PURDUE UNIVERSITY | Horticulture and Landscape Architecture

HLA HAPPENINGS

Issue 22-25 / July 1, 2022

In this issue:

ASHLEY ADAIR FEATURED IN PURDUE EXTENSION ANR NEWSLETTER

The following is from the Purdue Extension ANR Newsletter for July, 2022.

Bringing Big Grains to the Small Farm

Ashley Adair, Extension Organic Agriculture Specialist, has been busy with all of the things that come with the role of a new extension specialist – teaching, planning events, visiting growers, brushing up on the scientific literature, and deciding where to steer the Organic Agriculture Extension program next. In addition to working on events focused on organic row crops this summer, Ashley has planted a field trial that melds organic grains with the small farm – dry beans.

The nearest place that dry beans are grown on a commercial scale is Michigan, but a few organic grain growers in Indiana have tried them out with varying levels of success. Dry beans can be finicky to grow, but they are a leguminous, food grade crop that can be used to diversify a farm's crop rotation. And why not on the small farm?

Dry bean variety trial at the Purdue Student Farm site. Beans are planted in double rows on shaped beds and watered with a drip irrigation system. Photo by Chris Adair.

Ashley is focusing on two major goals in the Organic Agriculture Extension program. The first is soil health, which should be a top priority on any farm, but particularly on organic farms where tillage is typically relied upon for weed control. The second is diversification of agriculture across Indiana, regardless of farm size. Growing dry beans addresses both of these goals – growing a legume as part of the crop rotation, which benefits soil health, and potentially mapping a new marketing avenue for growers of all sizes.

With this project, Ashley hopes to find out if organically-produced dry beans are a feasible option for small farmers to diversify their crop rotation and their produce marketing strategy. Four dry bean varieties were chosen for the project, both for their growth habit and their cooking characteristics – Black Coco, Calypso, Jacob's Cattle, and Tiger's Eye. Dry beans store particularly well if harvested and dried properly, and provide a great source of protein and fiber for the consumer's diet. But as with any project, there will be challenges – some foreseen, others unpredictable.

During this project, we have already learned how sensitive dry beans are to planting depth and weed pressure in practice.

Planting and installing irrigation on 6/10 with the help of Purdue Student Farm's Alfonso Rosselli at Pinney Purdue Ag Center in organically-managed plots. Photo by Ashley Adair.

The trial at Pinney had to be replanted 12 days after the first attempt due to high weed pressure and poor germination, likely due to shallow planting restricted by a compaction layer. Ashley is working with another Horticulture and Landscape Architecture colleague, **Dr. Liz Maynard**, to determine a sensible cover cropping strategy to help alleviate weed pressure and compaction for future work in these plots.

This project will be the first of many adventures in field work for the new extension specialist. If you have questions about this project, or have questions about organic certification and production, please reach out to Ashley at holmes9@purdue.edu.

LORI HOAGLAND PRESENTED AT NATIONAL PLANT GERMPLASM SYSTEM

Lori Hoagland attended and gave a presentation at the North Central Region Technical Advisory Committee Meeting of the National Plant Germplasm System in Ames, IA.

In addition to discussing how her lab is using the germplasm collection to investigate how crop domestication has influenced beneficial plant-soil-microbial relationships in tomato, carrot and quinoa, she covered how other Purdue faculty (Katy Rainey, Jianxin Ma, Mohsen Mohammadi, Diane Wang and Cankui Zhang) are using the collections in their research programs with soybeans, wheat, rice, cotton, quinoa and garlic. She specifically highlighted how Mohsen, Cankui and her lab are using the collections to support the Arequipa NEXUS Institute. The long-term goal of all of these projects is to develop new improved crop varieties that can achieve high yield with fewer inputs, and withstand changing climatic conditions.

DAVID BARBARASH PUBLISHED INVITED PAPER

Dave Barbarash published an invited paper in the Journal of Digital Landscape Architecture and presented at the Digital Landscape Architecture Conference at Harvard, Cambridge, MA. The paper is titled: Automated Recording of Human Movement Using an Artificial Intelligence Identification and Mapping System. The paper includes three undergraduate student co-authors who contributed custom software code, text, and diagrams to the effort.

JOHN ORICK CO-WROTE NEW PUBLICATION

John Orick with co-authors published a new Purdue Extension publication: A Gardener's Guide to Avoiding Costly, Harmful, and Illegal Pesticide Purchases.

HLA IN THE NEWS ROUND UP

The Purdue Exponent wrote an article on the **Purdue Student Farm** and the **Boiler Vegetable Season Pass** in the Monday, June 27 print edition.

PINNEY PURDUE VEGETABLE FIELD DAY REGISTRATION NOW OPEN

Pinney Purdue Vegetable Field Day Aug. 9, 2022, 5 to 8 p.m. Central Time. Register at https://puext.in/VegEvening2022. More info at https://extension.purdue.edu/events/county/porter/2022/08/pinney-purdue-vegetable-field-day.html

Upcoming Field Days

- July 21: Purdue Fruit, Veg & Hemp Field Day
- July 26: Turf and Landscape Field Day
- July 29: Small Farm Education Field Day
- August 9: Pinney Purdue Vegetable Field Day

Newsletters

- Facts for Fancy Fruits: https://fff.hort.purdue.edu/
- Vegetable Crops Hotline: https://vegcropshotline.org/
- Purdue Landscape Report: https://www.purduelandscapereport.org/
- Greenhouse and Indoor Production of Speciality Crops: https://mdc.itap.purdue.edu/newsearch.asp?subCatID=425%20&CatID=10

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