

Dickinson

COLLEGE FARM

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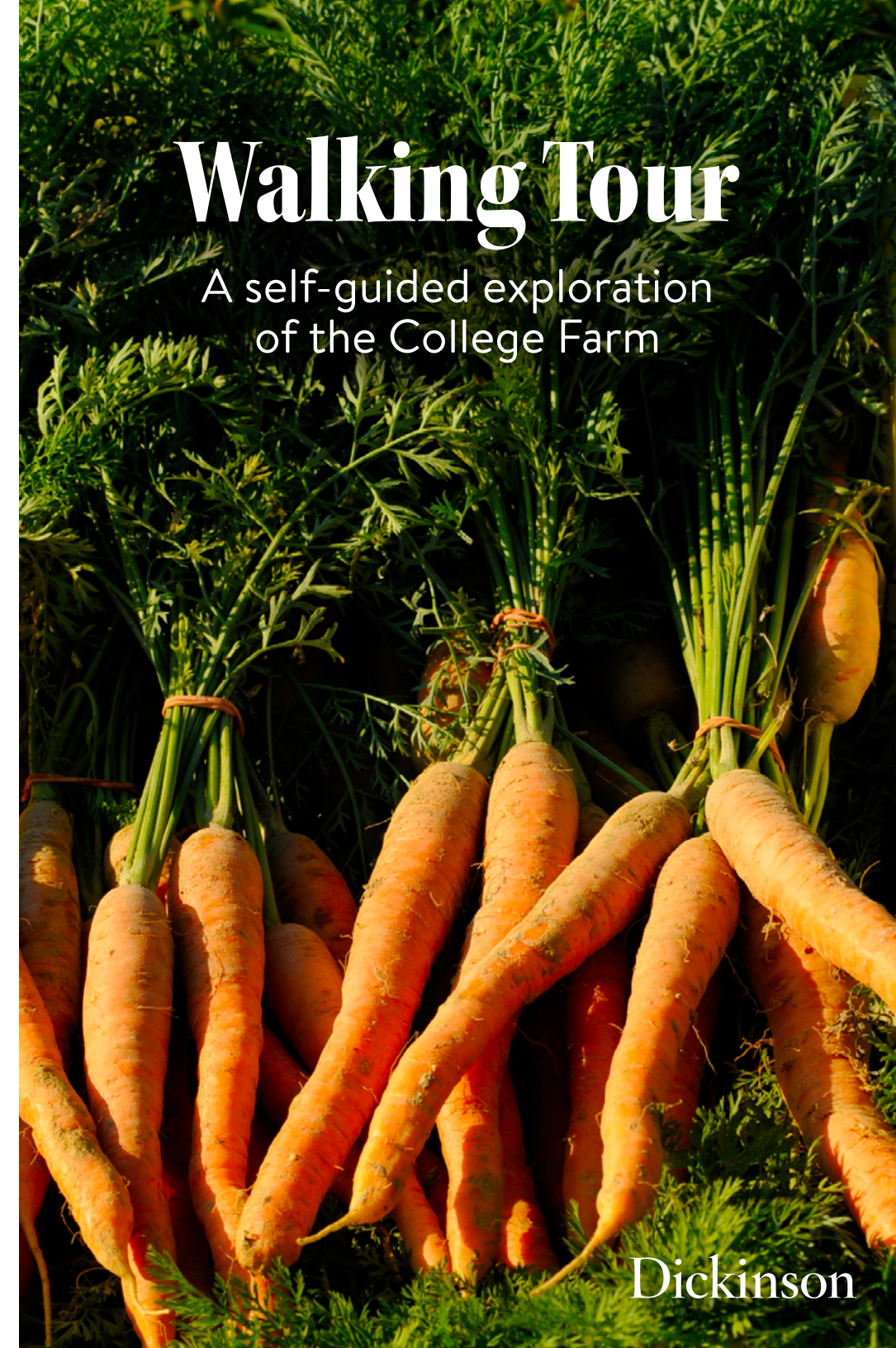
Use the QR code to listen to the Dickinson College Farm Walking Audio Tour.



Prepared by the Dickinson College GIS Lab, March 2015

Walking Tour

A self-guided exploration of the College Farm



Dickinson

Welcome

to Dickinson's College Farm, an over 80-acre, USDA-certified organic working farm and educational resource.



THE FARM PROVIDES produce to the college's Dining Hall, local community and members of the farm's Campus Supported Agriculture (CSA) program. This tour guides you to key areas of the farm and provides information about what you see. The tour is about an hour, with seven minutes per stop.

1) Yurts

- Seasonal apprentices have been living in the yurts since 2008.
- All of the electricity used in these buildings comes from four 195-watt solar panels located just uphill from the yurts.
- Solar power is stored in a large battery bank located in the largest yurt for use in the evenings and on cloudy days.
- Yurts provide an example of simple, unconventional living structures for seasonal accommodations.

2) Livestock

- All livestock are raised on pasture. The farm manages its animals through rotational grazing, moving them regularly to maximize animal health and minimize issues resulting from overgrazing.
- The farm has sheep, laying hens, and beef cows.
- All animal products are sold to the campus community.
- If you don't see animals, it is most likely because they are in a distant paddock.

3) Production

- The farm uses a total of 15 acres for crop production.
- Fields are fertilized with nitrogen-rich leguminous cover crops and compost made from Dining Hall food waste.

- Produce raised on the farm is provided to the Dickinson Dining Hall, our stand at the local farmers' market, our Campus Supported Agriculture Program (CSA) and a farm-run campus eatery (Farm Works).
- The farm maintains a healthy balance between growing crops and increasing soil fertility through crop rotation.
- Production fields have raised certified organic produce since 2009.

4) Hub Ponds

- Developed as part of a student independent-research project, the ponds promote the migration of the American Toad throughout the farm and support predatory insects.
- The area surrounding each pond is landscaped with native plants that flower at varying times of the production season providing both habitat and food to beneficial insects as part of the farm's Integrated pest management strategy.

5) Compost Area

- The farm works with the local community to collect leaf litter and wood chips as a source of carbon for composting.
- Compost piles are configured into long, narrow "windrows" which are regularly aerated using a mechanized turner.
- During turning events, nutrient rich effluent from the biogas project is added to the carbon materials to begin the composting process.

- Finished compost is applied to our production fields and pastures as a beneficial biological inoculant and source of nutrients. This practice also helps to sequester carbon in the soil and reduce materials going to the landfill.

6) Biogas

- Biogas is made through controlled fermentation of animal manure and food waste in a special heated tank called a biodigester.
- After tinkering with small research systems for over a decade, we developed the farm-scale biogas project in 2023 in partnership with our neighbors from Triple L Farm Dairy.
- This new system combines the manure of 150 cows with up to three tons per day of food waste from campus and local businesses.
- Methane-rich biogas is converted to electricity in a 50 kilowatt combined heat and power engine, generating renewable energy to satisfy the farm's needs plus an additional 30 homes on the local grid. This project reduces greenhouse gas emissions, water pollution, and landfill loading while also generating farm revenue.
- Dickinson students use the biogas systems for lab exercises and research projects leading to professional development.

7) Greenhouses

- The greenhouses allow the farm to extend its growing season into the colder months.
- The greenhouses also provide an environment in which students may work during the winter months.
- In summer, the greenhouses grow hot-season crops like peppers and tomatoes.

- In cooler months, lettuces, spinach and other greens are grown.
- All greenhouses were built with student labor.

8) Large Solar Array

- The solar array provides electricity to the barn and greenhouses.
- The panels connect to the utility through a grid-tied inverter.
- The solar array produces 5.25 kilowatts in full sun, which results in about 30 kilowatt hours per day—enough to power an average home.
- The solar-energy program reduces the amount of harmful carbon dioxide released into the air by tens of thousands of pounds.
- The equipment was purchased in 2007 with the help of an energy-harvest grant from the Pennsylvania Department of Environmental Protection.
- The farm is a renewable-energy teaching center where students and community members learn about solar-energy systems.

9) Barn

- This is a traditional Pennsylvania bank barn.
- The upper barn serves as storage for supplies and hay, and is a venue for events.
- The lower barn is the hub of the produce operation where produce is washed and stored after being harvested. It's also one of the pick-up points for the farm's Campus Supported Agriculture program.
- All of the drains in the floor, as well as the gutters on the barn roof, are channeled into an underground cistern. This gray water is then available to irrigate the farm's compost piles.

