Coffee ABSYSs

Assessment of Diversification Strategies in Smallholder Coffee ABSYSs

ABSTRACT

As our food systems continue to face multiple, cumulative and ongoing crises, ranging from environmental impacts to hunger, there is an urgency to find alternative, and transformational approaches to make our food systems more sustainable. Agroecology is a whole systems approach that seeks to transform our current, unsustainable food systems into ones that are ecologically sound and socially just. Diversification is a major principle within agroecology based transitions, informing efforts to manage risk, enhance soil fertility, optimize productivity, generate alternative income streams, and improve diets. Although diversification strategies have been popular as a response to many of the issues surrounding smallholder coffee production, there is a lack of evidence informing us what kind of diversification works, for what kind of farmers and in what contexts. In this project we worked with smallholder coffee farming systems in in Chiapas, México and Estelí, Nicaragua. We engaged cooperatives, farmers, youth, university researchers and NGO staff in a dynamic process of research, reflection and actions.

Keywords : Agroecology, Livelihoods, Diversification, Coffee, Research, Action, Participatory

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Project leader's institution : University of Vermont
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GOAL

Analyze how different diversification strategies affect food security, climate change resilience, livelihood performance and gender equity at the household, community and regional scales, and how this relates to the sustainability of coffee-based agrifood systems.
Generate scientific evidence and build capacity for In order to better understand and guide our food systems towards a sustainable transformation, research also needs to revolutionize and transform. This process requires asking the right questions and a commitment to a deeper engagement with all relevant actors. Our focus on agroecology and participatory action research (PAR) is our response to this call. Our general objective was to analyze how different diversification strategies affect food security, climate change resilience, livelihoods and gender equity at the household, community and regional scales. In order to engage these communities in better understanding and transforming their coffee farming systems, we invited them to become active and, as much as possible, equal partners in the entirety of our research process.

ACTION

Approach. We used an agroecological framework to create and assess social and ecological indicators for analyzing sustainability at various food system levels. This follows an understanding that agroecology is a transdisciplinary action-oriented approach, useful for fostering food systems diversification, change, and transformation (Méndez et al. 2013). Participatory Action Research (PAR) is an important element of this approach, as PAR encourages partners to engage in an iterative process of research, reflection, and action,
usually with explicit objectives to find solutions or address issues relevant to non-researchers. In our project, both non-academic and academic partners participated in all phases of the research process – planning, implementation, and analysis – making sure that the research would yield results that were not only academically robust, but also responded to the needs to the smallholder coffee farmers and their organizations, including capacity building.

RESULTS

On-farm diversification is an important strategy for smallholders to overcome food insecurity, climate change and coffee market instability. However, diversification should not be understood as simply increasing the number of agricultural activities. Rather, it is essential to situate it within social context, local ecological conditions, land access, labor and market dynamics. Maintaining agrobiodiversity, as an important diversification strategy, was key for household food security and climate change adaptation. As for income diversification, the sale of agricultural products (other than coffee) is generally sporadic and at a small scale. These sales, albeit small, allow farmers to purchase food and cover other basic expenses. However, markets for products other than coffee remain a challenge. While beekeeping has potential to generate income, fluctuating honey prices make it risky and less lucrative. Results from key-actor interviews with coffee value chain stakeholders and governance, showed that, in general, they do not see diversification interfering with coffee production or quality.
Solutions and recommendations in short term :
• Supporting diversified food production at the household level is a key strategy for food security and aligned with food sovereignty.
• Organic certification and stronger local markets for honey could help to reduce the price pressures and increase the sustainability of beekeeping.
• To take full advantage of the potential of diversification strategies, smallholder coffee farmers require support from a variety of actors from within and beyond the value chain, including researchers, roasters, nongovernmental agencies, and consumers.

PERSPECTIVES

Concluding Cross-Site Perspectives - Assessing Obstacles and Opportunities for Transformation :
Smallholder cooperatives in Latin America have traditionally focused on growing and exporting coffee, as a strategy to support the livelihoods of affiliated families. However, a combination of experiences, research and dialogue have promoted many cooperatives to recognize the limits of dependence on a single crop and many of these organizations are developing food security and farm diversification programs. Our project sought to better understand (in order to improve), cooperatives´ diversification strategies to overcome months of food insecurity and other vulnerabilities affecting member families.
PAR and agroecology:
Our use of agroecology and PAR was successful in getting cooperative leadership and youth involved, as well as resonating with smallholder families. A pervasive question with PAR and agroecology is its long term perspective, and once a process is started, how long do external actors stay involved. As the research teams continue to work at the sites beyond this project, this is a question we are examining. From a research perspective it is interesting to respond to critiques of PAR that it is expensive and does not yield sufficient academic outcomes (papers, etc.). Our experience informs us otherwise, but a more intentional and detailed documentation of these long-term processes, in terms of finances and outcomes is desirable. Agroecology and PAR are very compatible and share some of the same pervasive questions. Keeping track of some ecological and social processes requires a long time. We are working on incorporating the use of agroecological principles in some of our other work and are exploring the

possibility of also using them in
this process. A diversity of agroecology principles frameworks have emerged in the last decade, from both academia and civil society, which provide an opportunity to apply them to a variety of circumstances.
Diversification to build climate resilience:
Questions remain as to how diversification affects climate change resilience from a biophysical perspective. Although this was not within the scope of our project, it is a very important question, and one that we are exploring on how assessing through some on-going studies. For both sites Mexico and Nicaragua, more research is needed in terms of measuring ecological outcomes that enhance climate change resilience or reduce climate change impacts, as a result of on-farm diversification. Organizational and human capacity building to address food security moving into food sovereignty. This project embedded itself in processes driven by endogenous perspectives and people, in coordination with external allies such as researchers, students and NGOs. For the last four years we believe this to have been a successful strategy to root food security and sovereignty strategies. In addition, we engaged cooperatives on discussions related to gender and governance. Key remaining questions are how these capacities will evolve over the long-term, and what would be the best way for external actors to continue to accompany and support these processes.