



USDA Climate-Smart Grant Guidebook 2023






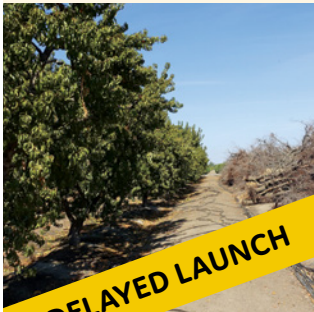


Contents

Introduction & FAQs	3
Cover Crops.....	5
Conservation Cover	8
Hedgerows & Whole Orchard Recycling	10
Contact Information.....	11
References	13

Introduction & FAQs

In 2023, Blue Diamond was awarded a five-year grant from the USDA for \$45 million to support growers implementing climate-smart farming activities. This voluntary program allows Blue Diamond member/growers or those who farm on a Blue Diamond orchard to **receive an incentive payment and no cost plants or seeds** when implementing one or more of the following activities after program launch:

ELIGIBLE PRACTICES			
Cover Crops	Conservation Cover, "Bee Pasture"	Hedgerows	Whole Orchard Recycling (WOR)
			
MATERIAL COSTS		DELAYED LAUNCH	
No cost, seeds provided by Project Apis m.	No cost, seeds provided by Project Apis m.	No cost, plugs provided by Pollinator Partnership	Consult local providers
IMPLEMENTATION INCENTIVE *			
Up to \$35/acre *	Up to \$50/acre *	Up to \$8/linear foot *	Up to \$900/acre *
IMPLEMENTATION INCENTIVE EXAMPLES			
Cover crops planted on at least every other row of a 100-acre orchard: ≤ \$3,500	Conservation cover planted on 4% of 100 acres (primarily on idle or fallow land, in or next to orchards): ≤ \$200	Currently, Blue Diamond Growers is unable to launch Hedgerows and Whole Orchard Recycling due to ongoing challenges with the USDA. Until Blue Diamond receives more clarity on the requirements from USDA and potential implications for our growers that want to participate in Whole Orchard Recycling and Hedgerows, the launch will be delayed. Blue Diamond will continue to provide updates about the progress of launching these two practices. Blue Diamond humbly requests your patience as we navigate the requirements of the USDA for Whole Orchard Recycling and Hedgerows.	
*Implementation incentive is for eligible cost-share activities only and is provided as a reimbursement. Eligible cost-share activities include land preparation, irrigation, management, and monitoring. For WOR, eligible activities only include chipping, spreading, incorporating activities. For cover crops, the incentive rate is reduced when planted on less than every other orchard row.			

What is required?

1. Participation in Blue Diamond's Orchard Stewardship Incentive Program (OSIP)
bluediamondgrowers.com/forms/
2. Registration of your farm and orchards with the USDA Farm Service Agency
3. A completed application with requested materials and subsequent approval from Blue Diamond
4. Proof of implementation to show you have completed the activity
5. Adherence to all program requirements and rules (see link to the right)

Where do I learn more and how do I sign up?

- More information can be found on the BDG webpage under *Grower Resources* > *USDA Climate-Smart Grant*, or bluediamondgrowers.com/usda-climate-smart-grant/
- The application link is bit.ly/bdg-csg-app
- Email csg@bdgrowers.com or contact your Regional Manager with additional questions

Why does this matter and what's the goal?

Customers and consumers are increasingly demanding products grown with climate-, pollinator-, and water-friendly practices and may be willing to pay more for them. To continue to drive additional profit for our members, we are working to develop a market-based premium for products grown with climate-smart practices. This premium is aimed at funding the program beyond the life of this USDA grant, creating future cycles of profit for our members.

How many of these practices can I implement on how many acres?

A grower can participate in all activities offered—there is no limit on the number of practices one grower can implement. Acreage allowable for this program varies by practice, plant material, and funding availability. Growers will be approved up to a defined number of acres (depending on the activity) and then approved for additional acreage upon further review. The funding amounts are on a first-come, first-served basis, and Blue Diamond will support as many acres as possible until funding is exhausted. Please review the “Rules and Regulations” for more details on the Blue Diamond Growers webpage: bit.ly/bdg-csg

Who is eligible?

All almond orchards with a Blue Diamond Crop Agency Agreement contract are eligible to participate. This means an owner or renter will be eligible if the orchard has a Blue Diamond contract. The orchard must currently be planted to almonds.

What is the process to apply and participate?

The grower (person implementing the practice) must apply to Blue Diamond and be approved for the funding prior to practice implementation. The process is as follows:

1. Blue Diamond application review and approval for participation
2. Grower to receive technical assistance on implementation, seeds or plants, and guidance for proof of practice implementation
3. Grower implements practice
4. Grower submits proof of practice implementation
5. Grower is then reimbursed for implementation costs at the qualified incentive rate

The application is available here: bit.ly/bdg-csg-app

How and when will reimbursements be administered?

Reimbursements will be sent to growers after proof of implementation is provided to Blue Diamond and grower activities are processed as complete. *This should take anywhere between 2 to 4 months.*

Can I seek additional grant funding?

Yes. Growers are encouraged to seek additional funding not provided by a federal source, as this program is



funded by the USDA. See the practice pages to learn more about additional funding sources.

Generally, the CDFA’s Healthy Soils Program and the San Joaquin Valley Air Board are the most readily grants able to stack with the CSG grant. Please reach out to Blue Diamond for more information (csg@bdgrowers.com).

Can I apply to receive grant funding annually?

Yes. Growers may participate every year. When WOR becomes available, growers are encouraged to list all acreage they wish to recycle over the course of the project on their first application. All activities are subject to acreage limits specified per contract in the “Rules and Regulations” available on the Blue Diamond webpage: bit.ly/bdg-csg.

When, where, and how can I begin seeking funding?

Growers are encouraged to begin their application as soon as they know they would like to implement one, or more, of the eligible practices. The application can be found at bit.ly/bdg-csg-app. You will be notified by Blue Diamond within 2 weeks after submitting an application.

Is this program mandatory?

No. The CSG program is not mandatory. It is a voluntary program.

What are the rules and regulations for this program?

The full rules and regulations, including how to provide proof of implementation for each practice, can be found by clicking the “Rules and Regulations” link on the Blue Diamond Growers USDA Climate-Smart Grant resources page, or by following the link bit.ly/bdg-csg. Rules and regulations are subject to change, to align with USDA and/or market requirements.

Cover Crops



Cover Cropping is the practice of planting a temporary crop, typically flowering and/or nitrogen-fixing species, after harvest with termination in late winter/early spring. Several species can be used as cover crops with each one chosen to serve a specific need.

The CSG grant is offering growers no cost seed and an implementation incentive up to \$35/acre. The incentive is reduced when planted on less than every other orchard row (e.g. a lower incentive will be paid for planting on every third row).

Cover crop benefits are briefly described below. Some benefits may not occur immediately but occur over time as soil adapts to cover crops. Please see the citations listed on page 18 to learn more information about the benefits:

Water Conservation: Improved soil infiltration and reduced runoff

Soil Health: Reduced compaction, greater aeration, and stable aggregation. Cover crops can also fix up to 100 lbs/acre of nitrogen depending on a variety of factors

Pollinator Health: Flowering cover crops provide necessary nutrition and stimulate honeybee population growth

Pollinators: Cover crops support stronger honey bee colonies and greater populations of native pollinators

Air Quality: Reduction of post-harvest dust in orchard middles

Climate: This is an active area of research. Cover crops can boost carbon sequestration by increasing organic matter in the soil

Economic Benefits: May potentially decrease farm input costs over time by reducing soil erosion, nutrient runoff, bee colony rental fees, and reduced nitrogen fertilizer use depending on species and site characteristics

There may be challenges associated with cover cropping, noted below:

Timing: Cover crops must be planted following harvest, with best results observed with an October planting (**note:** Project *Apis m.* will work to ensure seed is provided before October)

Establishment: If there is no rain after seed planting, cover crops will require irrigation to begin establishment (**note:** hedgerows may be more suitable in water-restricted areas)

Equipment: Cover crops must be either seeded using a drill or broadcast using a spreader

Sanitation: Cover crops may restrict the ability to mummy-shake (sanitation) in the winter if planted on every row. To avoid this, some growers shake and destroy before planting cover crops or plant cover crops on alternate rows to leave room for sanitation practices

Pests: Certain cover crop mixes may harbor unwanted pests, such as gophers

Other considerations:

Frost Protection: This is an active area of research. Growers should manage their orchard floors in the way that best suits their needs and operation

Reduced bee pollination in almond trees: Research shows that honeybee productivity is not negatively impacted by cover crops. Honeybees will seek almond nectar first, as it is a superior nutrition source. However, bees desire a diversified diet and will seek out alternative forage sources. Cover crops are an effective way to keep bees “local” in your orchard by providing alternative nutrition sources

Implementation: There is little prep work required for planting cover crops in almond orchards in the Fall. This is because preharvest preparations create a ready seed bed. Cover crops perform best when planted in early October. This planting date allows for the cover crop to become established in time to take advantage of winter rains and for early flowering species to bloom in time for almond bloom.

Termination: In typical years, it is recommended that you terminate cover crops in April after honeybee colonies have been removed. Termination in April also allows for enough time for the plant biomass to break down before harvest

Practice requirements:

Practice implementation and standards will follow the NRCS Cover Crop CPS (340). Please review the USDA standard here: bit.ly/NRCS_CPS

Proof implementation:

Growers will be required to provide proof of practice implementation which may include, but is not limited to, a signed form stating practice was implemented, an establishment plan and success report, receipts of services/goods, labor hours involved, and/or geo-tagged photos showing practice implementation.

Further information on practice implementation will be provided to growers prior to the estimated implementation date. Proof of implementation is essential to ensure compliance with grant agreement terms and allow for adequate measurement, reporting, and verification of any environmental claims by Blue Diamond and its growers.



Additional funding resources:

There are other funding programs available to “stack” on top of the CSG. Funding opportunities will vary by region, but one notable funding source is:

CDFA Healthy Soils Program: Private businesses located throughout California are eligible for a cost share grant. This grant is anticipated to open in the fall of 2023, which will apply to cover crops planted in the fall of 2024. Growers are eligible only if they have never planted cover crops previously. Details to follow, for more information visit:

cdfa.ca.gov/oefi/healthysouls/

Funding sources are in constant rotation, so please contact program staff (csg@bdgrowers.com) for up-to-date information.

How do I learn more?

For more information on cover crops in almond orchards, please contact Project Apis m. Contact information can be found on page 11. Please see the citations on page 13 for research publications showing the benefits of cover crops.

Visit almonds.com/almond-industry/orchard-management/cover-crops-and-forage for cover crop best management practices.

Participation in the CSG demonstrates a willingness to be a part of the climate solution and reap the cover crop benefits that are well-known and those are still being discovered. In addition to those benefits, it's also important to note that implementing conservation cover around almond orchards capitalizes on a unique opportunity to positively impact the health of up to 90% of the nation's honeybees.



Conservation Cover



Conservation Cover utilizes perennial, vegetative, plants to prevent soil erosion, capture water on idle or fallow land, that can provide several year-round benefits pollinators and other beneficial insects. Conservation cover is intended to be a permanent installation, typically on fallowed, idle, or marginal land. Conservation cover is meant to be minimally managed for weeds to preserve the wildlife benefits and mitigate cost.

The CSG grant is offering growers no cost seed and an implementation incentive up to \$50/acre.

Conservation benefits are briefly described below. Some benefits may not occur immediately, but over time as cover is established. Over time, benefits may come in the form of increased natural insect enemies, native pollinators, healthier managed pollinators, improved soil and water management. Please see the citations listed on page 13 to learn more information about the benefits:

Water Infiltration & Quality: improved infiltration

Soil Erosion: Prevents erosion and sedimentation

Pollinator Health: Flowering plants feeds pollinators and provide clean habitat

Climate: This is an active area of research currently

There may be challenges associated with conservation cover, noted below:

Pests: Certain plant species may provide habitat for both beneficial insects and pest predators. However, depending on size, management, and other factors, it can also serve as a habitat for pests, such as gophers

Weed Management: Controlling weeds in the first two years is critical to the success of the stand establishment. Weed control prevents weeds from taking over an area and gives desired plants time to establish and suppress weeds on their own

Other considerations:

Selecting conservation cover or mix that meets your goals, planting, and a plan for weed management are the major items to consider for your land. Consider the following when conceptualizing your conservation cover:

- Idle or fallow land or possibly marginal areas that can be converted
- weed management strategy

Early fall is the optimal timing to plant conservation cover. This allows for the seed to germinate and become established before the winter season where many species will turn their energy to root development. This creates a stand that is established and more developed to handle the hot and dry conditions in summer.

Practice requirements:

Practice implementation and standards will follow the NRCS Conservation Cover CPS (327). Please review the USDA standard here: [bit.ly/NRCS_CPS](https://www.nrcs.usda.gov/wps/portal/nrcs/detail/conservationcover/cps/)

Proof implementation:

Growers will be required to provide proof of practice implementation which may include but is not limited to a signed form stating practice was implemented, an establishment plan and success report, receipts of services/goods, labor hours involved, and/or geo-tagged photos showing practice implementation.

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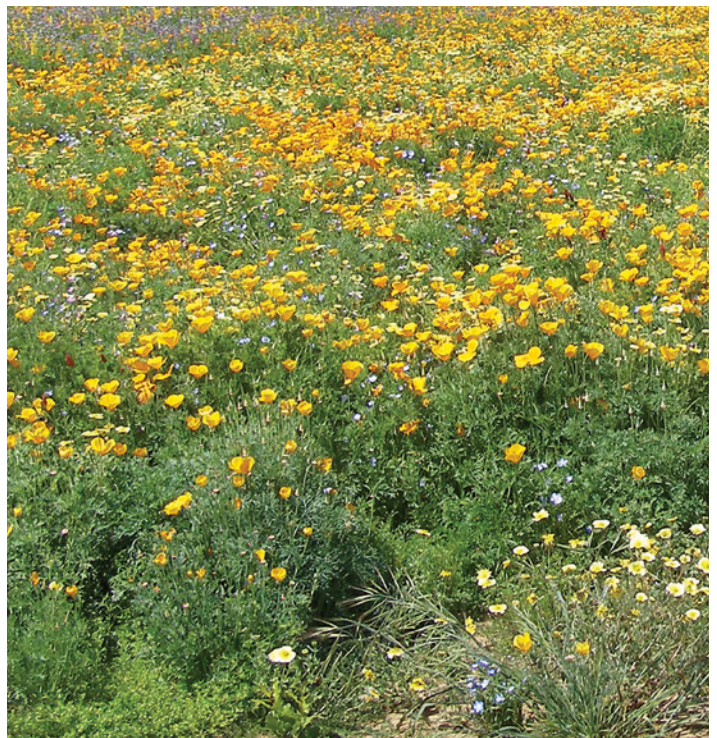
Funding sources are in constant rotation, so please contact program staff (csg@bdgrowers.com) for up-to-date information.

How do I learn more?

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Visit almonds.com/almond-industry/orchard-management/cover-crops-and-forage for conservation cover best management practices.

As a permanent installation, conservation cover creates significant wildlife habitat in addition to providing the on-farm benefits discussed in this guidebook. This practice not only improves the immediate area dedicated to conservation cover but can provide many beneficial services to the surrounding areas and inspire increased adoption and increase the impact of the overall climate-smart program.



Hedgerows



Hedgerows are permanent, perennial plantings that are usually composed of woody shrubs and trees that provide several year-round benefits to the orchard, pollinators, and other beneficial insects. Hedgerows are typically established in the fall so that roots can establish over winter. A number of species can be used for hedgerows, including drought tolerant plants that become self-sufficient as they become established.

Whole Orchard Recycling



Whole Orchard Recycling (WOR) is the on-site grinding or chipping of whole trees during orchard removal, and incorporation of the chipped biomass into the topsoil prior to replanting. WOR provides an alternative method of tree removal that could enhance both air and soil quality. UC-led research has identified significant advantages to WOR in increasing the health and productivity of the subsequent replanted orchard and soils while sequestering carbon, reducing GHG emissions, improving soil structure, and increasing water use efficiency.

Hedgerow & Whole Orchard Recycling – DELAYED LAUNCH UNTIL FURTHER NOTICE

Currently, Blue Diamond Growers is unable to launch Hedgerows and Whole Orchard Recycling due to difficulties with the USDA.

Blue Diamond was recently notified that these two practices will require an environmental review, formally referred to as “CPA-52 Environmental Evaluation.” The requirements of this evaluation are very detailed and time consuming and require further explanation by the USDA. Until Blue Diamond receives more clarity on the requirements from USDA and potential implications for our growers that want to participate in Whole Orchard

Recycling and Hedgerows, the launch will be delayed. Blue Diamond will continue to provide updates about the progress of launching these two practices.

Blue Diamond humbly requests your patience as we navigate the requirements of the USDA for Whole Orchard Recycling and Hedgerows.

In the meantime, cover crop and conservation cover are live! Please consider participation in one of these practices this season. If you have any questions, please reach out to our team via email at csg@bdgrowers.com.

Contact Information

Blue Diamond Growers:

Regional Managers:

bluediamondgrowers.com/meet-your-partners/

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Project *Apis m.*

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Protect their lives. Preserve ours.

Pollinator Partnership:

Billy Synk:

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Acknowledgement of Support

The BDG Climate-Smart Grant program is funded by U.S. Department of Agriculture (USDA) Partnerships for Climate-Smart Commodities Program and supported by USDA Natural Resources Conservation Service.





**Want to learn about one of these
practices from someone in your area?**

We can help connect you with local technical advisors
to ensure the best possible outcome for your activity.

Reach out to cgs@bdgrowers.com or
your Regional Manager for more information.



References

Cover Crops & Conservation:

Water Conservation:

Blanco-Canqui, H. (2018) Cover crops and water quality. *Agronomy Journal*. <https://doi.org/10.2134/agronj2018.02.0077>

Soil Health:

Cover crops lower soil surface strength, may improve soil permeability (1992) Folorunso, O., Rolston, D., Prichard, T., and Louie, D. *California Agriculture, Volume 46, Number 6*.

Pollinator Health:

Wauters, V. & et. Al. (2023) Developing cover crop systems for California almonds: Current knowledge and uncertainties. *Soil and Water Conservation Society*.

Pollination Benefits:

Wauters, V. & et. Al. (2023) Developing cover crop systems for California almonds: Current knowledge and uncertainties. *Soil and Water Conservation Society*.

Air Quality:

Delgado, J.A., Reeves, D.W., Follett, R.F. 2005. Winter cover crops. *Encyclopedia of Soil Science*. p. 1-3. Publication : USDA ARS

Climate:

Poeplau, C. & Don, A. (2014) Carbon sequestration in agricultural soils via cultivation of cover crops – A meta analysis. *Journal of Agriculture, Ecosystems, and Environment*.

Economic:

Burgtold, J. & et. Al. (2017) A review of economic considerations for cover crops as a conservation practice. *Cambridge University Press*





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