Food safety: aflatoxin and gender-related constraints in peanut production
Dr. Christie is the scientific PI for “Improving the health and livelihood of people of East Africa by addressing aflatoxin and gender-related constraints in peanut production, processing and marketing.”
Introduction

- Research Questions:
  - Does participative research empower farmers or simply use them as passive receptors of technology transfer?
  - How does participation empower women?
- This project uses participative methods as a research, empowerment and pedagogical tool.
- Peanut CRSP Collaborators: Virginia Tech, Makerere University, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), National Association of Women’s Organizations of Uganda (NAWOU)
Background

What are aflatoxins & why address them?

- Product of molds that attack or invade grains: toxins harmful to human and animal health
- Infected peanuts are used by unscrupulous market vendors; also local people to feed their families and animals
- They are anti-nutritional factors, causing poor growth in children and young animals.
- They suppress the immune system as a result of binding nutrients and thus can have effects like those of HIV/AIDS, and can accelerate the progression of the disease
- They have been associated with various illnesses, such as liver cancer, in livestock, domestic animals and humans throughout the world (FAO 2006).
Why focus on women?

- Women manage the peanuts in Uganda as it is considered a domestic crop in many places.
- Women are in charge of the harvesting and post-harvest activities including storage, sorting and food preparation.
- Women farmers in the region are often dependent on their peanut crop (as opposed to that of the male head of household, when there is one) to solve their dietary and monetary household needs.
- They stand to benefit directly from adding value to their peanuts before marketing, as well as ensuring healthy peanuts in the home, but need encouragement to participate in trainings and research as they are the least empowered group in the community.
Background

- **Project Objectives include:**
  - Qualitative, ethnographic research in selected households in urban and rural areas of Kenya and Uganda to document cooking practices involving peanuts and clay-eating practices, and identify opportunities for mitigating or reducing aflatoxins in the diet.
  - Develop information Education and Communication (IEC) materials for aflatoxin awareness at grassroots and higher level as well as conduct awareness raising and training workshops.
    - Farmer’s Stories from Kamuli: groundnut knowledge, recipes and everyday life
Peanuts, or groundnuts, are a major crop for sale into agricultural markets as well as in-home consumption.

Aflatoxins on peanuts are an anti-nutritional factor, repressing the immune system and causing poor growth in children.

Consuming aflatoxin-contaminated groundnuts can speed progression of HIV/AIDS and cause cancers.
Theoretical Framework

- Participative Research
  - Researchers act as facilitators of discussion and mutual learning rather than extractors of knowledge when using participative methodologies.
  - The generation, analysis and ownership of knowledge in participation opens the door for creativity and inclusion of marginalized groups.
  - Great analytical abilities expressed through participatory and visual methods.
Theoretical Framework

- **Participatory Mapping**
  - Participatory research and mapping recognizes that the local people are the primary source of information and experts about the land, culture and processes surrounding them, and values their knowledge at the level of the researcher.
  
  - “While map-making has been a tool of the powerful, today it is becoming a tool of empowerment”

Theoretical Framework

- Gendered Mapping and Power

- Mapping of gendered differences in access and use of resources is critical to protecting biodiversity and women’s livelihoods.

- There is legitimacy in treating “visual imagery and narratives as sources of empirical data” (p. 459); including gender as a subject of study enriches feminist geographical research in political ecology.
Theoretical Framework

- **Everyday Life and Food**
  - Importance of everyday life as a research focus.
    - de Certeau, “The Practice of Everyday Life” (University of Minnesota Press, 1998)
  - Cooking spaces and everyday living as spaces where ordinary people express desires and tastes, and resist the powerful forces that rework the social environment. Kitchenspace as a key site of cultural and social reproduction.
    - Christie, “Kitchenspace” (UT Press, 2008) and “Kitchenspace: Gendered Territory in Central Mexico” (Gender, Place and Culture, 2006)
Working with women’s organizations

- **NAWOU**
  - Organization that brings women together for development and to promote collective empowerment through networks. Works with local women’s groups and leaders.
  - Had contact with rural areas of Uganda where women rarely have the opportunity to participate in education activities.
  - “For NAWOU, the project was a promotion of grassroots activism as the majority of our membership works in groups. Encouraging and building confidence among such groups can lead to the survival of culture, traditional norms, fighting food insecurity, improving nutritional status, strengthening livelihoods, building capacity and empowerment.”

  - Peace Kyamureku NAWOU Secretary General
Site Selection: Kamuli

- Population approaching 800,000, with the majority living in rural areas.
- Predominant ethnic group is the Basoga.
- Primary language is Lusoga, with Luganda and English spoken as well.
- Poor region that is important for peanut growing.
- Harvesting of peanuts is largely carried out by children and women.
- Worked with self-selected participants.
- NAWOU presence
Research Methods

- Participatory Mapping
- Journaling
- Household Interviews
- Focus Group Discussion
- Activity Profiles
Participatory Mapping

- Farmers drew and described maps in groups and individually showing the “path of the peanut” from the field to its final destination.
- Plate, market, and back to the field as seed.
Journaling

- The farmers were left with blank notebooks, pencils and pencil sharpeners and asked to record their recipes and experiences, and draw maps that would help scientists understand the importance of groundnuts in their everyday lives and culture.

- 26 exercise books collected and redistributed back to farmers

“On the 20th August 2008 I discovered how sweet ground nuts are. I first fried my shelled groundnuts and ate them with tea together with my family. My husband enjoyed and the children enjoyed because I had sorted the rotten ones and thrown them away before frying them.”

By Lovia Mutabrio
“On 25th August 2008 I and my husband visited our friends at Irapa. They roasted groundnuts for us and served us with tea. When we tested the groundnuts they were sour. I discovered that they had stored them poorly and they had moulded. We had learnt from NAWOU that extra care has to be taken when storing groundnuts after drying.”

By Nabirye Merab
“We are at a wedding function we had a big turnout that day of visitors. When they had settled down we served them with fried groundnuts they were so happy and appreciated and said we keep it up. Later on when it was time for dinner we served the food and groundnuts stew which was thick. We had mixed it with chicken and wrapped it in banana leaves. The visitors ate and said it was more delicious than the fried ones.”

Drawing by Nankwanga Rose
Household Interviews

- Mainly with women to discuss cooking practices, peanut recipes and cultural beliefs and taboos regarding peanuts.
Focus Group Discussions

- Separated men and women’s groups as a part of initial focus group discussion and group mapping.
  - Follow up focus groups with NAWOU and Makerere trainings
  - Final focus group discussion, November 2009
Activity Profile

- Farmers were asked to list which productive and reproductive activities were carried out by each gender.

Women do most of the work; have more knowledge about peanuts post-harvest.
Chronology

8 August 2008: Initial Focus Group Discussion, mapping and distribution of journals

7 February 2009: NAWOU Follow-up visit

March-November 2009: Ongoing follow-up visits by NAWOU

3 November 2009: Follow-up training including all parties and return of journals

November 2009- January 2020: Book compilation and publication (1000 copies)

Available online at: http://www.oired.ye/Peanut_CRSP/FarmersStoriesFromKamuli.pdf
14 members of the press attended: reporters from FM radio, The Monitor and New Vision newspapers

40 farmers (27 women and 13 men)

Deputy Speaker of Parliament, Mrs. Rebecca Kadaga

Principal Officer Mr. Cornelius Magara from the Ministry of Gender

Dr. Kaaya Archileo of Makerere University

NAWOU officers

President Mrs. Merinah Konyonyo

Secretary general Mrs. Peace Kyamureku

Capacity Building Officer Tsige Gabremikael

Information officer Marilyn Kabalere

Assistant Credit Officer Barbara Masette.

Book Launch: 17 March 2010

Distributed in over 10 districts, the Uganda Women Parliamentary Association, the National Public Library, Women and Gender Studies at Makerere University and the Resource centre of the Ministry of Gender, Labour and Social Development; also to partner organizations in Tanzania (WEGCC), Zambia (NGOCC), Ethiopia (WAT).
Findings

- **Peanuts**
  - Storage materials are important factors in contaminating peanuts with aflatoxins.
    - Jerrycans are the worst
  - Levels of aflatoxins are highest at the market.
  - Participative activities served as an opportunity to build on people’s existing knowledge.
    - Journals also served the purpose of general educational tool and were used for note-taking in trainings.
  - Offering something for farmers to learn attracts engaged and committed participants.
Findings

- **Empowerment**
  - Farmers learned what to look for when buying peanuts at the market.
    - Ex: watching the peanuts being ground to make sure the ones they buy are not contaminated
  - Farmer's took great pride in describing their everyday life.
  - Farmers as co-researchers with universities: considering farmer’s knowledge as respectable as researchers, reinforced by the publication of a book written by farmers.
Findings

- **Gender**
  - Men recognized that women do most of the post-harvest work, had the most knowledge about aflatoxins and needed access to information.
    - Activity profiles and other exercises helped to raise awareness about gender inequity.
  - Women hold knowledge that should be targeted in development.
  - It is important to give people the freedom to express things on their own (pencil and paper).
  - Women need to be encouraged to participate.
Impacts

- Women’s networks strengthened and better organized
- Networks can be used for multiple educational activities and building social capital
- Improved health
- Men recognizing women’s contributions inside and outside the household (reproductive and productive work)
- Greater awareness of negative impacts of aflatoxin
- Better post-harvest practices to reduce aflatoxins
  - Ex: sorting peanuts for cooking, better storage
- Participatory methods provide education and empowerment, not just information and training
Questions? Thank you!

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