Nearly 10,000 smallholder growers in Dominican Republic, Peru and Ecuador produce over 80% of global organic-export bananas. These growers face the challenge of replacing large quantities of harvested nutrients in a balanced manner, while adhering to strict organic fertilization guidelines and generating a profit. While organic certification does not explicitly require a positive nutrient balance, growers are expected to document plans to restore nutrients extracted using certified fertilizer materials. However, few management tools are available to guide grower planning and decision-making.

**OBJECTIVES OF PROPOSED STUDY**
- Determine whether annual nutrient exports from organic banana plantations are covered by the off-farm nutrients which are applied.
- Develop a simple calculation tool for the calculation of nutrient balance which can be used by technical advisory staff.

**METHODS USED**
- Interview guide developed to estimate for a calendar year the total banana biomass taken off an average field and the nutrients applied to the field in the form of mineral and organic fertilizers and amendments. Internal nutrient cycling was not taken into account.
- Review of literature and product information to establish nutrient content of fertilizers being applied.
- Interview and calculation of nutrient balance for 13 organic banana farms in Dominican Republic, Ecuador and Peru.
- Development of excel-based Nutrient Balance Workbook for practical use by field staff.

**CONCLUSIONS AND NEXT STEPS**
- The nutrient balance index provides an easily-estimated overview of fertilizer management with both ecological and economic implications.
- Growers often did not have all the information needed to make an accurate calculation, including annual production figures and nutrient values and water content of fertilizers.
- Decisions about types and amounts of fertilizers were guided by availability, since the grower associations often distributed inputs and by resource limitations faced by small growers. As a result, both over-application and deficits are common.
- Next steps include improved estimates of plant density, return period and bunch weight for more accurate calculation of exports. Soil analysis and economic calculations will be included in the nutrient balance workbook.