



PEOPLE & VIEWS

**Introducing On-farm Research to Smallholder Farmers**

**May, 2021 Info News**

## **Commercializing Smallholder Farming**

**FOCUS: Nalongo Resty, Muduma Subcounty.**



### **Current Situation:**

When Nalongo Resty returned to the family farm in 2015 to help her ailing mother, she faced some significant challenges. Poor soils and increasing fertilizer and herbicide costs were straining the farm's bottom line. As a result, she began looking into new ways of farming that could improve her land and also improve the profitability of this source of family livelihood. Eventually, she succeeded: This happened after experimenting with lower commercial fertilizer rates and routinely incorporating a 3kg bucket of manure from her pig sty into the soil of her banana plantation. Nalongo Resty has now resorted to adding manure to supply nutrients and enhance soil quality. She also mulches the plantation to prevent weeds and loss of moisture from the soil. In the process, she has completely eliminated her fertilizer and herbicide costs from the management of her banana plantation.

### **Justification:**

Like all-natural systems, our farms are affected by environmental factors, such as: climate; weather; soils and topography; and by the interactions between the various plants, birds, animals and microorganisms that live in that system. Farming in this complex and constantly changing environment raises a host of questions and problems, as each day and each season bring new challenges. As a result, farmers always find themselves exploring new ideas and ways of doing things.

### **Emerging Opportunities:**

In a country where more than a third of young children – 2.4 million – are stunted, of which half of these are under five years. It is vital to help smallholder farmers innovate and find sustainable livelihoods for themselves. Strengthening farmer capacity requires a combination of local initiative; training; financial and technical support. As a farmer, on-farm research takes your role to a whole new level. It is conducted on a working farm and on a small part of this farm. A partnership with your group members, agricultural service providers / extension workers and or professional researchers provides you with leadership, guidance and assistance.

Through on-farm research, farmers gain insights into their own production system and how to produce for maximum profit, not yields. The value of on-farm research is that it provides reliable information that you know will make a difference. And, the use of statistics distinguishes on-farm research from demonstrations or variety plots. When you have the numbers in front of you, then you talk and work confidently knowing what has to be done.



## A Simple Testimony

Just like most smallholder farmers, Nalongo Resty began with the aim of improving food security by raising the productivity of her banana plantation. As food deficits were resolved, income generation became a priority and the need to improve on the farming system arose. Eventually, research on weed control & soil fertility at the farm became inevitable. She is now able to produce food for the entire household, and remain with a surplus to sell.

A bunch of bananas at her farm, that weighs between 18 to 20kgs now costs UGX 15,000= and a banana sucker costs UGX 1,200=. In a month, she earns an average of UGX 285,000= from the sale of 15 bunches of bananas and 50 suckers from her plantation.

## Call to Action:

**The following 10 steps will help a smallholder farmer develop a successful on-farm research project.**

1. Identify your research question and objective - this involves moving from the general to the specific.
2. Develop a research hypothesis - this is a clear statement of what you expect the outcome of your experiment to be, based on the limited evidence you have at hand.
3. Decide what you will measure and what data you will collect - what will you measure and record in order to answer your question and test the validity of your hypothesis?
4. Develop an experimental design - this involves arranging treatments in the field so that error and bias are reduced, and data can be accurately analyzed using statistics.
5. Choose the location and map out your field plots - be specific about plot size and layout.
6. Implement the project - ensure you discuss and involve your entire team at the farm. This prevents mishaps.
7. Make observations and keep records throughout the season - observe and take notes throughout the season on influential factors, such as: rainfall; temperature; other weather events; seedling emergence; pest problems; field operations etc...
8. Collect research data - be organized; use data sheets; label all your samples; keep all plots and treatments separate.
9. Analyze the data - while analyzing, you may consult the technical advisor or extension worker for guidance.

10. Interpret the data and draw conclusions - what do the results tell you?; what can you infer from the data?; and, how can you apply that information to your farm? Ensure you discuss your findings with your team at the farm and the group members.

**Whatever questions that may have inspired you to engage in on - farm research, it is likely that other farmers in your community will also have the same questions.**

**Sharing your research results, particularly if they have the potential to improve your operation's sustainability, may inspire others to make similar changes and try new practices, which allows you to provide an important service to your community.**

### Contact information:

P & V Commodity Supplies,  
Plot 43 Bulamu, Mityana Road.  
P.O. Box 70508,  
Clock Tower - Kampala, Uganda

**Tel:** +256 772 723 806 / +256 414 370 203 /

**WhatsApp:** +256 752 723 806

**EMAIL:** admin@pvcommodity.com /  
vsebukyu@pvcommodity.com

**SKYPE:** vincent b sebukyu /www.pvcommodity.com