

ANNUAL IMPACT REPORT

DRYLANDS
AGROECOLOGY
RESEARCH

2021 - 2022





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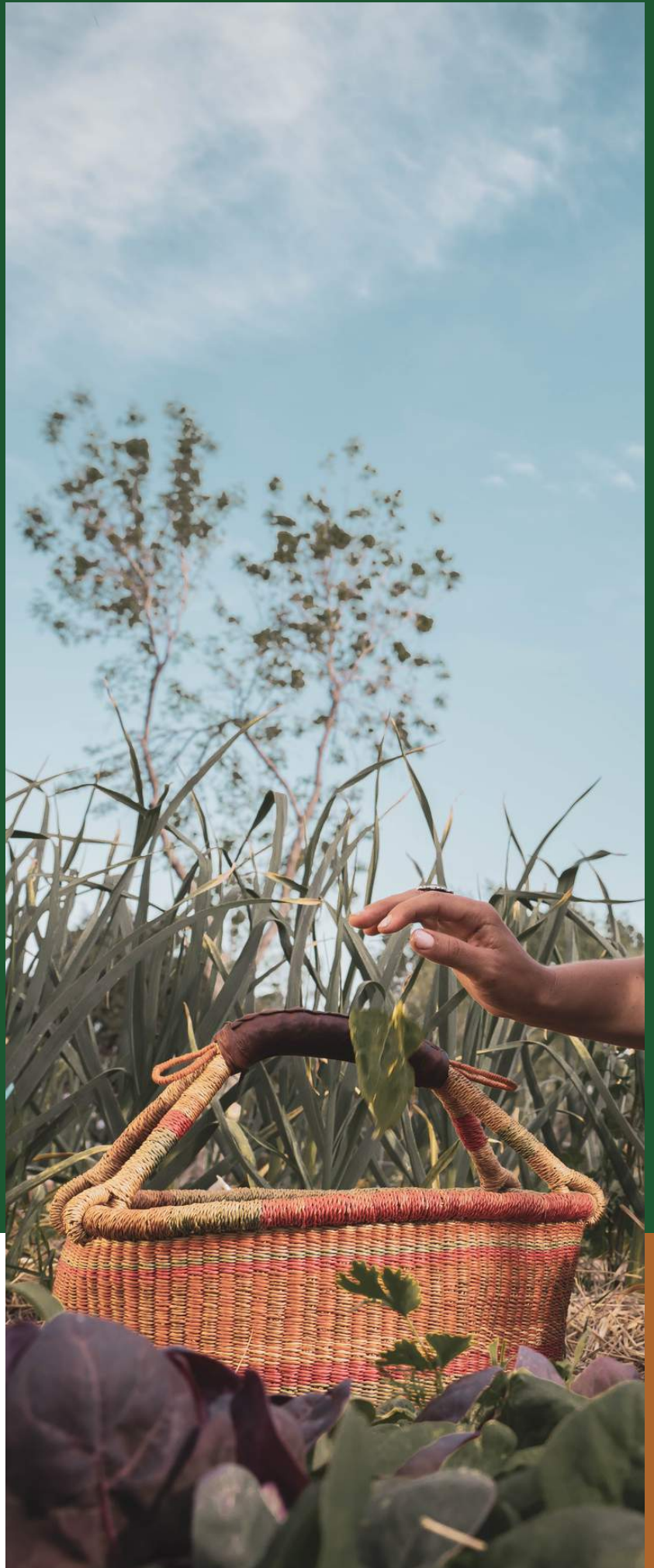
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**REGENERATIVE
DESIGN.
RESEARCH.
CULTURAL
POLLINATION.
EDUCATION.**

OUR MISSION IS TO
RESTORE THE EARTH AND
OUR COMMUNITIES
THROUGH
REGENERATIVE DESIGN.

BY TRANSFORMING
BARREN LANDS INTO
HAVENS OF HEALTHY
ECOLOGY, FOOD,
COMMERCE, AND
COMMUNITY, DAR IS
CREATING A MODEL FOR
REVERSING CULTURAL
AND ECOLOGICAL
DEGRADATION.



DRYLANDS
AGROECOLOGY
RESEARCH

LETTER FROM THE FARM

Dearest Community,

It is with humility, great appreciation for this planet, and a sense of hope that we share our gratitude for all of your continued support with Drylands Agroecology Research.

Sometimes we question why we are focused on dry, abandoned landscapes as there are moments of feeling overwhelmed by our capacity to work with Mother Nature and to create abundance without disturbing her. And then we remember; that this jewel planet was not always this degraded and infertile. We remember that communities who live in relationship with the Earth roamed these landscapes, capable of feeding themselves and finding sources of medicine all along the way.

So, why do we focus on ecosystems with little to no water?.. We remember that water is a precious resource and without it, life would not exist. With that, we put on our boots and head out to the fields to greet the drylands and make relations with those who embody traditional foodways and who remember their ancestors thriving on the abundance in the landscape.

This year was a year full of hard work, beauty, chaos, humility, and growth at DAR. As we walk in a world filled with injustice with a rapid increase in climate change, we believe it is our work to initiate a positive impact on both this planet and our larger community.

Sincerely,

DAR

DRYLANDS AGROECOLOGY RESEARCH

The Founding Team





40%

OF ALL LAND

on Earth consists of
Drylands.

25%

OF HUMANITY

depends on the dryland
ecosystem to survive.

75%

OF EARTH'S LAND

is already degraded.

**As lands degrade and lose their capacity to hold water, they lose their
capacity to sustain life & humanity.**

DAR'S SOLUTION



REVERSING DESERTIFICATION

DAR reverses desertification by using water-harvesting earthworks to rehydrate landscapes so that they can support abundant vegetation.



WATER COLLECTION

By collecting water in contour swales and basins, DAR has established 5,000 productive trees and shrubs with little to no irrigation. The cool, moist microclimate these trees create helps to support enhanced pasture and cropland health.



RESTORING DEGRADED LAND

By holistic grazing and nutrient cycling using pigs, chickens, and drought resilient crops, the soil itself becomes a living sponge for water. Using this feedback loop of hydration, DAR has restored over 40 Acres of degraded drylands.



WE LIVE FOR THIS.



WHY DAR WORKS



“Though the problems of the world are increasingly complex, the solutions remain embarrassingly simple.”

— Bill Mollison |
Permaculture Co-Founder



PROBLEM

Modern human societies are in deep ecological imbalance. Our reliance on food systems that defy the wisdom of nature has led to severe degradation of our ecosystems and cultures.

Moreover, popular solutions are often “bandaid” approaches that address individual symptoms rather than the fundamental flaws in our Way of Being.



SOLUTION

Regenerative Systems Design is grounded in the understanding that all human, ecological, agricultural, and economic systems are interconnected.

DAR uses regenerative design to transform degraded landscapes into thriving, relationship-dense ecosystems that revitalize soil, restore hydrological cycles, sequester carbon, support biodiversity, provide abundant food and resource, and support thriving human culture and livelihood.





PROBLEM

1.5 billion tons

of carbon dioxide are released to the atmosphere due to deforestation, mainly the cutting and burning of forests, every year.

112
million tons

of carbon were released this year from California forest fires in 2020 alone.

These high intensity fires leave scorched, barren, hydrophobic landscapes in their wake.

10%

of global emissions come from cattle raised out of balance with their local environment.

75%

of the food that humans consume today comes from only 12 crops, and scientists are alarmed by the enormous diversity loss in our food systems.

DAR'S SOLUTION



DAR practices afforestation, sequestering carbon by successfully establishing trees in locations where trees traditionally did not grow. The 15,000 trees DAR has planted will, when mature, sequester 375 tons of carbon annually.

Within a decade, DAR will plant 150,000 trees that sequester 3,500 tons of carbon annually, the amount released on average by 760 passenger vehicles. Most importantly, DAR is creating a model for the scaling of these systems to much larger acreages.

Developing techniques for reforestation in semi-arid climates is imperative to stabilizing ecosystems and the fire-flood cycle.

DAR's Contour Earthworks not only make it possible to establish trees without irrigation, they also transform storms from destructive events into catalysts for revegetation as seed, soil, and water pool in contour swales.

DAR raises cattle and other ruminants using methods that improve pasture health and enable pastureland to sequester sufficient carbon to offset the emissions of cattle, while also building the ability of soils to retain moisture and support biodiversity.

Using holistic grazing, DAR has documented the revegetation of denuded pastures, an average 4.4% increase in soil organic matter percentages, 10-second improvement in soil water infiltration rates, and an 11% increase in water holding capacity.

DAR transforms food waste into sequestered carbon by cycling it through livestock systems into healthy, water-retentive soil that also supports high crop yields. DAR is breeding bio regional agroforestry and grain crops that are diverse and locally adapted, in service of creating a resilient bio regional food culture.

OUR PILLARS



LAND REGENERATION



RESEARCH



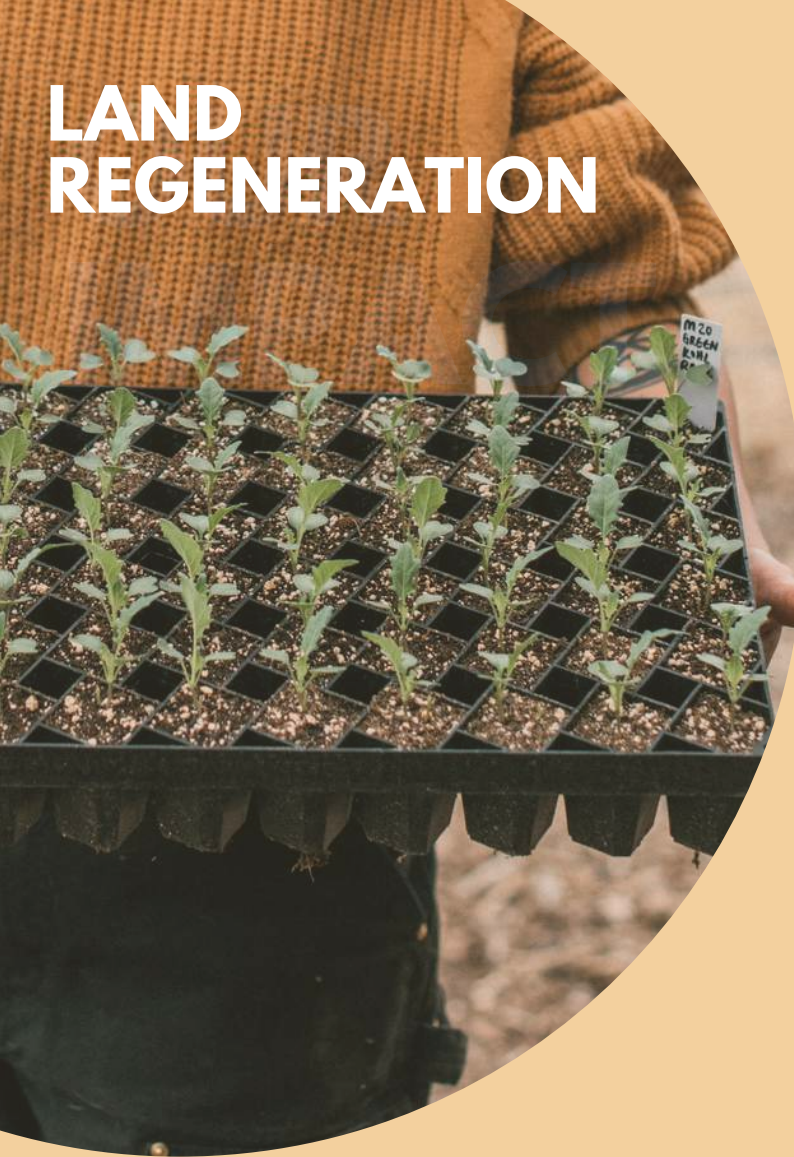
EDUCATION



CULTURAL ADVOCACY



LAND REGENERATION



DAR'S APPROACH:

Using the principles of ecology, DAR transforms dry, abandoned, and marginalized lands into abundant ecosystems that rehydrate, sequester carbon, enhance biodiversity, and produce abundant resources for humans, including food, building material, and medicine.



DAR'S STRATEGY:

Using water harvesting earthworks to catch and distribute rainfall in arid climates makes it possible to practice agroforestry, the practice of integrating trees into pasture and cropland to create maximally diverse, productive, and resilient ecosystems.



DAR'S IMPACT:

- A total of 150 acres under stewardship using these implementations.
- 5 Additional Properties are in preparation & design phase for implementation of regenerative systems.



DAR'S APPROACH:

DAR is developing a research program to study the impact of scaled agroecology on hydrology, carbon sequestration, biodiversity, and soil health.



DAR'S STRATEGY:

This research will help us to better understand and refine our land management and communicate the value of this type of ecosystem development to the public, and governmental organizations.



DAR'S IMPACT

- Soil health data collected at Elk Run Farm twice annually since Fall 2020
- First annual tree & shrub survey conducted Fall 2021 at Yellow Barn, Metacarbon, and Elk Run Farms
- Soil testing will be expanding to Yellow Barn and Metacarbon Farms in 2022
- Insect biodiversity data collection will begin Summer 2022 at Elk Run, Yellow Barn, and Metacarbon Farms

RESEARCH



CULTURAL ADVOCACY



DAR'S APPROACH:

DAR regenerates land and culture by empowering Indigenous communities to reclaim their traditional land and foodways and supporting the creation of a new bioregional food culture grounded in Indigenous wisdom.



DAR'S STRATEGY:

By supporting land regeneration projects in Indigenous communities, partnering with Indigenous communities to introduce traditional crops and foodways into farm systems, and providing CSA shares to Indigenous elders through a partnership with Spirit of the Sun.



DAR'S IMPACT:

- Launched an Indigenous food sovereignty project with Shoshone tribal members in Wyoming.
- Fed 5 Indigenous Elders for the late Spring through Summer season with fresh vegetables and medicines from Elk Run Farm, DAR's demonstration site.
- Collaborating with Harvest of All First nations to pilot an Indigenous Foods Garden and Festival at YBF in 2022.



DAR'S APPROACH:

DAR teaches regenerative systems design through Folk Farm (an early childhood outdoor education program), skills based workshops, and intensive training in land stewardship and regenerative design.



DAR'S STRATEGY:

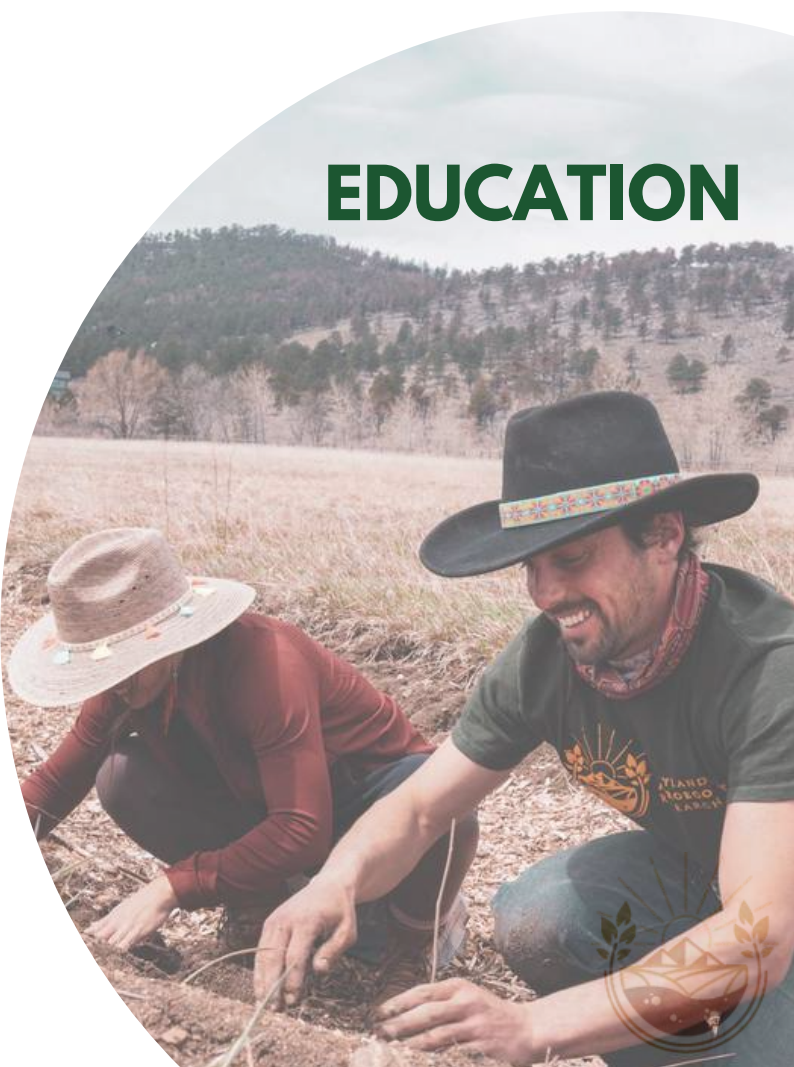
Teaching regenerative systems design to youth and aspiring land stewards will lay the foundation for shifting our culture in an equitable, decentralized, and lasting way.



DAR'S IMPACT:

- Folk Farm enrollment was 15 students in 2021
- 1500 people attended farm tours, workshops, and events in 2021
- 15 students graduated from our first certified permaculture design course in 2021, based at Elk Run Farm

EDUCATION



MEET AZURAYE



“ **Hear from Azuraye | Yellow Barn Farm Manager**

For the last 20 years my family has tried to bring regenerative practices to the Yellow Barn but nothing has truly gained support and momentum. When we met Nick and Marissa at DAR, it felt as if the stars had aligned. Their master plan of this 100 acre property showed us exactly how we could finally achieve this goal of bringing the land and soil back to life.

Yellow Barn is perfectly positioned to be a demonstration site for DAR's large-scale regenerative practices, and with our team of young, entrepreneurial, and ecologically-minded leaders, we have been able to achieve more in the 1.5 years since the project began than we ever could in the previous 20 years of land stewardship by the Wycoffs.

”



MEET AZURAYE



In fall of 2020, Merrie Wycoff approached Nick DiDomenico about creating a regenerative design for Yellow Barn Farm. Like many properties in this region, Yellow Barn comes decorated with a problematic past—party to the tide of Western settlement that displaced Native peoples from their traditional foodways, subject to the same overgrazing that has denuded much of the west, its western half scorched by the 2020 Calwood Fire.

With the full commitment of her daughter Azuraye, and in partnership with DAR, a vision was birthed to transform this property into a 100 acre living, breathing demonstration site of regenerative design.



In Spring 2021, the land work broke ground. 4100 linear feet of contour swales were dug in the gently sloping pasture below the ditch. 175 volunteers showed up to plant 3500 trees in contour swales and windbreaks. Compost was piled into the future market garden, and rotations of pigs, chickens, and cover crops began to transform grass into cropland.

But what is simultaneously being born at Yellow Barn Farm is a rich collection of micro-businesses—from brewing compost tea to transforming food waste into biodiesel to teaching yoga. These enterprises have already begun to solidify the relationships between people and land, economy and relationship, out of which truly resilient systems are born.



This year at Yellow Barn Farm, we are piloting an Indigenous Foods Garden and festival with Harvest of All First Nations. We are collaborating with Left Hand Watershed to revegetate the burned slope above Yellow Barn Farm. We are introducing holistically grazed cattle into the pastures to, like their cousins the bison, regenerate the land and support the rich biodiversity grasslands are capable of supporting.

Most importantly, we have united in our shared vision for the future, and Azuraye Wycoff is now Operations Director for the DAR team.



MEET OUR PARTNERS

Meet our Land Stewardship Partners



Elk Run Farm
(Pilot)

Case Study



Yellow Barn Farm
(Allen's Farm)

Case Study



Metacarbon Organic
Farm

Case Study



Middleway Gardens

Case Study



COLLECTIVE IMPACT



1500

people hosted through
farm tours, workshops,
classes, and events.



5000

trees planted in windbreaks
and contour swales

4,100

2,900



7000

linear feet of contour swales dug

4,100

2,900



15

Students graduated
from the first full length
certified
Permaculture Design Course.



First annual tree survey conducted to track survival by species of all trees and shrubs in contour swales at Elk Run, Metacarbon, and Yellow Barn Farms, confirming an average survival rate of roughly 85%.



Food sovereignty project was launched with Shoshone Tribal Members in Wyoming.



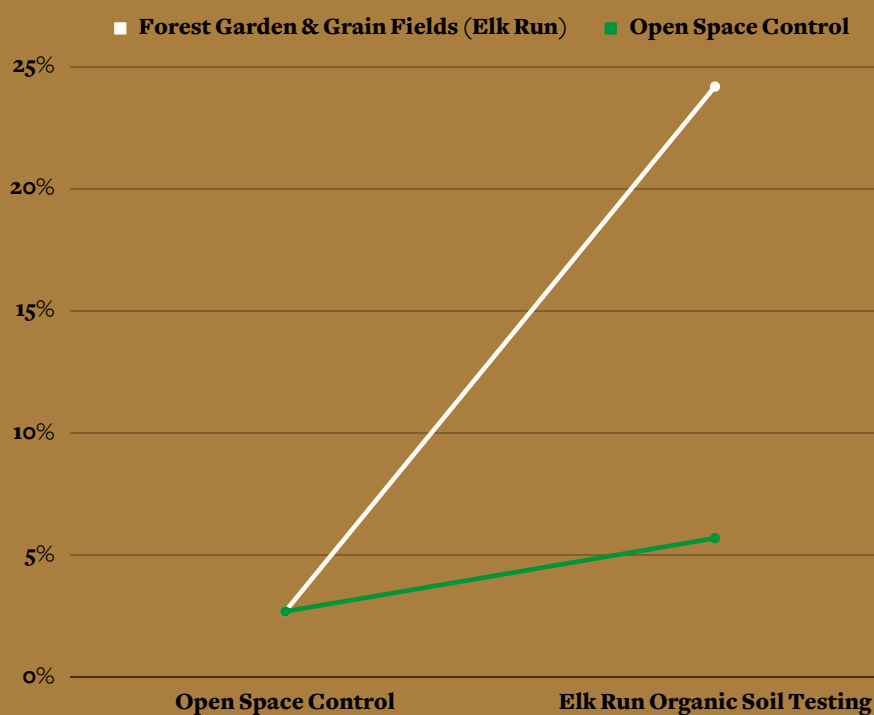
SOIL IMPACT



- Soil testing continues to demonstrate a 24.2% average soil organic matter percentage in the Forest Garden and Grain Fields at Elk Run, as compared to 2.7% in the open space control.



- Soil testing continues to demonstrate a 5.7% average soil organic matter percentage in the pastures at Elk Run, as compared to 2.7% in the open space control





HERO STATS

\$320,473.35

Total Revenue

\$7,923.50

Donations

\$8,297.55

Events

\$293.40

Farm

\$34,331.25

Folk Farm School

\$75,000.0

Grants

\$16,407.75

Programs

\$32,893.00

Designs

\$144,236.90

Installations



EXPENSES

\$153,615.96

Total Expenses

\$48,223.40

Total Operations

\$18,649.35

Advertising & Marketing

\$17,634.70

Automotive

\$2,320.81

Bank Fees

\$1,120.00

Community Services

\$1,967.30

Computer & internet

\$13,434.14

Contract Services

\$12,198.54

Executive Management Comp

\$1,350.40

Facilities & Equipment

\$876.26

MISC

MEET OUR FARM TEAM



Our dedicated, women-led farm team.



NICK DIDOMENICO

Co-Executive Director
Regenerative Design



MARISSA PULASKI

Co-Executive Director
Cultural Advocacy & Education



AZURAYE WYCOFF

Director of Operations



AMY SCANES-WOLFE

Director of Research
& Community Outreach



JESS WALTERS

Lead Folk Farm Instructor
144,236.90



YOLOTEOTL

Cultural Liaison
144,236.90



CARLOS CARRASCAL

Digital Drafting & Drone Photog
144,236.90

THANK YOU!



FOR
BELIEVING IN
A MORE
REGENERATIVE
AND PEACE-
FILLED
FUTURE!

WE ARE
LOOKING
FORWARD TO
SHARING DAR'S
EVOLUTION
WITH YOU.

CHEERS TO
PLANTING
TREES!

