

# Rural Agricultural Development Innovation for Food and Nutrition Security: Findings from a Study in Tanzania

Jens M. Vesterager and Helene B. Lilleør: The Rockwool Foundation, Denmark  
Dominick Ringo: RECODA, Tanzania

## Introduction

Sub-Saharan Africa remains the world's most food-insecure region in spite of its abundant agricultural potential. In an attempt to contribute towards overcoming this problem, an agricultural development approach known as RIPAT (Rural Initiatives for Participatory Agricultural Transformation) has been developed over the period since 2006 through a series of projects in northern Tanzania.

It has for decades been anticipated by development actors that pro-poor agricultural development interventions would be the direct route to improved nutrition among smallholder farm families. However, it is difficult to find evidence that documents such linkage – partly because of poor quality evaluations, but also because it has been realised that agricultural development interventions must be designed to a much larger extent with a nutritional lens and must take into account what types of agricultural component can lead to improved nutrition.

We provide research evidence of improved rural food and nutrition security following the application of the RIPAT approach.

## Aim of the approach

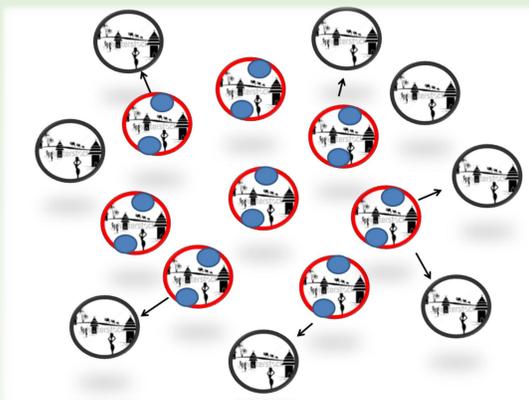
RIPAT aims to bridge the technology gap and promote the adoption of new farming technologies that are likely to improve household food security and nutrition. Top-down agricultural extension methods that rely on imposing centrally-based technology solutions ('one size fits all') have too often failed to produce results. RIPAT seeks to combine the best elements from both bottom-up and top-down extension approaches.

The RIPAT approach is founded on three cornerstones:

- creation of a vision of a better future through careful sensitisation and mobilisation of farmers to take charge of their own development;
- establishment of farmer groups with good leadership to enable the transfer of a 'basket' of appropriate agricultural technologies through participatory demonstrations and reflective learning techniques;
- close collaboration with local government authorities and the extension service for continuation and up-scaling.

## Project implementation

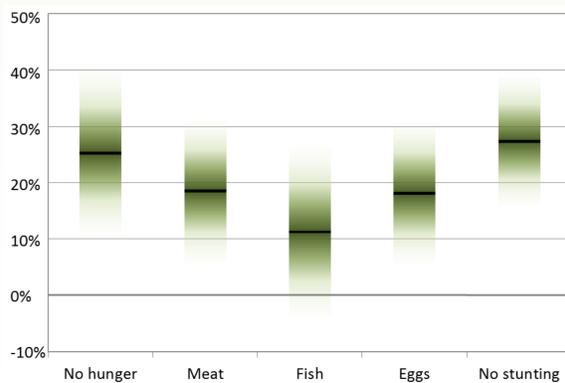
A typical RIPAT project targets 8-10 villages in an area. Two groups are established in each village, each group being made up of 30-35 farmers; normally these are selected from the 'lower middle class' in the community. Groups are facilitated on a weekly or bi-weekly basis over a 3-year period. The group leaders from all the groups meet quarterly to share experiences and coordinate their efforts. In this way groups become interlinked. The best farmers in the groups ('super-farmers') play an important role in the dissemination of agricultural technologies to the wider communities and the spreading of techniques to other villages.



## Evidence

The approach has been studied through a research-based evaluation using qualitative and quantitative methods. Analysis of data based on interviews with almost 2,000 households (data collected one year after project closure) shows that, on average, households that participated in RIPAT – in comparison with similar households that did not – are significantly more likely:

- to be cultivating the improved crops or breeding the improved livestock varieties in the 'basket of options' (adoption);
- to be food secure in the lean season, when RIPAT farmers are 25 percentage point less likely to experience hunger;
- to be eating meat and eggs on a weekly basis;
- to have well-nourished children. There is a 27 percentage point reduction in stunted growth among children below 5 years of age.



The black lines represent the estimated effects. The graduated bars represent the 95% confidence intervals around this effect. As long as the lower ends of the graduated bars are above the zero impact line, there is more than a 95% probability of there being a positive impact of the project among RIPAT households.

## Reasons for impact and implications for future programming

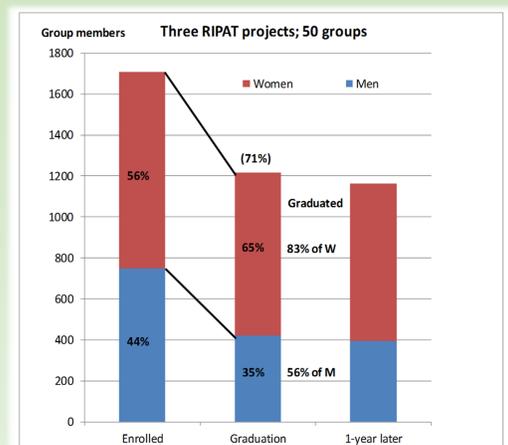
The researchers point to the following main reasons for the strong impact of RIPAT which should be kept in mind when designing future food and nutrition security programmes:

- The pragmatic and flexible extension approach that was used and the provision of a 'basket of options' gave farmers a genuine possibility of CHOICE as to which technologies to adopt and as to when and to what extent to adopt them, depending on each individual's needs and resources. This led to the sustained adoption of technologies.
- The formation of strong groups that continued after project closure was important for providing farmers with a VOICE and thus a say in agricultural matters in their villages.
- The 'basket of options' was designed to enhance production smoothing over the year, through agricultural technologies involving, for example, milking goats, poultry, bananas and vegetables. These technologies aided production of food throughout the year, including the lean season. This aspect of the program, combined with the contribution that RIPAT makes to the empowerment of women, is likely to have translated into better nutrition among children less than five years old. The establishment of savings groups (VSLAs) and the promotion of water harvesting and drought-resistant crops also contributed to food and nutrition resilience.
- Belonging to strong farmers' groups contributed to an increased sense of empowerment, especially among the female group members, leaving women with a stronger say within their families in matters concerning agricultural production and household food security.

## Groups continue

Of 52 groups established in a series of three projects, 50 still existed one year after project closure. Figures for these 50 groups were:

- ~ 1,700 farmers initially enrolled in the groups. Gender balance: 56% female, 44% male
- ~ 1,200 farmers (71% of the original membership) graduated after three years; 83% of the original woman members graduated, compared to only 56% of the men
- The proportion of female group members increased from 56% to 65% over the three-year project period
- One year after graduation (project closure), all 50 groups still existed, and the dropout had been low.



Other lessons learned:

- If a group is starting to disintegrate, it is often the women who struggle to keep it together
- The inclusion of perennial crops such as banana in the 'basket of options' combined with the establishment of VSLAs strengthen group cohesion and encourage groups to continue
- Well-established groups act as local institutions/platforms for channelling development to grassroots communities and for lobbying and advocacy within the village.

## References

### Research Results

*Farmers' Choice – Evaluating an approach to agricultural technology adoption in Tanzania* brings together the analyses of economists, agricultural scientists and anthropologists who studied the impact, implementation, adoption and spread of the RIPAT approach.

Lilleør, H.B. and Lund-Sørensen, U. (eds). Practical Action Publishing, 2013. 168 pages.

### Implementation Manual

*The RIPAT Manual* explains step by step how to organise and implement a RIPAT project. It is especially relevant for staff of NGOs and development organisations working at the programme design and field levels, and for local government officials involved in agricultural extension and rural development.

Vesterager, J.M., Ringo, D., Maguzu, C.W. and Ng'ang'a, J.N. The Rockwool Foundation, 2013. 142 pages.

Both publications can be downloaded at [www.RIPAT.org](http://www.RIPAT.org)

## Contact

Dr. Jens M. Vesterager. The Rockwool Foundation, Denmark.  
E-mail: [jenves@rockwoolfoundation.org](mailto:jenves@rockwoolfoundation.org). Mobile phone: +45 3010 9815  
Mr. Dominick Ringo. RECODA, Tanzania.  
E-mail: [recoda11@gmail.com](mailto:recoda11@gmail.com). Mobile phone: +255 768 224 052  
Dr. Helene B. Lilleør. The Rockwool Foundation, Denmark.  
E-mail: [hbl@rockwoolfoundation.org](mailto:hbl@rockwoolfoundation.org). Mobile phone: +45 5151 2920

