

# INTEGRATED CULTURAL AND MECHANICAL WEED MANAGEMENT FOR ORGANIC WINTER SQUASH SYSTEMS

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## Introduction of researcher:

Marisa Benzle is a 2nd year graduate student working towards her Master's of Science in Horticulture. She joined the Brainard lab in the Fall of 2016 and is scheduled to conclude the project and her degree in Spring of 2019.



## Project Details:

Marisa and her team are working on an interdisciplinary project to improve the production of organic winter squash in lower Michigan, by investigating methods of weed control and variety selection for organic growing environment. Other members of the project include entomologists and a soil and nutrient management researcher, to better understand the impacts of organic reduced tillage. *The purpose of this project is to optimize the benefit to the farmer while maintaining the environment of the farming system.* This is a difficult balance to find but one that most growers Marisa has interacted with strive for.



## Advice on starting research projects:

“Before ever doing your own research I would recommend pursuing interactions with people that do research for a living and talking to them about their work. A research station like KBS is an amazing resource for students to learn more about what it means to be a researcher. Take the time to ask questions and learn from other people's experience before deciding what you want to investigate yourself.” - Marisa Benzle

## What is exciting about this research?

We are at a time of change and growth in the science of variety development and applied research in general. There is an increased focus on what the farmer wants and needs. Horticulture is an applied science and thus the work that we do is designed around the needs of the grower. Marisa finds this integration of the farmer into the scientific process very exciting and challenging.

## Project Discoveries:

It's very important to have the right tools and the knowledge to use those tools can make on the management of organic systems. There is a lack of data available to growers when selecting varieties that best suit their environment when growing in organic vegetable systems. We have yet to see if variety choice will make a significant improvement to our system in terms of weed control, or tolerance to an organic system overall. This study is useful in telling us if we can see differences in the varieties that already exist.