Olson, Jennifer; Michigan State University
olsonjj@msu.edu
Authors: Mary Karanu, Rural Outreach Africa Program
Jennifer Olson, Michigan State University
Susan Wyche, Michigan State University

Title: Testing the Human-Centered Design Approach to Reduce the Labor Burden among Farmers in Kenya: Participatory Development Limitations Redux?

Despite years of research to reduce poverty among small-scale farmers in sub-Saharan Africa, productivity is generally low and labor requirements are high. Youth and men are departing, leaving behind mostly women and elders. The ubiquitous hand hoe is inefficient and back-breaking. Little attention has been devoted to improving farmers’ hand tools to reduce their steep labor burden. Lacking are well-designed, locally available and affordable technologies.

A team of researchers, engineers and development practitioners from Kenya and the US is addressing this using human-centered design (HCD) in 13 communities in Western Kenya. HCD prioritizes users’ voices using productive techniques. The team had gender-segregated farmer groups sketch designs of new or modified existing tools, and local (jua kali) metal workers manufacture prototypes. Farmers are testing several prototypes of four tools.

We will present the results of questionnaires, focus group interviews and observations of farmer reactions. Initial results indicate that the process is producing strong farmer and metal worker feelings of ownership over the tools, and tools that meet farmers’ economic, social and technical requirements. The reactions to the tools vary by gender, age and farming system. Older women, for example, start using one new tool like a hand hoe (bending down and hitting the soil). Our initial concerns, however, that older farmers would not have ideas or try new tools has been allayed.

In the excitement, critical questions are emerging. Although the tenets of HCD are similar to Robert Chambers’ participatory development, most HCD proponents are unaware of early critiques of participation such as overlooking power dynamics and thus who participates and benefits, ignoring the structural causes of poverty, and working outside the economic and social system so activities are not sustained. The impact of HCD designs may be limited because solutions are hyper-local and may not be replicable.

The utility of HCD for international development is thus not clear. It is being promoted by development agencies and threatens to become a fad. The ethical and practical lessons from participatory development should, however, not be forgotten.