



**Statement of the
California Farm Bureau Federation**

**TO THE
UNITED STATES HOUSE OF REPRESENTATIVES
COMMITTEE ON AGRICULTURE
SUBCOMMITTEE ON CONSERVATION AND FORESTRY**

**FOR A HEARING ON
MANAGING FOR SOIL HEALTH:
SECURING THE CONSERVATION AND
ECONOMIC BENEFITS OF HEALTHY SOILS**

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Chairwoman Spanberger, Ranking Member LaMalfa, and Members of the Subcommittee, thank you for the opportunity to appear before you today about the important topic of soil health. I am Shannon Douglass, First Vice President of the California Farm Bureau Federation (Farm Bureau).

Farm Bureau is a non-profit, voluntary membership organization whose purpose is to protect and promote agricultural interests throughout the state of California and to find solutions to the problems of the farm, the farm home and the rural community. Farm Bureau is California's largest farm organization, representing nearly 36,000 members across 53 counties contributing to the largest agricultural economy of any state in the nation. Farm Bureau strives to protect and improve the ability of farmers and ranchers engaged in production agriculture to provide a reliable supply of food and fiber through responsible stewardship of California's resources.

My husband Kelly and I are first generation farmers living in Glenn County with our son where we raise beef cattle and grow forage crops, walnuts, hay, sunflowers and various seed crops. In addition to farming and my position at Farm Bureau, I run a company called CalAgJobs, which connects agricultural career candidates with California's agricultural employers.

IMPORTANCE OF HEALTHY SOIL

Farmers recognize that healthy soil is one of the necessary, critical inputs of a successful farm. Regardless of whether it is the multi-generational farm that continues to produce a safe and abundant food supply or the first-generation farmer, like myself, farming on newly-established agricultural land, soil health is vital for sustainability, productivity, and profitability. Unhealthy soils produce poor crops and poor feed for livestock, requiring soil inputs, while promoting weed growth or no growth at all. In California, in particular, over the past three decades, we've lost more than a million acres of farmland, much of which is our most productive, prime, agricultural soils. If our development trends and resource constraints continue, some studies suggest, we will lose another 1.4 million acres by the year 2050. This is also a crucial timeline where our food, fiber, and energy demands are expected to increase by about 50%.

Beyond responding to impending food and land scarcity, healthy soils have been demonstrated to serve as a carbon sink, effectively sequestering carbon in agricultural soils and vegetation. As farmers and ranchers manage more than one billion acres in the U.S., we have a wonderful opportunity to share our positive contributions, including to those that may articulate otherwise. The 400 commodities we grow in California, particularly our specialty crops, depend upon the robustness and uniqueness of our soils, for both economic and conservation purposes. It is in our best collective interest to pivot more quickly to a proactive, holistic approach to ensure we are managing our soils and applying practices that maintain and ultimately, improve soil health.

Farm Bureau member-adopted policy confirms a strong interest in soil health. As a grassroots, member-led organization, Farm Bureau members work through a process each year to create and refine Farm Bureau policy that directs the organization's program of action. Ideas and suggestions for the policies originate in discussions among Farm Bureau members at various meetings and gatherings. After consideration by a statewide committee, our voting delegates annually adopt policies at the Farm Bureau annual meeting. Soil health is incorporated and interwoven throughout Farm Bureau's policies and programs of action. This is evident in our support for public policies, programs and legislation, such as the Farm Bill, that encourage voluntary conservation programs and research to investigate and improve on-farm practices, as well as technological investments that further soil health and sustainability. Farm Bureau supports both public as well as privately-led initiatives to achieve these goals. We also support incentives for promoting carbon sequestration in soils.

PRACTICES ON MY OPERATION

Our farm is located in Glenn County, California, which as a county, leads the state in the number of acres contracted for cover crops with the United States Department of Agriculture – Natural Resources Conservation Service (NRCS). A recent soil health cover crop demonstration day in our county attracted 95 grower participants, showing the increasing interest in the practice. Demonstration events such as this in our county are widely attended and successful because of the great outreach efforts to those in industry by our local NRCS office. The technical advisory committee created by NRCS, led by a combination of local farmers, local agronomists and local seed suppliers, has also played a key role in outreach and collaboration. The committee works with our local NRCS agronomist to ensure NRCS recommended cover crop seed mixes are easy to use and readily accessible to growers in the area.

In part because of these types of demonstration events, I have taken steps to improve the soil health on my own farm. Some popular national varieties include the annual cereals and forage grasses. Following seed supplier protocol, we implemented cover crops to achieve the multitude of benefits possible in a cropping system. These include, but are not limited to, prevention of erosion, improvement of the soil's physical and biological properties, providing nutrients for the soil, the suppression of weeds, availability of water in the soil, and breakage of pest cycles. Of course, we are aware that the potential benefits achieved will vary depending on the species of cover crop, the crop cycle, and the location of the operation.

Using the regional tools, progress reports, and plant guides developed by NRCS, we implemented cover crops on our farm in 2016 beginning with rotating them in before planting our sunflower seed crop. Since then, we have continued to test different mixes as part of our crop rotation system. Specifically, we have planted cover crops in the winter in advance of planting and are also integrating cover crops into a newly planted walnut orchard.

We have been pleased with the increase in organic matter, overall weed suppression, and we anticipate yield increases in the coming years in response to our efforts. We believe these

results will give us the ability to continue making the investment of seed and planting costs. In addition to soil health benefits, we are finding extension benefits from the utilization of cover crops, as well. For example, we are seeing many of these varieties serving as habitat for both bees and other pollinators, as well as for beneficial insects. There are also varieties that can be utilized to decrease nematode populations in the soil and we have seen those working on the fields of our neighbors.

CALIFORNIA'S HEALTHY SOILS PROGRAM

For our operation, we opted to utilize cover crops without any financial assistance or incentive support, although we are aware that such programs exist. I'll explain our state program, why it wasn't a good fit for my farm, and more detail on how the program works.

In California, one particular incentives program available to growers is the Healthy Soils Program (HSP) managed by the California Department of Food and Agriculture (CDFA). While we commend CDFA for creation of the program, after researching it for our farm, we personally decided the application process was too cumbersome and time consuming. It was ultimately easier to implement the practice ourselves than to put in the time and resources necessary to go through the extensive grant application. Having said that, the CDFA HSP is important to highlight as a program attempting to improve soil health in California.

The HSP was born out of the 2015 International Year of the Soils, which encouraged the State of California to create an interagency plan via the Healthy Soils Initiative to promote the development of healthy soils. The initiative articulated the benefits of soil health: improved plant health and yield, improved biodiversity, habitat development, carbon sequestration, reduced sediment erosion and dust, increased water retention, and improved air and water quality. The initiative promoted five actions:

1. Protect and restore soil organic matter in CA;
2. Identify sustainable and integrated financing opportunities;
3. Provide research, technical assistance and education;
4. Increase governmental efficiency on public and private land applications; and
5. Promote interagency collaboration.

While several agencies had individual actions, CDFA initiated the HSP aimed at incentivizing the use of on-farm soil management practices that improve soil organic matter, sequester carbon and reduce greenhouse gas emissions. In its current form, the program is divided into two funding streams: incentives and demonstration projects.

Incentives are offered to California growers and ranchers who implement specific conservation management practices on their farms and ranches that sequester carbon, reduce greenhouse gas emissions, and improve soil health. Forecasted benefits are calculated using a

tool developed by NRCS, Colorado State, CDFA and the California Air Resources Board. This tool is called COMET-Planner. On-farm management practices are also those eligible under NRCS conservation practice standards, and include practices like compost application, cover cropping, no-till, reduced-till, mulching, herbaceous cover, and conservation plantings such as windbreaks and hedgerows.

Demonstration projects are offered to farm operators, industry groups, non-profits, academia or Resource Conservation Districts providing on-farm projects that collect data or showcase conservation management practices to benefit soil health. These also typically include an outreach and education component and have included practices such as compost application, hedgerow planting, mulching, no-till and cover crop management with grazing and controlled burns.

CDFA is also now offering grants for technical assistance for the HSP. Funds awarded through this competitive grant program are distributed to technical assistance providers including Resource Conservation Districts, the University of California Cooperative Extension, and non-profit organizations, with demonstrate technical expertise in designing and implementing agricultural management practices to support CDFA's incentive programs. Technical assistance providers help provide hands-on, on-demand application assistance for growers and ranchers applying for a grant and implementing one or multiple management practices.

Grant guidelines are proposed before an Environmental Farming Scientific Advisory Committee convened by CDFA that consists of representatives from academia, other state agencies and departments, USDA, technical advisors and growers. The Committee discusses the program, advises on improvements, takes public comment and makes recommendations to the California Secretary of Agriculture.

The Healthy Soils program originally received its first funding allocation in 2016-17 with \$7.5 million from the state administered Cap and Trade program proceeds. In 2018, it again, received \$5 million from the Cap and Trade proceeds and \$10 million from California Proposition 68: the CA Drought, Water, Parks, Climate, Coastal Protection and Outdoor Access for all Act of 2018. To date, it has funded 329 projects and has claimed to reduce 18,360 metric tons of carbon dioxide, the equivalent of removing approximately 4,000 cars off the road for one year. In the awards announced just this month, CDFA awarded \$8.7million for 194 incentive projects and \$3.8 million for 23 demonstration projects. The most common practices for incentives include compost application, followed by cover cropping. The funds are evenly dispersed amongst orchards, grazing/rangelands, cropland and vineyards. Funded demonstration projects include a higher percentage for orchards and the most common include cover cropping, composting and mulching. For the current proposed California budget, the state legislature included \$28 million to the HSP from Cap and Trade Auction revenues.

RECOMMENDATIONS

To maximize the conservation and economic benefits of soil health on the farm, Farm Bureau provides the following recommendations for the Committee's consideration:

- Flexibility: Recognition that there is no one-size-fits-all approach for on-farm soil health practices. In California alone, there are over 400 commodities grown. Each commodity and operation will have different conservation and economic needs to factor and we need to realize that in some circumstances, the practices that have been validated as promoting healthy soils may not make sense. In those circumstances, we can't make value judgments against those operations, but rather, we need to use our motivation and resources to identify new practices that work.
- Producer Incentives: Support for programs that create incentives to encourage or recognize activities on working farms that enhance soil health. For example, to help address climate change, we support compensation to farmers for planting crops or adopting farming practices that keep carbon in the soil. Application processes for these programs should be streamlined and should not overburden producers. Compensation needs to be provided so that it actually makes financial and agronomic sense.
- Soils Research: Continued resources for research that support soil health practices. Areas of research should include the study of diseases that jeopardize soil health, new technologies that have the potential to improve soil health, and the application of agricultural byproducts as soil amendments. Soil health practices specific to specialty crops should not be overlooked. For example, programs such as the USDA Specialty Crop Block grants could place more emphasis on encouraging specialty crop growers to utilize cover crops or implement other soil health focused practices.
- Technical Assistance: Ongoing resources for NRCS technical assistance staff that are commensurate to the voluntary financial assistance available to producers. Resources for ongoing soil mapping and publication of soil survey information are also essential.
- Wildfire Response: The utilization of public-private partnerships for replanting fire-ravaged areas with beneficial species ecologically appropriate for the region that stabilize soil and reduce weed invasion.
- Prioritize Local: Long-term implementation of on-farm soil health practices will depend on the practicality, feasibility, and availability of resources to the producer. Any soil health program should be locally focused and producer led.
- Avoid Conflicting Regulation: Soil health practices must take into consideration other on-farm practices such as those required by laws like the Food Safety Modernization

Act (FSMA). We must be thoughtful about the intersection of practices required in other laws to ensure that best practices under NRCS are in harmony with food safety and other regulations. The burden must be placed on the legislators and regulators to avoid regulatory conflict.

- Other Research: Further research is needed to document the additional agronomic benefits of soil health practices. For example, research documenting the reduction in water needed for lands with compost applications.

CONCLUSION

A comprehensive suite of tools is available to successfully manage for soil health. Cover crops are one of many tools that will be effective for some farmers and in some farming systems. It is important to note they will not integrate well with all crops. Any implemented recommendations by private and public sources need to be tailored to the local area relying on the science provided by local experts for maximum effectiveness. With continued research and prioritization of funding, cover crops hold great promise as a tool to combat the increasing pressures on American farmers.

Thank you for the opportunity to testify.