

Coastline

GAVIOTA COAST CONSERVANCY NEWSLETTER

FALL / WINTER 2022



Grazing cattle on Jalama Canyon Ranch.

Jalama Canyon Ranch: The Future of Regenerative Agriculture

BY JESSE SMITH

Last year on April 20, 2021, White Buffalo Land Trust became the stewards of Jalama Canyon Ranch, a diverse 1,000-acre landscape 10 miles from the coastal shores of Central California. White Buffalo Land Trust (WBLT) is a non-profit organization located in Santa Barbara County with a mission to practice, promote and develop systems of regenerative agriculture. Their team is dedicated to increasing the ecological function of the landscape through agricultural practices and growing the ecological literacy of our community through research, monitoring, education and training.

During the transition to the new management plan, WBLT looked through the lens of each of the five ecological sites represented across the property to identify agricultural practices and enterprises that could support the health of each site. Over the last year, they've collected baseline measurements to track the relationships between their practices and desired ecological outcomes. With the addition of new team members Ann Close, Director of Research and Education, and

Aarushi Jhatro, Ecology and GIS Manager, they've set forth a path to implement the monitoring strategy in service of the multiple stakeholders identified in the initial planning process. This monitoring strategy, discovery process and plan were supported in part by a generous grant from the Gaviota Coast Conservancy, Gaviota Agricultural Project Fund.

WBLT identified three core stakeholder groups for their ecological monitoring:

1. Data to help improve their management and decision-making.
2. Data for certifications, verifications, and ecosystem service payments to organizations.
3. Data collected in partnership with students, researchers, and institutions.

Positive animal impact that can be measured and verified is central to our approach to regenerating land at Jalama Canyon Ranch. To do that, we have partnered with Northern California-based, Richards Grassfed Beef. Our innovative pilot partnership brings livestock onto our land during the grass growing season which feeds the animals and stimulates our ecology. The animals are removed at the

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Gaviota SOIL Worm Farm Project

BY ED SEAMAN

Our Regenerative Agriculture pilot project seeks to measure and understand the results of applying worm castings (vermicast) instead of synthetic or organic fertilizer to our berry crops. The SOIL (Saving Organics Investing in Land) Worm Farm Project was primarily funded in 2019 by the Gaviota Coast Conservancy. In my pre-project discussions with Doug Kern, Executive Director, and other members of the GCC, we talked about how this project could be ground-breaking in Santa Barbara County. The reward could be great for the community, but would also have risks.

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Worms among their own castings, or vermicast.

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The original objectives were:

1. To measure and understand the “before and after” results of applying worm castings (vermicast) instead of synthetic or organic fertilizer to our berry crops.
2. To study and gain a greater understanding of the nutrient and pathogen loads, and the biology of the vermicast itself, and the soil when vermicast is applied consistently.
3. To increase the regional knowledge of on-farm food waste diversion programs and soil health for the agricultural community.
4. To educate local regulatory agencies, identify policy barriers, and engage policymakers in on-farm food waste



Building worm bins.

reduction and healthy soil practices using worms and vermicast-inoculated soil amendments.

The project was challenging and fun. Our project team gained, and continues to gain, new knowledge. We didn't kill any berry plants in the process - a key factor in determining success as a farmer! Scientifically, our vermicast is excellent - low to no pathogen loads and dense nutrient loads.

We hosted 4 field days starting in May 2021, events attended by farmers and ranchers, climate collaborators and regulatory agencies. We reported the following annual results per worm bin:

We diverted approximately ~7,500 lbs. of wasted food and ~2,500 lbs. of horse manure. The worms produce at least 3,120 lbs./year of vermicast. Once established, each worm bin produces 60 lbs. of castings/week on 150-200 lbs. of green waste feedstock.

Our croplands offset 6 metric tons of CO2 emissions by diverting green waste,

and we sequester at least 13 metric tons of carbon in our cropland soil. By increasing our soil organic matter via castings, we also increase our soil's water holding capacity - per acre, a 1% increase in organic matter increases water holding capacity by 20,000 gallons.

Questions that we answered:

1. Can vermicast improve the health and productivity of a perennial crop? Yes
2. Can vermicast increase the cropland's soil health and its ability to mitigate climate change through carbon sequestration? Yes
3. Can vermicast replace to a significant extent a cropland's reliance on synthetic (or processed organic) fertilizer? Yes

4. Can vermicast extracts (liquids) inexpensively replace solid composting in grazing land restorations? Yes
5. Is vermicast more cost-effective than processed compost in regenerating and sustaining healthy soil? Yes
6. Can properly scaled on-farm vermicompost systems help Santa Barbara County achieve its climate, food waste diversion and agricultural preservation goals safely and profitably?
 - a. Yes! But our feeling is that more farmers/ranchers/landowners need to engage jn these systems to achieve climate and waste diversion goals.

As of June 6, 2022,15 acres of the Santa Barbara Blueberries berry fields are receiving a biology-rich vermicast application roughly once per month. The Restoration Oaks Ranch house lawn is also getting a shot of vermi-extract weekly.

In this issue of Coastline ...

Our work at GCC is guided by The Three Pillars of the Gaviota Coast: Rural Character, Ecological Integrity and Public Access. Each is integral, and interconnected, to support and fulfill our mission. In this issue, we look at three projects where GCC has made financial investments that encourage regenerative agriculture practices: Jalama Ranch Canyon, Frinj Coffee and the Worm Farm Project. Each project helps to preserve and protect the rural character of the Gaviota Coast.

We are no longer using synthetic or organic fertilizers at all, although I reserve the right to use them again if the plants start to look sad. I don't expect this.

We have transitioned away from fertilizers quickly and with no mortality, something agronomists and farmers in the big ag world told me was not possible three years ago. Now we want to scale, either by teaching or selling castings and vermi-inoculated soil amendments, to those not inclined to “worm husbandry”.

Soil biology is, and has always been, nature's way of keeping soils fertile and regenerating, no matter the climate. To understand how living vermicast works on soil, you must learn about the interactions between the microbiology, soil nutrients and plants. Whether you are a farmer, a rancher, a gardener, an environmentalist or just an interested human, my team and I would be honored to teach you what we know.

Ed Seaman is the Founder and Executive Director of the Wild Farmlands Foundation, President of Creekside Business Services, General Manager of Santa Barbara Blueberries, and serves as a founding board member on the Santa Barbara Youth Music Academy's Board of Directors.

www.wildfarmlands.org



Finished bins ready to fill.

A Message from our Executive Director

DOUG KERN

Gaviota Coast Conservancy is currently working on permanent protection for four critical properties along the Gaviota Coast. These acquisitions involve purchasing the land, or placing a conservation easement on the property. Land purchases will provide public access to the Gaviota Coast. The conservation easements will keep the land in the hands of farmers and ranchers, preserving the rural character of the Coast.

These conservation opportunities are happening right now. The market has changed and sellers are willing. Now is the time for conservation through private philanthropy, and the California State 30x30 initiative, an international movement to conserve natural areas across the planet.

You can help GCC by contributing to our operational needs while we work to secure coastal properties. Operational funding keeps the lights on, the computers humming and the conversations productive.

Please consider donating now, and your generosity will help secure Gaviota Coast properties...forever! Feel free to contact me if you have any questions, or would like to become involved in this process.

Sincerely,
Doug Kern, Executive Director

doug.kern@gaviotacoastconservancy.org



Grapes flourishing on Jalama Canyon Ranch.

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end of the season allowing the pastures to rest, and minimizing the negative effects of overgrazing. It's good for the land, and it's good for business.

Both White Buffalo Land Trust and Richards Grassfed Beef are part of the Savory Institute - Land to Market verification program. This means all beef produced under the Richards Grassfed Beef label, comes from landscapes that are continuously assessed for biodiversity, soil health, water infiltration, and the carbon cycle to measure and verify impact on the land.

When WBLT set out to change the management approach at JCR, they started from a place in the context of historic management, which was rooted in grazing cattle and goats, along with the production of wine grapes and olives. During the first year, they implemented several changes to their management approach in the service of ecological health.

Starting with the Vineyard, they prioritized the support of the vine's holistic health

through a series of beneficial inoculations through foliar and root applications. They then layered in the practices of multi-species cover crops, compost applications, micronutrient supplementation, and reduced disturbance through a no-till approach to soil management. These practices are part of a holistic approach where the vineyard plays a critical role in the health of the overall landscape. Soil health, biodiversity and hydrological function are all considered in the context of their management objectives. The 5-acre vineyard is part of a partnership with Sashi Moorman and Rajat Parr at Sandhi Wines who are making an estate wine from the Pinot Noir and Chardonnay grapes. Collaborating with the WBLT team, they are educating and inspiring growers, makers, and wine lovers to use this craft as a tool to restore our ecosystem.

To learn more about the work at Jalama Canyon Ranch, and the upcoming Holistic Management Intensive course, please follow them on Instagram and visit their website: www.whitebuffalolandtrust.org



Jalama Canyon Ranch.

A Path to Improving Marginalized Land with Coffee

BY GRIFFIN HALL

Two years ago, Jay Ruskey and Frinj Coffee Inc. partnered with the GCC to plant roughly 850 Geisha coffee trees and 150 companion plants at Good Land Organics. Today, we are eagerly awaiting their first Spring 2023 crop harvest. While coffee growing is relatively new to this area, its impact is ushering in a new era of sustainable, high-value agriculture.

The plot selected was a former sloped avocado grove, that had been minimally maintained for several years.

We deeply value our community connections in sustainable agriculture. We invited our friends from White Buffalo Land Trust in 2020 to assist in developing an orchard layout that minimizes erosion and conserves water. We decided upon a modified keyline pattern design, in which rows of trees are oriented slightly off-contour to maximize water infiltration to the land and minimize run-off.

We selected *Coffea arabica* var. Geisha due to its ability to break price records, year after year. Numerous countries now host Geisha auctions, with this year's record price being over \$6000/lb (up from \$3500/lb in 2021). This variety is highly sought after due to its delicate floral notes and ultra-smooth body. It is Frinj Coffee's principal variety, and drinking a cup will change your entire perception of coffee.

Coffee plants tolerate a wide variety of growing environments, but is damaged by heavy winds. Wind has been, and will continue to be, a challenge to orchard establishment on the Gaviota Coast. To mitigate this, we heavily employ several

species of wind-break trees to create a buffered micro-climate. This not only protects the coffee trees, but also provides additional revenue streams to farmers through increased fruit diversity. Amongst the coffee trees, we planted dozens of Inga, Prosopis, Casuarina, and Loquat trees.

No farming comes without challenges. This plot's biggest challenge has been the steep "toe" slope at the bottom of the plot. During the heavy pulse of rain in January 2021 (when 8 inches fell in 48 hours) experienced a small slide that disrupted 10 plants. Amazingly, only two of those plants perished.

To rebuild and fortify, we planted more *Prosopis alba* (Chilean mesquite) trees around this toe, to naturally stabilize the land with its vigorous tap root. Leguminous trees also offer a multitude of benefits to the land, including vigorous root growth and adding measurable amounts of natural fertilization (due to root-associated symbiotic associations with Nitrogen-fixing *Rhizobia* bacteria).

Griffin Hall is Director of Operations for Good Land Organics. His mission is to steward FRINJ's land, trees, and ranch team. www.frinjcoffee.com

Gaviota Coast Conservancy is dedicated to protecting the rural character and environmental integrity of the Gaviota Coast for present and future generations.



Plot before planting, June 2020



Plot after planting and growth September 2022

Coming Events

11/29 Beach Hike
12/31 New Year's Eve Hike

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