



Red H Farm

Introduction



Figure 1. Caitlin at her farm. Photo credit: Katie Hurtado

Red H Farm is located in Sebastopol, a small town in Sonoma County, about one hour north of San Francisco, California on the western coast of the United States of America. Red H Farm is owned and operated by Caitlin Hachmyer, a 32-year old woman born and raised in Sebastopol. The 0.6 hectare farm exists between two parcels of land. The first, core parcel is 0.3 hectares of land on which Caitlin grew up and which is still owned by her family (the “home farm” site, as referred below). The second is an additional 0.3 hectares located at the Permaculture Skills Center (PSC), an

educational and entrepreneurial space in Sebastopol where Caitlin works as an instructor in a farmer-to-farmer educational program called Farm School (the “PSC site”). The main greenhouse sits on a third parcel of land.

While Caitlin is the farm owner, she is also the primary farm worker at Red H Farm. In addition, at the core parcel she receives family support who assist with various projects including mowing, harvesting, hauling compost and mulch, weeding and general farm maintenance. At PSC there is a core staff that maintains the property as a whole. The community there also provides a thought space and support around innovation and farm development, as well as co-investment in amendments and perennials that benefit the land in the long term.

The farm sits in a semi-coastal location with a Mediterranean climate characterized by cool mornings and warm afternoons in the summer, and some degree of protection from hard winter frosts. The region consists of seasonal drought and there is a reliance on drip irrigation during the summer and early fall months. The land consists of a mix of sandy loam and clay soils between the two properties, both of which experience some degree of saturation and mild flooding in the winter. The region supports year-round production and is a bountiful agricultural area with cultural support for a local food system. There is a heavy regional focus on wine-grape production, which contributes significantly to the increasing and prohibitive cost of land. It is this prohibitive cost of land that has prevented Caitlin from purchasing farmland and kept her in a position of renting. In this sense she is fortunate to be collaborating with the Permaculture Skills Center, who recognize the agricultural value (not merely the market value) of the land and have thus been keen on co-investing in building healthy soils. This has fostered Caitlin’s ability to manage the land agroecologically and in accordance with the same values that she implements on the land owned by her family.

Description of the Agroecology system

The land stewardship practices at Red H Farm focus on soil health, water conservation and biodiversity. Red H Farm implements no-till agriculture, which relies on using compost and wood



chips to mulch beds and pathways respectively. These amendments are continuously placed on the surface of the soil (rather than being actively mixed in) to act as a weed barrier – a method of no-till that avoids using chemicals for weed suppression. This method simultaneously helps hold in water while building soil health. Caitlin also relies on reusable, woven black plastic mulches to solarize weeds for bed preparation. Over time these methods build soil organic matter and protect the soil, helping to conserve water. The water conservation inherent in systems focused on mulching and high soil organic matter levels is increasingly important in a drought state like California coupled with the unpredictability of extreme weather events in the face of climate change. Building soil organic matter, in addition to keeping land planted and/or mulched, is important in helping to keep soil in place during weather events that can create runoff. The core farm site gets so wet in the winter, it becomes saturated and has water running across it – erosion control is crucial. This, in addition to ecological principles, was in fact a key reason why Caitlin implemented no-till practices: realizing the land was too wet to accommodate heavy machinery until well into the growing season meant that severing reliance on those tools would greatly extend the production window to year-round. Additionally, the wet conditions during the winter and spring months at Red H Farm, coupled with



Figure 2. Cabbage and mulch

mulching techniques that hold in moisture, eliminate the need for irrigation for a large part of the growing season – there is enough moisture in the soil well into the summer months to keep the plants healthy. This has become a crucial feature of the property in the last year, because in late 2015 the old well that served the farm collapsed. This has changed the production planning in several ways. It has meant that most of the dry farmed crops and/or crops that are harvested by July or August (tomatoes, potatoes, radicchio, onions and winter squash) will be grown at the home farm site, benefiting from moisture until mid-late summer. It also means intensive succession planting in the spring and early summer to get maximum productivity out of the land. Crops that will produce all season like kales, chards, and later successions of summer squash and cucumbers will be prioritized at the PSC site, where they can benefit from irrigation later in the season.

Practices focus on building healthy soil ensure strong, healthy plants that can fight pests – Caitlin relies on this, as well as biodiversity (both in harvestable annual and perennial crops as well as plantings to attract beneficial insects) rather than chemicals. In addition, the use of pest barriers like floating row covers are integral to the pest management strategies at Red H Farm.

Caitlin farms bio-intensively and works to make her systems reflect and work *with* nature as much as possible. While around 100 different annual crop varieties are grown at Red H Farm, there is an additional current focus on creating more harvestable, native perennial hedgerows that will create increased habitat and provide an even more diverse harvest at the home farm. There is already tremendous perennial biodiversity at the PSC site, which has been a source of inspiration and education around species selection and perennial development.

Outcomes of the practices

The agroecology system at Red H Farm integrates both traditional and modern practices that stem from traditional agroecological values. Responsible water use and conservation as well as



biodiversity and the biointense mixing of annual and perennial systems (incorporating agroforestry into an annual system) are core agroecological techniques. The elimination of mechanical tillage in annual specialty crop production is a new concept in western agriculture, though it is grounded in traditional production techniques. The utilization of modern resources like woven black plastic, mechanical mowing and floating row covers complement this values-based system. While the capital investment in the resources necessary for this system is high, since implementing this combination of techniques in 2013 the production output and economic viability of the farm has been steadily increasing. In 2015 Red H Farm produced \$35,000 in crops from 0.6 hectares, a 25% increase from the previous year.

This system has been developed and continues to grow and change, incorporating and testing new techniques based on several key modes of learning. First, while she did not grow up on a commercial farm, growing up rurally meant that Caitlin was raised in a family that grew and raised much of their own food. This included a large garden, laying hens, and small amounts of livestock production (beef cows and pigs) done collectively with a broader family network. This connectedness to the land on which she was raised undoubtedly provided the foundation of Caitlin's passion for stewarding the land and providing for her community. Second, Caitlin attended university at both The University of California, Berkeley and at Tufts University, where she learned the core principles of agroecology, the practices and detrimental effects of modern western agricultural practices, and the policy and planning environment of both the local and global food system. This, coupled with ongoing



Figure 3. Farm diversity

independent research she undertakes has provided her with a core foundation of knowledge at the outset of farming. Primarily, it is currently Caitlin's farmer networks to which she attributes most of her farm-specific learning and innovation. Building a community that exchanges knowledge and support has been integral to developments and problem-solving on the farm. It is recognizing the huge value in this that inspired Caitlin to work with PSC in their Farm School – helping to formalize some of these networks and passing on gained knowledge while continuing to learn from her students, peers, and elders will be key to changing the food system.

There is a tremendous amount of community support for local food in Sonoma County, and Caitlin has benefited from the backing of local organizations to support her work. Some of these include the Permaculture Skills Center and the local Farmers Guild, which in collaboration with the Sebastopol Farmers Market where Caitlin sells her produce, honoured Red H Farm with a cash award to assist in purchasing compost, the biggest expense on the farm. This was particularly important in 2015 because the local composting facility, Sonoma Compost, was forced to shut down when the County negotiated a new landfill operations agreement with an out-of-state firm that did not want the compost operation on the landfill site where it had been operating for more than 20 years.

The compost site was challenged with compost runoff water entering a nearby waterway when their ponds overflowed during heavy rains. They had been working with local regulators to implement corrective actions while a new site was selected and developed. Unfortunately, a nearby neighbor



opposed to the landfill expansion leveraged this opportunity to file a lawsuit against the facility. This suit, along with the County's desire to finalize their new landfill operations agreement, and major financial assessments the County would impose on the compost operation were it to continue operation, left little choice but to close down the much beloved operation.

The closure of Sonoma Compost has left a compost deficit for area farmers, landscapers and backyard gardeners. About 90,000 cubic yards the highest quality, most cost effective, locally sourced compost is now no longer available to local growers. Receiving community support to help with the purchase of additional compost to stockpile in advance of this closure was important, while Caitlin seeks a new source of compost and explores opportunities to increase compost production at the farm.



Figure 4. Flower strips for bees

This resource is a key component to ecological, climate-mitigating farming throughout the region. Interestingly, there is not only strong cultural support for ecological farming locally, but there is also political support for this kind of farming system more broadly. At the State level policy is moving forward aimed at assisting farmers in using ecological practices that build soil and sequester carbon, as farmers are increasingly looked to as the front line of defence against climate change. Simultaneously, regulations requiring county level organic waste management plans to keep organics out of

landfills and create compost are being put in place. The disconnection between this larger political shift supporting ecological farming and the local political shift undermining key resources has created local discord. The community is collaborating to work with the county to resolve the discrepancy. Caitlin has been part of these efforts based on both her interest in building sustainable systems as well as the direct impact these changes have had on her farm.

The agroecological approaches at Red H Farm are resource and labor intensive, but they focus on the long-term viability and resilience of the system as much as they focus on immediate production output. Balancing these two components – ensuring a healthy ecosystem while economically supporting small and family farmers – is both crucial and very challenging in building an agricultural landscape. Additionally, this method of farming is community-centred, focusing on building relationships and an interconnectedness with the land and food system in the broader community. These things can be challenging to quantify, but are integral to creating sustainable communities within the long-term quest for food sovereignty.

Message from farmer to farmers

“Building knowledge sharing and community into your farming system is so important – whether you are farming in partnership or collaboration, or by yourself, building a community of support will help to keep you farming when things are challenging, as they inevitably will be. Balancing the competitive spirit inherent in owning a business with the collaborative and open spirit integral to personal and community health will help change the food system at its core.”

— Message from Caitlin Hachmyer