People and Nature: Our Future is in the Balance
National Wildlife Federation
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Michigan State University
East Lansing, Michigan
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BACKGROUND

Campus Profile

Founded in 1855 as the nation's first land-grant university, Michigan State University (MSU) served as the prototype for 69 land-grant institutions later established under the Morrill Act of 1862 and was the first institution of higher learning in the nation to teach scientific agriculture. Today, Michigan State has grown into a comprehensive research university with 4,402 faculty and academic staff, and 34,342 undergraduate, 7,657 graduate and 1,367 professional students.

Michigan State is a leader in scientific and technological advancement. Research pervades all aspects of the curriculum at MSU, involving undergraduate and graduate students with faculty in more than 3,000 active-sponsored projects. Central to the university's land-grant mission is service to the state, the nation and the world. Public service and extension missions are fulfilled by long-standing commitments to international development and education and an extensive lifelong education effort throughout the state. MSU Extension offices provide community and technical support services to agriculture, business and family services, and 4-H youth programs in each of Michigan's 83 counties.

In keeping with MSU's role as a land grant university, the mission of the University Committee for a Sustainable Campus is to foster a collaborative learning culture that will lead the MSU community to a heightened awareness of its environmental impact, to conserve natural resources for future generations and to encourage MSU to work to create a sustainable community. The University Committee for a Sustainable Campus (UCSC) has the following goals to "green" the MSU campus:

- Education: heighten the environmental awareness of the campus community,
- Support: build commitment throughout the campus to meet the mission of the UCSC,
- Outreach: transfer knowledge of sustainability gained from MSU experiences beyond the campus,
- Research: increase research on our campus environmental impact,
- Assessment: coordinate an environmental assessment of the MSU campus,
- Policy: recommend adoption of policies that support the practice of environmental stewardship.

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GOALS & ACCOMPLISHMENTS

Goals

This project investigated how Michigan State University, a land-grant university, manages edible food by-products from agricultural research. Defined for this project, *edible food* is plant material that can be consumed without further processing after it has been harvested and that is safe for human consumption.

We sought to understand how edible food crops are managed by investigating where and how food crops travel and the decision-making behind those pathways. Possible barriers and opportunities to divert more edible food crops for human consumption were also sought. This project used qualitative methods including interviews with open-ended questions, participant observations and inductive analysis to answer these questions.

To understand how decisions are made, decision-makers were identified and interviewed at nine research stations that generate edible food crops. Decision makers (DMs) include farm managers, assistant farm managers, research coordinators, research assistants, research technicians, faculty researchers, extension agents and specialists. Initial interviews identified additional participants including more DMs, recipients of edible food and individuals who facilitated links or connections between decision-makers and recipients. Conversations with these participants all helped answer the questions about the challenges farm managers and other DMs face to manage edible food crops and identify possible opportunities to divert more materials for human consumption.

It is difficult to see what the future will bring. Through asking questions and having conversations with key DMs about managing edible food some DMs now think about this issue in a different way. Some DMs had never seen food crops as valuable resources. Some had never seen alternatives to their practices.

Below: An acre of yellow squash, leftover after research field trials, was quickly harvested by a large team of volunteers. Within an hour hundreds of pounds of squash were boxed up and delivered to food banks, elderly and low-income housing units throughout the greater Lansing area

Accomplishments

This project has conducted over 30 interviews and five participant observations to understand the pathways that edible food travels once generated at agricultural research stations. Asking questions of how by-products from research at agricultural stations are managed has created opportunities for DMs to ponder this and other questions. Qualitative methods provided a space for a conversation to emerge that resulted in learning from both sides.

Although the goal or objective of the station is research, most of the decision makers come from a farming background or are still actively farming. Farmers grow food with the intent to sell their products for consumption. It appears that DMs have the instinct that their products, although not grown with the intention of being consumed, are managed in a way so they can be consumed. Most stations manage edible food so it will enter the food chain either through sales or donations.

Some interesting results:

- Eight of the eight research stations divert some portion (if not all) of the edible food into the food chain.
- Seven of the eight research stations investigated donate food crops.
  Recipients of donations include food emergency programs, social service agencies, hunters, farmers practicing animal husbandry and children's programs.
- Five of the eight research stations are linked with groups that provide field gleaning of crops.
  Gleaned crops are distributed to or through food emergency programs including food banks, soup kitchens and food pantries.
- Six of the eight research stations sell food crops
  Four of the six stations sell nationally through wholesale, broker and processing markets.
  Five of the six stations sell locally (retail, to neighbors, hunters and farmers engaged in animal husbandry).

Above: After harvesting, washing and grading, researchers separate samples of potatoes for different tests. Multiple varieties of potatoes will be tested for bruising, disease resistance, ability to produce a good potato chip and its ability to store well at different temperatures

All research stations divert some portion of the edible food crops into the food chain or a human consumptive pathway. Despite current levels of diversion, there are still opportunities to divert more edible food for human consumption. Two stations showed interest in diverting more if a community agency would accept the food crops once identified. One station showed no interest in changing current management options.

All recipient groups that participated in this research project were interested in receiving additional materials. One group was interested in increasing their gleaning activities. One gleaning group had ended their gleaning efforts two years ago but is currently considering starting up again as a result of this project.

Some conversations centered around current policies or guidelines for managing plant material from research. Most DMs follow basic guidelines that have been handed down word-of-mouth. Although decision makers are following the same basic tenets, their interpretation, often differ. DMs were sometimes quite comfortable with the current policies and how they followed them, but a few DMs saw the benefits of writing policies down and of hearing how others interpret them to better understand how to follow them. It's unclear if new policies will be developed as a result of this research. Findings from this project will be provided to administrators of the research stations.

Information gathered for this project will also be used to develop an Extension bulletin to provide "lessons learned" for decision makers at other agricultural experiment stations. Other

land-grant universities will benefit from hearing how MSU manages their by-products and how they might develop relationships with community groups to divert edible food crops for food emergency programs.

Challenges and Responses
Qualitative work is different from quantitative research. Answers are not always what we expect. Open-ended questions are asked because we want to know about a story and cannot presume we know the story before it is told. This project was exploratory in nature, which is why it seemed to fit under the "Assessment" category of NWF's Campus Ecology program. This project attempted to 'assess' the current situation of edible food management at research stations. This project did not set out to develop a new management system nor to quantify production or consumption levels of edible food. This design was a new experience for me, the researcher, as well as the NWF. I commend NWF for accepting this project despite not understanding how to quantify it.

Proposing this type of project in a quantitative world has been challenging. Conferences on sustainability-connected specifically to universities or not-seek numbers and quantities. People want to understand how much and how long. A challenge for me has been to understand qualitative research and translate it to others.

I hope in the future more fellows and colleagues working in the sustainable development arena consider qualitative methods to look at different aspects of sustainability as we continue to seek and create more sustainable campuses in a more sustainable world.

ENGAGEMENT & SUPPORT

Leaders and Supporters
What made this project successful is that people I interviewed in this project were open to sharing their experiences. They shared a bit of themselves so that I could begin to understand the story around edible food at agricultural experiment stations.

I also could not have completed this project without support from my faculty advisor.

Funding and Staffing
NWF funds were instrumental for they covered travel expenses for interviews and observations. An assistantship was provided for one year through funds from the Michigan Family Independence Agency's Family Nutrition and Education Program and the Resource Development department at Michigan State University.

National Wildlife Federation's Campus Ecology Program
For this project to be successful, I needed to visit physically the different agricultural experiment stations to interview decision makers and engage in harvest activities. Without funding from the NWF Campus Ecology program visiting all the stations to get a comprehensive understanding would have been cost prohibitive. The resources which were helpful *are State of the Campus Environment, Green Investment Green Return and Ecodemia.*

CLOSING COMMENT

It is not productive to blame different groups or individuals for problems on our campuses or why things are not able to change. It is important to remember that success will happen when we work together.

"When you plant lettuce, if it does not grow well, you don't blame the lettuce. You look into the reasons it is not doing well. It may need fertilizer, or more water, or less sun. You never blame the lettuce. Yet if we have problems with our friends or our family, we blame the other person. But if we know how to take care of them, then they will grow well, like lettuce. Blaming has no positive effect at all, nor does trying to persuade using reason and arguments. That is my experience. No blame, no reasoning, no argument, just understanding. If you understand, and you show that you understand, you can love, and the situation will change." – Thich Nhat Hanh (1992)