No Farms No Food

American Farmland Trust
SAVING THE LAND THAT SUSTAINS US

THE CLOVERLEAF FARM

Stewardship Profiles in California Agriculture
Environmental Leadership with Soil Health and Biodiversity

In 2011, after a long search for farmland, Emma Torbert rented a one and a half acre parcel of land between Davis and Dixon from endive farmer Rich Collins for $1.00, and established the Cloverleaf Farm. Three years later, Emma met Katie Fyhrie, and the two have been farming together since. Both Emma and Katie have extensive farming educations: Emma holds a master's degree in horticulture and agroecology from UC Davis, and Katie will graduate from the same program in June 2016. They now lease four and a half acres and grow a variety of crops, including peaches, apricots, figs, asparagus, blueberries, melons and strawberries.

The Cloverleaf Farm distributes produce to a thirty members of their community supported agriculture (CSA) program, and sells produce, pies, and jams at a farm stand they share with Hearty Fork Farm and Collins Farm. The Cloverleaf Farm also sells directly to Sacramento's Natural Food Co-op, The Davis Food Co-op, Bi-Rite, Good Eggs, and to the occasional local restaurant. Peaches are Emma and Katie's most popular product, and in order to continue production, they have implemented sustainability practices to keep their soil and crops healthy.

ACHIEVEMENTS

- Increased soil organic matter
- Increased crop health
- Decreased application of nitrogen per acre

PROBLEM

Soil health is important to Emma and Katie, who have focused on building soil organic matter and soil biological communities by amending the soil with compost, fish emulsion, cover crops, and through no-till farming practices.

In addition to soil health, Emma and Katie have made efforts to enhance biodiversity on the farm. Emma notes that "if you have a robust ecology, there will be fewer potential problems." Their efforts have included planting flower cover crops and a hedgerow to attract bees and other beneficial insects, and ultimately, to decrease spraying.

And, having established a connection with a fellow farmer, this upcoming season The Cloverleaf Farm will run chickens through the orchard to help with pest management and cover crop maintenance.

SOLUTION IMPLEMENTATION AND MANAGEMENT

According to the pair, their soil has an impressive 4.5 percent organic matter content. One of the key projects on The Cloverleaf Farm are eight soil moisture monitoring stations, which reports soil moisture content so that irrigation water is applied precisely.

Emma says they currently irrigate once every two weeks, but will be interested to see how this will change with the data from the monitoring stations.

One unique aspect of The Cloverleaf Farm is their soil-care philosophy: Emma observes that by applying fewer nutrients and less water, the trees struggle a bit, and produce a tastier fruit. According to Katie, they apply only about twelve pounds of nitrogen per acre, as compared to most farmers, who apply about 100 pounds per acre. In an attempt to eliminate the use of copper spray to treat peach leaf curl, Emma and Katie plan to experiment with a new organic form of pest management: sour raw milk. This sour raw milk, sourced from Organic Pastures in the Bay Area, will also act as a soil amendment in that it functions as a probiotic to stimulate soil biological activity.

CHALLENGES/OBSTACLES OVERCOME

Emma notes that one challenge with their soil is a calcium-magnesium imbalance inherent to the soil's parent material. This poses a problem because a soil that has too much magnesium will form a hardpan, and will be more difficult for plants to take up water. Ideally, they could apply lime, but due to high pH, it is not a good solution. So far, Emma and Katie occasionally apply gypsum with sulfur. As they continue to farm, they are interested to see whether this imbalance will become a larger problem.

When asked about their biggest challenge, Emma notes that finding permanent land has been challenging. The entirety of the Collins Farm is under conservation easement, which prohibits subdivision, so they won't be able to buy their parcel from the Collins family. Although the two would like to build structures and incorporate animals into their orchard system, space, and lack of ownership have prevented them from doing so.

MEASURING SUCCESS

Soil organic matter on the Cloverleaf Farm has increased measurably.

To both women, becoming economically sustainable has been a significant achievement: she and Emma can pay themselves an equitable wage. Emma has just been able to quit her second job, and Katie graduated with a Master's degree in horticulture from UC Davis in June. Because both Emma and Katie have research backgrounds, they have a vision to improve small-scale specialty crop production. In pursuit of this goal, they have written and received grants, including a CDFA Specialty Crop Block Grant and a grant from Cascadian Farm Organic, to pay for various projects on the farm they couldn't have afforded otherwise. They are proud to have received these grants, which they feel validates their farming expertise.

For more information about the stewardship practices discussed in this profile, please contact the farmers directly. You can reach Emma and Katie by email to thecloverleaffarm@gmail.com

STEWARDSHIP PRACTICES

- Soil Health
- Biodiversity

PROJECT PARTNERS

- California Department of Food & Agriculture, Specialty Crop Block Grant Program
- Cascadian Farm Organic
- Center for Land Based Learning
- The Collins Farm
- Small Orchard Extension
- University of California, Davis

This project is supported by a Specialty Crop Block Grant from the California Department of Food and Agriculture and the Agricultural Marketing Service of USDA.

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