

# SONOMA-MARIN *Resources*



## How Can Planning Make Carbon Farming Doable?

By Oia Walker-van Aalst, GrizzlyCorps Fellow at Marin RCD, with RCD Staff

Producers face uncertainty every day, making it key to plan ahead when creating agricultural systems that are productive, drought-resilient, climate-smart, and wildlife-friendly—and ready to take on the future. That’s where carbon farming and Carbon Farm Plans come in.

Through management practices that enhance on-farm carbon storage, carbon farming helps producers mitigate and adapt to climate change effects, like drought, and restoring balance to the earth’s natural carbon cycle. The carbon farming approach involves implementing well-established agricultural practices specifically known to pull carbon out of the atmosphere, convert it to plant material and/or soil organic matter, and store it long-term to replenish depleted soil carbon pools. Carbon farming not only sequesters carbon and acts as a natural solution to climate change, but also confers co-benefits to producers that enhance resiliency on working lands. For instance, a 1% increase in soil organic matter will hold 20,000 gallons more water per acre. With carbon farming, agricultural systems can turn from net carbon sources to sinks, so producers can be a part of the solution to climate change and weather the times to come.

Capturing and storing carbon on the farm can be done with strategies both new and old. As plants like crops, grasses, trees, etc. perform photosynthesis, they capture carbon dioxide, a greenhouse gas (GHG), from the atmosphere, and turn it into carbon-based plant parts (roots, leaves, shoots) or move it to the soil as carbon-based compounds, increasing soil organic matter. Carbon stored in plants and soils can feed animals (including humans), support wildlife habitat, increase soil health and water retention, improve on-farm productivity, and more. Some strategies for increasing carbon capture include planting hedgerows, restoring riparian areas, cover cropping, and compost application. These practices add to the standing woody vegetation, living root systems, and plant diversity on the farm. It’s key to note that the carbon in plants and soils can either be stored for decades to centuries through the process of soil carbon sequestration or quickly released back to the atmosphere through practices like overgrazing and tillage. Carbon farming can also involve installing infrastructure like anaerobic digesters to reduce on-farm carbon emissions or cross fencing to encourage rotational grazing.

Any operation—beef, dairy, vineyard, crop, orchard, forest, and any combination thereof—can implement carbon farming practices, but it becomes a lot easier with a Carbon Farm Plan (CFP). CFPs are customized, full-farm plans, shaped by producers’ environmental, social, and financial goals. These plans show how to maximize opportunities for carbon capture, storage, and emissions reduction. Beginning with an inventory of the entire site, a CFP is created by brainstorming possibilities with an expert team, and then selecting the most relevant and compatible practices

from a list of more than thirty-two on-farm USDA Natural Resource Conservation Service (NRCS) conservation practices. Using GHG modeling tools like COMET Planner, carbon capture rates are quantified and calculated to show a total long-term carbon sequestration potential for the farm. Each plan has research, maps, and a vision that makes taking action easier. With a CFP in hand, a producer can access funding opportunities to implement practices and designs, a network of technical advisors, a public that is increasingly interested in climate-smart food systems, and a future on their site with improved productivity, ecology, and soil health. Furthermore, CFPs can be living documents that change as land-bases change hands, a producer’s goals shift, or practices are implemented and new opportunities arise.

CFPs are an emerging, important part of a complex world of agricultural/ecological paradigm shifts, climate-related markets, publicly and privately-funded incentive programs, and local, state, and federal policy. Local producers in the Bay Area are completing CFPs in increasing numbers -- so far, 19 in Marin County and 24 in Sonoma County (and counting), and local technical advisors and organizations are ramping up capacity to help create more. For instance, the North Coast Soil Health Hub is focused on carbon farming, and has a new local position who will help coordinate planning efforts across the region. Overall, CFPs help producers plan ahead with confidence and support, and demonstrate that it’s possible to create agricultural systems which cannot only survive but actively create a brighter, more resilient future. Bay Area producers interested in CFPs are encouraged to talk with their local Resource Conservation District, Fibershed, or the Carbon Cycle Institute.

## SCFB *Training Programs*

### Virtual Farm Equipment Safety (CPR & First Aid: Two-year Certifications)

Date	Time	Language	Cost
Thursday, June 10	9:00 am – 10:00 am	Spanish	Free
Thursday, June 10	10:15 am – 11:15 am	English	Free
Tuesday, June 15	2:00 pm – 3:00 pm	English	Free
Tuesday, June 15	3:00 pm – 4:00 pm	Spanish	Free

These will be virtual classes. Email [joe@sonomafb.org](mailto:joe@sonomafb.org) for link. Limited to current Farm Bureau members

### SCFB/Farm Service Agency Application Event

Date	Time
Wed., June 30	10:00 am – 5:00 pm

This event will be held at the Sonoma County Farm Bureau office. Farm Service Agency and Natural Resources Conservation Service agents will be available to help begin or complete program enrollment applications. This is event is limited to current Farm Bureau members. Please call the SCFB office 707-544-5575, or email [joe@sonomafb.org](mailto:joe@sonomafb.org) to RSVP for the event.

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## Award Recipients

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