FOOD & BUSINESS APPLIED RESEARCH FUND

Biochar-Urine Nutrient Cycling for Health 2 (BUNCH2Scale) – Bangladesh

Consortium Members

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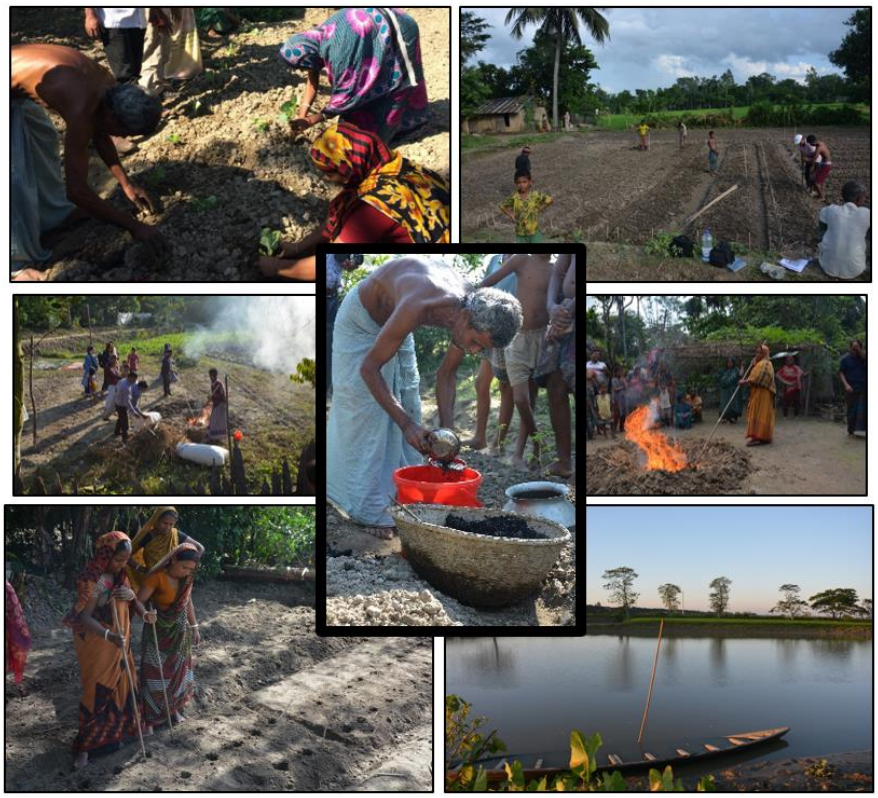
Project description

In Bangladesh, many children are undernourished due to diets deficient in vitamins and minerals. Gardening can enrich diets, but soil fertility is often low. Biochar, which can be made from crop waste in soil-pit kilns, is a porous material that transforms urine, an efficient but underutilized fertilizer, into an odourless solid fertilizer. Biochar-Urine Nutrient Cycling for Health 2 (BUNCH2Scale) will scale up biochar-based organic fertilizer through a user-centric system and evaluate the fertilizer's ability to increase garden yields by improving soils and increasing plants' ability to absorb nutrients.

Impact activities and preliminary results

Training on biochar was scaled up to 1013 FAARM participants during the session on winter planting in 2017. As part of the training and as a demonstration for each area, 430 farmer trials have been set up. These farmer trials directly compare the yields from crops produced in biochar-urine enriched soil and crops from soil to which fertilizer was not applied. For these trials, participant groups selected one of nine crops (cabbage, cauliflower, kohlrabi, green amaranth, red amaranth, radish, carrot, orange fleshed sweet potato, and rai). The results of the first farmer trials will be available in late January. Past farmer trials in 134 fields in the area, including 61 supported through BUNCH2Scale, resulted in the yield of crops more than doubling.



Opportunities and challenges

The project into which BUNCH2Scale is nested, Food and Agricultural Approaches to Reducing Malnutrition (FAARM), is multifaceted and combines diversification of diets through year-round home gardening and poultry rearing with nutrition and hygiene education, while empowering women and linking them to markets. Challenges included women's limited mobility to attend trainings and act as multipliers. The technology taught through BUNCH2Scale enables women to improve yields from gardening, a female domain, without having to go to the market, a male domain in Bangladesh.

In the coming year, VU will lead in conducting "living lab" workshops. These will focus on the social dimensions that play a role in the adoption and diffusion processes of the (biochar) innovation. Based on the elements that influence the diffusion of innovation in general (social system, technology, communication channels, time) we aim to identify perspectives of local users (opportunities, constraints, alternatives, positive deviance etc.). The "living lab" workshops will also provide input for the technology manuals on biochar that will be developed and introduced by the project. The findings will be crucial both for documenting the scaling up within the BUNCH2Scale study and for further scale-up in Bangladesh.

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