman, S., Islam, S., Kurishi, A., Kamal, M., Hossain, M.S., Tasnima, M, Parvin, A., Parupalli, B., Krupnik, T.J. 2022. Research Protocol for linking farm diversification, markets and nutrition through on-farm agronomic trials and trainings: TAFSSA's Participatory Socio-Agronomic Research. Work Package 2, Research Protocol 3. CGIAR research initiative on Transforming Agrifood Systems In South Asia (TAFSSA). International Maize and Wheat Improvement Center. Dhaka, Bangladesh. Available online here.



Id	Upazila	Union	Village	Treatment
Rangpur Division: Dinajpur district				
1	Birganj	Nijpara	Kolyani	Control
2	Birganj	Vognagar	Kalapukur	AgP+&N
3	Chirirbandar	Auliapukur	Indropara	AgP+
4	Chirirbandar	Saitara	Satnala	N
Rangpur Division: Rangpur district				
5	Pirgachha	Itakumari	Boro Hayat Kha	Control
6	Pirgachha	Chhaola	Shibdeb	AgP+&N
7	Kaunia	Tepamadhupur	Chargonai	AgP+
8	Kaunia	Kursha	Ramnath	N

Id	Upazila	Union	Village	Treatment
Rajshahi Division: Rajahahi district				
9	Godagari	Mohonpur	Bautia	AgP+&N
10	Godagari	Deopara	Soyghati	AgP+
11	Tanore	Pasondor	Kundail	Control
12	Tanore	Mundumala	Mundumala Paurosova	N
Rajshahi Division: Chapainawabganj district				
13	Nachole	Kasba	Kajla	N
14	Nachole	Kasba	Sobdolpur	AgP+
15	Nachole	Nijampur	Kamar Jogdoil	Control
16	Nachole	Nijampur	Bashbaria Bakoil	AgP+&N

Figure 1: Locations of TAFSSA on-farm activities in Bangladesh; jointly implemented with the Bangladesh Agricultural Research Institute's On Farm Research Division (BARI-OFRD).

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ABOUT TAFSSA

TAFSSA (*Transforming Agrifood Systems in South Asia*) is a CGIAR Regional Integrated Initiative that supports actions improving equitable access to sustainable healthy diets, that boosts farmers' livelihoods and resilience, and that conserves land, air, and water resources in a climate crisis.

ABOUT CGIAR

CGIAR is a global research partnership for a food secure future. Visit https://www.cgiar.org/research/cgiar-portfolio to learn more about the initiatives in the CGIAR research portfolio

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