



# MOVING THE NEEDLE IN THE FIGHT AGAINST MALNUTRITION



**TECHNICAL ASSISTANCE AND RESEARCH FOR  
INDIAN NUTRITION AND AGRICULTURE (TARINA)**

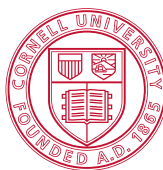
**2018**

Tata-Cornell Institute for Agriculture and Nutrition (TCI)  
College of Agriculture and Life Sciences | Cornell University



## TARINA CONSORTIUM PARTNERS

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access and availability to diverse foods throughout the year.

Through sustained intervention, TARINA has been able to encourage **7,777 households** to set up kitchen gardens in Bihar, Uttar Pradesh, and Odisha. In 2016,



TARINA is continuing to motivate more households to adopt kitchen gardens across four districts of three states.

one out of 10 households in TARINA intervention areas had kitchen gardens, which **increased to one out of three households** by the end of August 2018 (Figure 16). Earlier, households were cultivating three to four types of vegetables per year in their kitchen gardens. After the intervention, there has been a

substantial diversity observed, with households now growing up to **13 different types of seasonal vegetables (including green leafy vegetables)** in their kitchen gardens.

To encourage more households to develop kitchen gardens, TARINA is engaging with community platforms like SHGs, FFSS, and other interest groups. Based upon the needs of the community, a unique combination of technical inputs, as well as understanding and knowledge of kitchen gardens and maintenance is given to the groups to support them and to enhance production levels. **Training**

### Impacted and Counting...

- **One in three** households has adopted the kitchen garden for better access to diversified food across seasons
- **5,144** farmers are trained on PoP for better kitchen garden/wadi management

and **awareness** generation, especially on a critical **package of practices (PoP)**, which include **land preparation, sowing methods, pest management**, and the importance of **vegetables and fruits** in

## INCREASE IN KITCHEN GARDENS IN TARINA INTERVENTION VILLAGES SINCE 2016

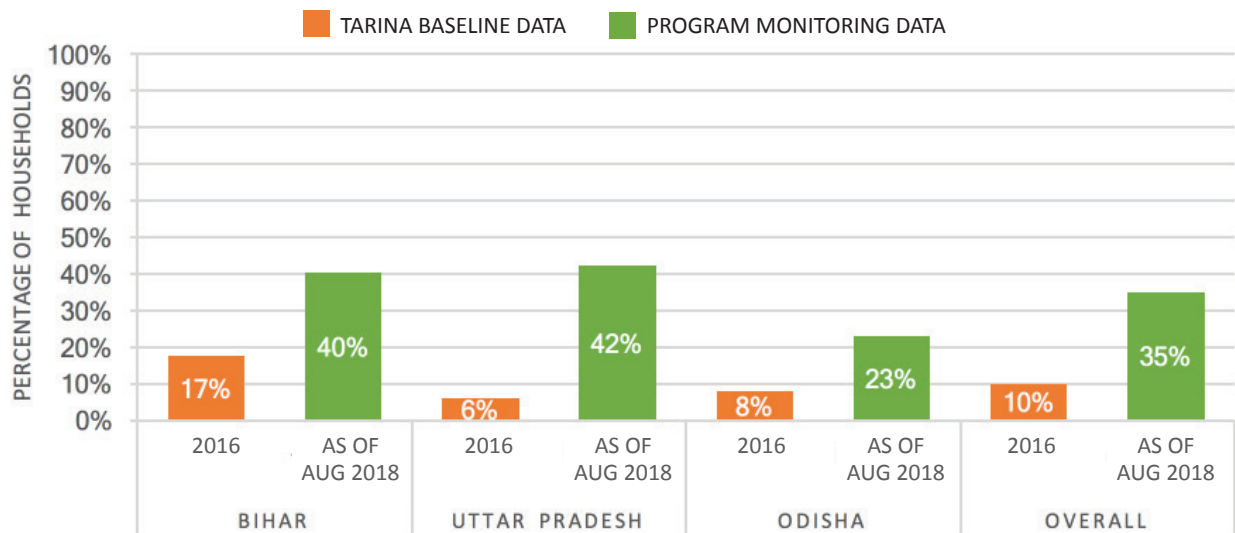


Figure 16: As of August 2018, there has been a considerable increase in the number of households having kitchen gardens.

## Face of Change: Hamida's Food Plate is Now More Diversified through her New Kitchen Garden



*Hamida (in center) talks about her success to peers.*

establish a kitchen garden on her small plot of land. “I attended meetings and trainings on establishing kitchen gardens... I got to know why eating fruits and vegetables can help against malnutrition and prevent ill health within family,” reported Hamida.

Hamida also learned about plot preparation and line sowing practice in the kitchen garden. Within TARINA, BAIF provided a model layout for her to divide her plot into subplots to grow different vegetables concurrently. Hamida irrigated the plot by fetching water from wells.

“Earlier we used to eat only potatoes and onions, but now we will be able to grow okra, gourds, brinjals, chilies, coriander, etc. ... due to the kitchen garden, we can now eat a wide variety of vegetables and fruits,” shared Hamida. With seed support, she can now grow okra, brinjal, bitter gourd, sponge gourd, coriander, bottle gourd, and chilies during May–July, and spinach, amaranthus, radish, carrot, and beetroot during November–January. She is able to consume a variety of vegetables for at least 8–9 months in a year and produces enough yield for her large family.

Hamida Khatoon, of the Dhobiakoda Village in the Munger district of Bihar, lives with her extended family of 14. Her family lives in a semi-pucca (not concrete) house. In a remote area of Munger, villagers lack convenient access to markets and water; most are either landless or small farmers, growing pulses, rice, and potatoes. Hamida, too, grew only onions and potatoes for household consumption, spending around INR 1200–1500 (US\$16–20) monthly for vegetables from the markets.

Hamida did not have cultivable land around her house, but she received help from TARINA to

*“Practicing the kitchen garden, using the model, has not only helped me to meet the nutritional needs of my family but is saving a significant amount of money that I used to spend on buying vegetables from the market,” said Hamida Khatoon.*

**daily diets** is being provided for group members and general participants. Additionally, quality seeds procured from the government and private agencies at subsidized rates are being offered to households. BAIF, through its linkages with the National Horticulture Research and Development Foundation (NHRDF), ensures timely procurement of seeds.

Moreover, to address the issue of open grazing, which was a determining factor for many farmers against setting up kitchen gardens, BAIF has provided farmers with fences, and GDS has supported farmers by providing fencing at a subsidized rate.

In addition to kitchen gardens, BAIF within TARINA, has enabled **457 farmers across 20 villages** to address

seasonal deficits of fruits and vegetables through demonstrations for the promotion of seasonal and perennial tree-based farming *wadis*. Input support, such as seeds and saplings, irrigation and pesticides, along with training and supportive guidance on the recommended PoP, are being provided to the households.

### **Postharvest Loss Management with a Focus on Mycotoxin Exposure: Reducing Nutritional and Socioeconomic Burdens of Unsafe Food**

Postharvest loss is one of the major challenges affecting not only the adequacy of food supply but