Feed the Earth: An Exploration of Regenerative Agriculture Programs in Washington State

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Abstract

Regenerative agriculture centers soil health as the solution to the environmental and economic problems caused by conventional agriculture. By using regenerative practices, agricultural operations become more cost-effective and supportive of the environment. The transition to regenerative techniques can be complex and expensive, but financial and technical government assistance programs have the potential to lower risk for individual farmers. Washington State supports the use of regenerative agriculture through Conservation Districts, the Sustainable Farms and Fields grant, and the Soil Roadmap report. These programs benefit from an administrative framework linking local, state, and federal resources, but capacity is generally limited by financial support for the programs.

[Note for Evergreen MES Admissions Committee:
This report was my Western Washington University Honors Capstone. Originally this 21 page report included an introduction and conclusion; background on the economic output of the Washington agriculture industry, agriculture terminology, regenerative agriculture methods, Washington soil health concerns, and the policy foundations for state and federal agriculture administration; and information about Washington State programs that support regenerative agriculture programs, including conservation districts, the Sustainable Farms and Fields grant, and the Washington State Soil Health Roadmap. I have included pages 14 to 20 and the entire References section.]

Programs

Conservation Districts

Conservation districts (CDs) provide an invaluable network of financial and technical support for farmers and land managers in their pursuit of regenerative agriculture practices (Sweeney, 2024).[1] Over 3,000 CDs across the country "coordinate assistance from all available sources—public and private, local, state and federal—to develop locally-driven solutions to natural resources concerns," (WSCC CD, n.d.). CDs operate under a federal program, the National Association of Conservation Districts, and are managed at the state level, with almost every county in the country having its own branch. CDs in Washington were established in 1946 under the belief that the integrity of the land is "among the basic assets of the state and that the preservation of these lands is necessary to protect and promote the health, safety, and general welfare of its people," (WSCC CD, n.d.).[2]

Most federal and state conservation funding opportunities require landowners to acquire a "Farm Plan" that outlines structural and managerial recommendations to protect and optimize the use of natural resources on their land (WSCC CD, n.d.). Certified farm planners at CDs provide a free consulting service to landowners and will create a Farm Plan that is customized to the size and goals of the production. Farm Plans are not business plans, as natural resource conservation is the foremost priority, but often include suggestions about soil health, animal health, and chore

[1] Information on Conservation Districts was supplemented by an interview with Aneka Sweeney, the Outreach & Education Manager for Whatcom Conservation District, on May 2nd, 2024. The interview was conducted during a local school field trip to Alluvial Farms, a sustainable pork ranch in Whatcom County.

[2] This mission statement is quoted from the preamble of the state legislative bill establishing Conservation Districts (RCW 89.08.010).

efficiency. Farm planners with the CDs also research what financial opportunities these landowners qualify for and often act as a middle party between individuals and government agencies.

Alluvial Farms of Everson, Washington, worked with the Whatcom County Conservation District (WCD) to navigate the financial opportunities available for establishing regenerative agriculture practices on their 40-acre swine farm (Sweeney, 2024). Alluvial and WCD created a certified nutrient management plan to qualify the operation for the NRCS EQIP grant, which funded the purchase of their livestock housing structure and a forced-air compost system. As air is automatically pumped from vents through the manure, the timeline to spreadable fertilizer is shortened by weeks and doesn't require someone to manually turn the compost. The EQIP grant also paid for a set of fencing and path barriers to support rotational grazing on the property. WCD and the property owners determined how best to break up the land for the health of the animals and regeneration of the soil. The electric wire fencing allows the farmers to easily segment the fields by what land needs time for recovery and what land is ready to be used by livestock.

Alluvial was able to originally buy the property with the payout they received from putting a significant area of their land in a conservation easement under the Conservation Reserve Enhancement Program (CREP) (WCD, n.d.). In Washington State, CREP is focused on restoring and enhancing salmon habitat by transforming CREP land into biodiverse forests of native plants to act as riparian barriers (WCD, n.d.). Alluvial's property runs along the salmon-bearing Dale Creek and their qualification earns them annual rental payments from the program. WCD acts as the liaison between the landowner and FSA- the agency that funds the rental

payments, planting, and maintenance- and provides technical, legal, and outreach expertise for the program.

The Washington State Conservation Commission (WSCC) provides base funding and grants for Washington CDs (WSCC CD, n.d.). CDs can also apply for specific district programs and contracts from WSDA and their county. CDs are all run differently based on unique priorities and grant opportunities. While day-to-day collaboration between CDs is limited, several state and regional projects and conferences exist. The Puget Sound District Caucus is a space for CDs to share resources and new ideas. The WSCC Center for Technical Development is an inter-district organization that works to provide CD employees with a level of technical knowledge standardization and the tools to best serve landowners with creativity and innovation (WACTD, 2024). Neighboring CDs are also known to partner on localized projects like cost-share equipment or wildfire outreach programs.

Along with funding limitations, lack of public knowledge restricts the work that CDs are capable of (Classeen, R., 2004). CD leadership elections and long-term planning decisions are open to the public but see very little participation. WCD calls for more community members to involve themselves in conservation events and support local initiatives which demonstrate the value that CD work brings to the community.

Sustainable Farms and Fields

Sustainable Farms and Fields (SFF) is a conservation grant program under the Washington Soil Health Initiative (WaSHI). The goal of this program is to make it “affordable

for farmers and ranchers to implement climate-smart practices."[3] In 2023, SFF awarded $1.8 million to CDs and other public entities for projects with a measurable impact on carbon sequestration and CO2 emission reduction generated throughout the farming and ranching processes (WSCC SFF, n.d.). The SFF committee prioritizes projects that adopt regenerative agriculture practices, like no-till, cover-cropping, and composting, as well as those that use agroforestry as a method for sequestering carbon (WSCC SFF, n.d.). As an avenue for local solution implementation, SFF pursues both economic stability and effective natural resource management across Washington State agriculture (Hammond, B. et al., 2013).

Created in 2020, SFF was appropriated funding in 2023. While it is a relatively new program, SFF has already gained widespread support from farming cooperatives and environmental organizations, including the Tilth Alliance, Washington Farm Bureau, Washington Association of Wheat Growers, and over a hundred other coalition supporters (Audubon, n.d.). SFF anticipates another $1.5 million to be awarded in 2024, a decrease from 2023 numbers which had successfully funded around half of applicants over that fiscal year. Limits on funding will likely make the program more competitive as CD and technical staff become more familiar with the opportunities SFF provides.

Funded projects include: technical assistance used to identify carbon storage opportunities; equipment sharing programs for regenerative agriculture practices, like no-till seed drills, manure separators, and compost spreaders; and materials and supplies, such as seeds for cover crops, seedlings, and soil amendments (WSCC SFF, n.d.).

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[3] Information on Sustainable Farms and Fields was supplemented by an interview with Karen Hills, the Sustainable Farms and Fields Program Manager, on May 13th, 2024. Interview was conducted virtually.

With funding from SFF, the Snohomish County CD and San Juan County SD have partnered to develop a carbon farm planning template. Similar to Farm Plans used by CDs for property owners who want to apply for conservation grants, the carbon plan specifically works to recommend practices to increase carbon sequestration and reduce greenhouse gas (GHG) emissions. CD resource planners document a property's existing practices and conditions, as well as potential opportunities. Carbon dioxide benefits are then quantified using either the COMET-Planner, a simplified online USDA GHG model tool, or COMET-Farm, a complex estimation tool. Practice recommendations are prioritized based on farm-specific goals and then the resource planner connects the landowner to available resources. The carbon plan launches at the end of 2024 and will be available for resource planners for work on applications for SFF and other grant programs. Having such a clear outlined plan of how grant funding is to be used will make it easier for applicants to be awarded these grants.

WaSHI Soil Roadmap

In 2021, the Washington Soil Health Initiative (WaSHI) completed the Washington State Soil Health Roadmap, a 124-page living document outlining current soil health issues and potential solutions (WaSHI, 2021). Recommendations are based on interviews with agricultural stakeholders collected through surveys, listening sessions, and focus groups, with the objective to establish a detailed plan with clear goals and milestones for the maintenance and improvement of Washington agricultural soil health. The Soil Health Roadmap is available free to the public and as a reference for policymakers and industry stakeholders.

The Roadmap is categorized into eight focus areas, including the environmental community and seven regions: dryland agriculture in Eastern Washington, irrigated Columbia

Basin, irrigated potato production in the Columbia Basin, juice and wine grapes, Northwestern Washington annual cropping systems, tree fruit, and Western Washington diversified farming systems (WaSHI, 2021). Nuance of soil health issues are dependent on the context of these regions, but farmers agree that a clear and cohesive plan for best management practices is needed (DuPont, S. T., 2021).

Surveyed farmers and land-managers also said there are several major social barriers to the adoption of soil health practices (WaSHI, 2021). Some regenerative practices, like crop rotation and no-till, can be complex without technical assistance, especially when soil has already been severely damaged by intensive crops. The crop rotation times that work best for the needs of the land can also come into conflict with economic demand. Lack of capacity at regional and county offices, as well as lack of public information, make it difficult for land-managers to enroll in current incentive programs. Suitable agricultural land is difficult to acquire outside of the Columbia Basin and leased farmland often discourages tenant investment in soil health practices. The regenerative agriculture transition also presents a major sociological barrier for many land-managers, as it requires them to not follow their expertise in conventional methods and take a risk on a new methodology.

Specific goals identified in the Soil Roadmap include the preservation of existing soil organic matter, an increase in soil capacity for water retention and carbon sequestration, and a reduction in rates of soil erosion (WaSHI, 2021). Additional milestones included the development of a universal low-cost soil health measurement tool, improved public knowledge of soil health through an expansion of agency and university capacity for community outreach and targeted education, and a 30% increase of landowner enrollments in soil health incentive programs.

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