

My journey in agriculture and carbon begins at the Imperial Stock Ranch.

It was est. in 1871 as a 160-acre homestead claim and became Oregon's largest individually owned land and livestock holding by 1900, producing sheep, cattle, grains, and hay.

Sheep were the greatest production focus for the first 100 years of the ranch's history; this is our **152nd year** of continuous operation.



Located in the high desert of north central Oregon, east of the Cascades, we used to have an annual rainfall of 8 to 10 inches per year...

My husband always wanted to “see the land win.”



By 1989, in cooperation with our local NRCS and Soil and Water Conservation District, they had created a **Conservation Management Plan (Carbon)** considering all aspects of soil, plant and water health, and established monitoring.

We began implementing a comprehensive set of changes – work that continues today, 34 years later, and that will never be done.



We farm c. 3600 acres of crop land
– all dry land farming.

A key element in the management
changes, was that my husband
converted it all to direct seed / no
till in 1996, making the plow
obsolete.



We made many changes in our grazing practices and watering points.

With this whole basin approach, in 20 years, we saw large and increasing numbers of salmon returning to our creeks to spawn.



This had been our only focus,
tending the landscape and the
animals created to graze it.



And then 1999 happened. For 100 years, we had sold our wool to the same company.

But no more. With processing and textile manufacturing partners closing across this country, offshoring arrived on our doorstep that spring with no warning.

Photo taken inside our historic shearing shed – more than 125 years old and still in use.



A ranch to runway story...

From that day forward, I took us from ranch to retail in *our own branded products*, building **supply chain relationships** as close to home as possible.

This story was the motivation for a book published by Bloomsbury Publishing, London. Stories of Fashion, Textiles and Place – Evolving Sustainable Supply Chains. By Leslie Davis Burns and Jeanne Carver.



Pairing the wool products with our long heritage, but also our leading agricultural practices, was instinctive.

The provenance of the wool has been a key part of our success.



And it landed us at the 2014 Winter Olympics in Sochi, Russia.



Midway through 2015, I got another call, this time from Patagonia, who was interested in a wool supply that would require a 3rd party audit for land and animal practices.

They were helping lead the development of a global standard for wool production, focused on land stewardship and animal welfare, called the **Responsible Wool Standard (RWS)**.





That standard launched in 2016, and Imperial Stock Ranch became the first ranch in the world certified.



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Pictured here, Ralph Lauren's 2022 Team USA Olympic uniforms made with Shaniko Wool.

Shaniko Wool ranches (10) are located in the western U.S. and currently graze more than 2.6 million acres.



Up until now, we had our observations, yield data, resource agency testimony, field and species counts, and certification to third-party standards in support of our work.



Going Beyond Certification...

In early 2020, Shaniko Wool responded to increasing concern by apparel brands and the textile industry over the ecosystem impacts of ranching practices.

[The Shaniko Wool Carbon Initiative.](#)



Purpose:

Determine the ecosystem and climate impacts of each ranching operation with carbon as a key performance indicator, plus collateral benefits.



Key Performance Indicator:

If soil carbon levels are increasing *significantly* over time, additional positive benefits include:

- Increases in soil organic matter
- Nutrient availability
- Water infiltration and holding capacity
- Systems biodiversity
- Improved habitats
- Resilience to weather extremes
- Disease resistance
- Improved livelihoods



Third-party verification of

- the research model
- sampling protocols
- data analysis
- findings

Feedback to farmers/ranchers



Example: For the first 1.5 million acres under RWS certification, approximately 140 sampling points would be recommended.

Shaniko Wool established 236 sampling points.

As of 2023, we have baselined all 2.6 million acres.



Preliminary Data

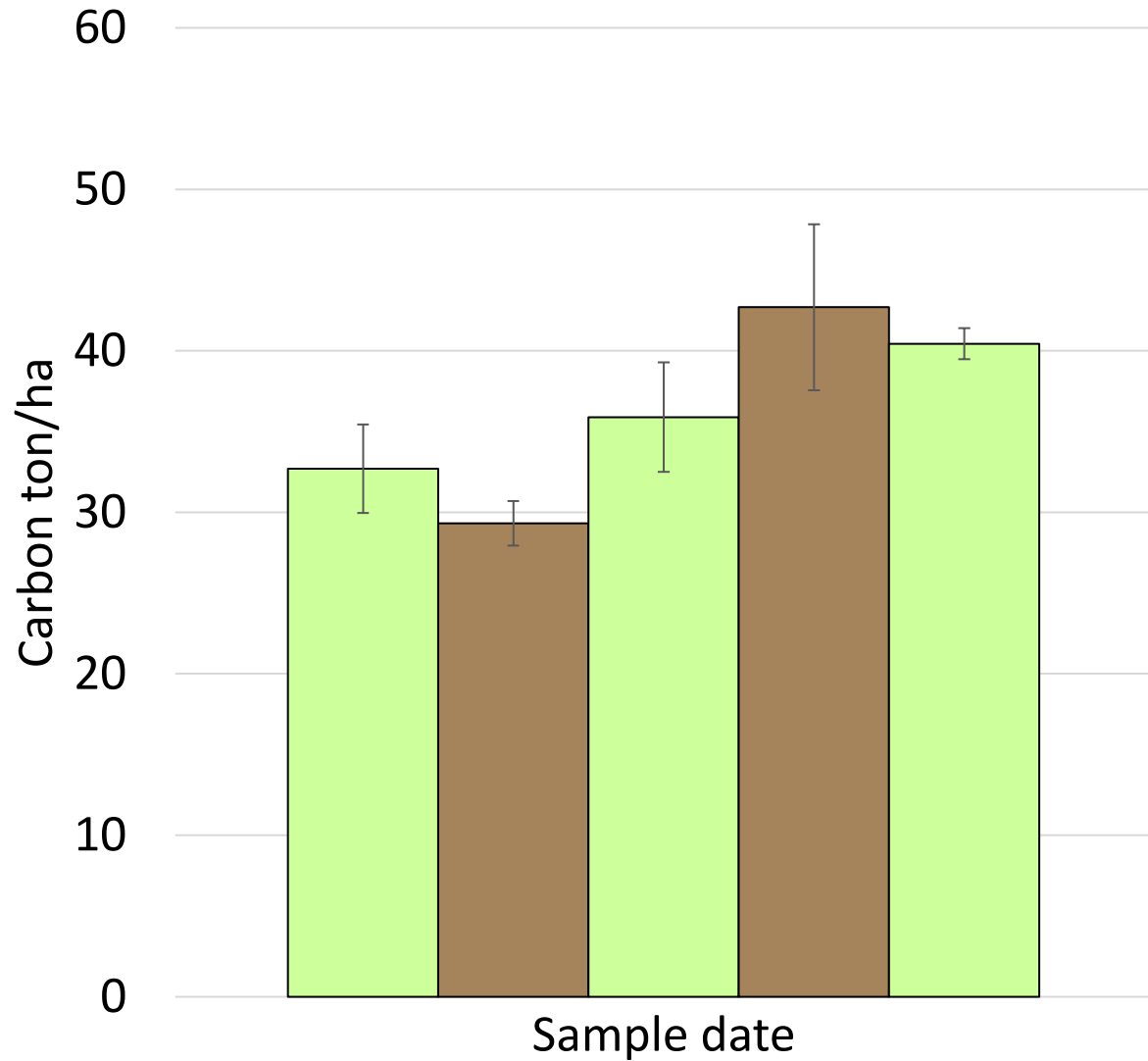
Example: 3 years of data from one ranch in the Farm Group –

- Annual *NET* carbon capture is 1.86 tons/acre on 32,000 acres (at ISR in Oregon).
- Through improved practices, 60,000 tons of carbon/year is being captured (NET basis).
- Equivalent to removing more than 218,000 tons of CO₂ from the atmosphere.
- Emissions total a negative.
- And our practices have us avoiding an additional 8,880 tons of emissions of CO₂ equivalents/year.

Soil Nitrogen, residual Biomass and soil moisture are also being measured.



OR Ranch Soil Carbon (0-20 cm)



Spring 2020 Fall 2020 Spring 2021
Fall 2021 Spring 2022

Oregon Ranch Soil Carbon

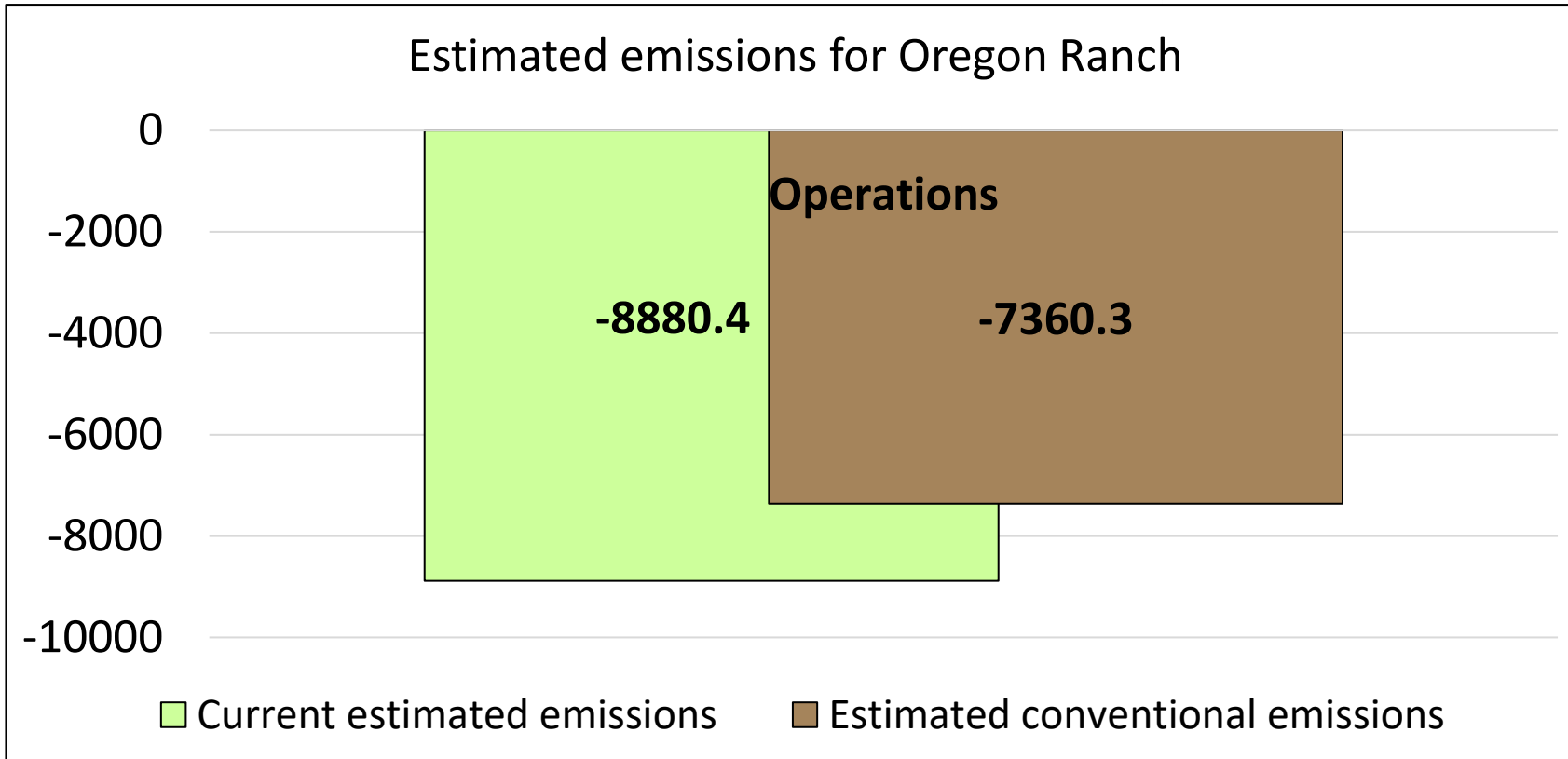
Average soil carbon (20 cm)

- Sp. 2020: **32.70 ton/ha (13.2 ton/ac)**
- Fall. 2020: **29.31 ton/ha (11.8 ton/ac)**
- Sp. 2021: **35.89 ton/ha (14.5 ton/ac)**
- Fall. 2021: **42.69 ton/ha (17.27 ton/ac)**
- Sp. 2022: **40.44 ton/ha (16.36 ton/ac)**

COMET-Farm: Greenhouse Gas Emissions

Estimated emissions (tons of CO2 equivalent per year).

Negative numbers represent “avoidance” of emissions.



8,880 tons of CO2 equivalents per year **represent:**

1,736 gasoline-powered passenger vehicles driven for one year.

906,511 gallons of gasoline.

791,372 gallons of diesel.

“Conventional” refers to management practices that don’t follow a sustainable approach.



Agoro Carbon Alliance has been working with Shaniko Wool and the Oregon State University research team since February, 2022.

Agoro Carbon Alliance reinforces
Shaniko's Carbon Initiative –

- Strengthens the research team
- Provides oversight and credibility
- Brings a framework for investment
- Supports farmer livelihoods
- Supports the mission of improved ecosystem health
- Supports companies in meeting sustainability targets through robust MMRV
- Helps accelerate action on the ground



Agoro Carbon Alliance registers high quality credits with **Verra**.

Shaniko Wool carbon measurement model has been approved by Agoro.

Shaniko Farm Group has been approved as its own project generating quality *carbon credits* which can be framed as *offsets* or *insets*.

(Sheep feeding on crop residue.)



*Shaniko Wool is a Shared
Investment in the Future...*



Our collective work makes this kind of relationship possible...

Janessaleone.com

Our comprehensive measurement model and findings bring truth to whether we are regenerative or not. It takes us beyond a list of practices.

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