Research Poster

Impact of Farmer-Centered Action Learning on Agroecology Innovation in Rural Haiti

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Introduction

This research project addressed a gap in knowledge about the impact of participatory approaches on farmer innovation in Haiti. Most agricultural development research in Haiti has tended to focus on transfer of knowledge or adoption of externally imposed agriculture systems (Bannister & Josiah,1993; Bannister & Nair, 2003; Bayard, Jolly, & Shannon, 2007; Murray & Bannister, 2004). However, there is little research on action learning projects that enable Haitian farmers to prioritize their own needs and solutions for improving agricultural production. A key factor to this participatory process is providing support by application and evaluation of those solutions.

Participants in the study were farmers from the community of Deslandes in the Artibonite Valley of Haiti. They experimented with agroecology techniques over a four-year time span as a way to improve soil health, boost production, and increase farm income. Sixty-four farmers organized in three traditional work groups called *konbits,* designed and tested low-input agroecology techniques in experimental plots as part of the Konbit Vanyan Kapab Agroecology Project. Konbit Vanyan Kapab is interpreted locally as *working together we can find solutions*. Farmers applied what they learned each year and taught other farmers about agroecology through formal and informal activities. The purpose of this research project was to examine the potential of farmer-centered action learning to promote agroecology innovation in Haiti.

Conceptual or Theoretical Framework

Konbit Vanyan Kapab farmers have adopted a *learn-do-improve* philosophy to discover the three A's: *Aprann* (learning by doing), *Aplike* (applying knowledge), and *Amelyore* (improving application). The three A's incorporate strategies characteristic of successful action learning processes. Among these are: integration of indigenous-based knowledge, active farmer participation in all aspects of experimentation, and emphasis on experiential and social learning.

This philosophy aligns with the participatory action learning process. Participatory action learning has proven successful at not only transforming agricultural practice, but also promoting personal skill development and social capital for cooperative action and innovation. (Armitage, 2008; Duveskog, Friis-Hansen, & Taylor, 2011; Enfors, Gordon, Line, Peterson, & Bossio, 2008; Tschakert & Dietrich, 2010). Participatory action learning also fosters resiliency among resource-constrained farmers and their communities.

Methodology

Quantitative and qualitative methods were used to answer the following research questions: (a) will action learning activities impact farmers' ability to cooperatively design and implement agroecology techniques, (b) will action learning activities impact farmers' confidence in their ability to advance agroecology in their community, and (c) will action learning activities led to using agroecology techniques outside the experimental plots. Quantitative data were gathered by use of a questionnaire. Qualitative data were gathered through triangulation of field notes, activity reports, observational data, video recordings, and farmer role-play.

Results/Findings

The Konbit Vanyan Kapab Agroecology Project was largely successful at helping farmers gain knowledge and skill in the design and implementation of agroecology techniques. At the conclusion of the project, 96% of farmers indicated they knew more about and had a better understanding of agroecology techniques, 92% planned to continue working cooperatively to solve farming challenges, and 88% planned to continue using agroecology techniques. However, not all farmers had accurate mastery of technical definitions and application of certain techniques. For example, it was discovered during the role play portion of the project that almost one-third of the farmers misunderstood what a cover crop was.

It was found that farmer-centered action learning impacted farmers' confidence in their ability to advance agroecology in their community. All of the farmers indicated they *definitely* would teach agroecology techniques to others. The farmers are planning to facilitate agroecology demonstrations with 100 additional farmers. One farmer in a video recorded interview said: "people used to say I was stupid, now they want to be my friend and ask me to teach them agroecology techniques."

It was found that outside of the experimental plots, 40% of farmers used one or two agroecology techniques, 28% used three or four, and 20% used more than four. However, 12% used no agroecology techniques. From activity reports, almost all farmers reported they were able to grow more food using agroecology techniques, and many reporting they doubled their production. One farmer said: "You all know my father's land would grow only millet and a little corn. Now I grow beans and many other crops to take to market."

Conclusions

The overall conclusion to be drawn from the findings is that farmer-centered action learning enabled farmers to develop skills, confidence, and adoption of agroecology techniques. The action learning approaches assisted farmer's ability to cooperatively design experimental plots. Farmers developed confidence to continue innovating and are invested in changing agricultural practices in their communities. Opportunities to teach others in their community about agroecology has helped to elevate farmers' self-esteem. Though the extent of using agroecology techniques outside the experimental plots varied among individual farmers, the conclusion is that the Konbit Vanyan Kapab Agroecology Project fostered a spirit of self-discovery among farmers.

Implications/Recommendations/Impact on Profession

The implications for national and international agricultural development are that greater long-term impact is possible if policy and funding promote smaller, multi-year farmer-focused initiatives that emphasize action learning approaches to education and innovation. The Konbit Vanyan Kapab Agroecology Project provides a model of action learning that could be easily replicated in other rural communities in Haiti and elsewhere. The results favor a renewed focus on participatory action learning strategies that builds upon local knowledge, is hands-on, and engages participants in becoming change agents through social learning strategies.

References

Armitage, D., Marschke, M., & Plummer, R. (2008). Adaptive co-management and the paradox of learning. *Global Environmental Change, 18,* 86-98.

Bannister, M. E., & Josiah, S. J. (1993). Agroforestry training and extension: The experience from Haiti. *Agroforestry Systems, 23*(2), 239-251.

Bannister, M. E., & Nair P. K. R. (2003). Agroforestry adoption in Haiti: The importance of household and farm characteristics. *Agroforestry Systems, 57*(2), 149-157.

Bayard, B., Jolly, C. M., & Shannon, D. A. (2007). The economics of adoption and management of alley cropping in Haiti. *Journal of Environmental Management, 84*(1), 62-70.

Duveskog, D., Friis-Hansen, & Taylor, E., W. (2011). Farmer field schools in rural Kenya: A transformative learning experience. *Journal of Development Studies, 47*(10), 1529-1544.

Enfors, E. I., Gordon, L. J., Peterson, G. D., & Bossio, D. (2008). Making investments in dryland development work: Participatory scenario planning in the Makanya Catchment, Tanzania. *Ecology and Society, 13*(2). Retrieved from http://www.ecologyandsociety.org/vol13/iss2/art42

Hagmann, J. R., Chuma, E., Murwira, M., Connolly, C., & Ficarelli, P. (2002). Success factors in integrated natural resource management R & D: Lessons from practice. *Conservation Ecology, 5*(2). Retrieved from http://www.consecol.org/vol5/iss2/art29/

Murray, G. F., & Bannister, M. E. (2004). Peasants, agroforesters, and anthropologists: A 20-year venture in income-generating trees and hedgerows in Haiti. *Agroforestry Systems, 61-62*(1-3), 383-397.

Smith, J. M. (2001). *When the hands are many: Community organization and social change in rural Haiti.* Ithaca, NY: Cornell University Press.