SANTA LUCIA CONSERVANCY

CONSERVATION GRAZING ON THE SANTA LUCIA PRESERVE

SHAPING A LANDSCAPE

Rancho San Carlos was a working cattle ranch for over 150 years before it became The Santa Lucia Preserve.

From the early Holocene to the Spanish invasion, wildfires and cultural burning shaped the region, transforming some of the dense forests into the oak savannas and grasslands we're familiar with today. Many of California's native plants have adapted to rely on disturbance to germinate and deposit soil nutrients. **The Indigenous Rumsen Ohlone traditionally harvested important native plants like soap root, wild onion, wild radish, and buttercup from the grasslands and coastal praires.** When the land was developed as a commercial ranch in 1857, invasive grasses were introduced to increase forage for livestock, resulting in negative consequences for local biodiversity.

MANAGING DISTURBANCE

The Preserve's history of commercial ranching left many of the grasslands over-grazed and we removed cattle from the land when The Santa Lucia Preserve was established in 1995.

With periodic drought, wildfire, and floods, disturbance has shaped California's ecology for time immemorial.

At first, the ecosystem rebounded, but after 5 years without disturbance, ***thatch*** buildup began stifling the growth of native plants. To manage the thick layer of dead plant matter, the Conservancy reintroduced cattle to the system in 2013.

The Conservation Grazing Program regiments disturbance to foster biodiversity across over 2,800 acres of grasslands.

Using portable fencing and water troughs to continually move the herd across the land, our ecologically focused, science-based grazing program works to:

- Reduce thatch
- Improve soil health
- Promote native wildflowers
- Manage invasive species
- Manage shrub encroachment
- Reduce fuel loads for fire safety

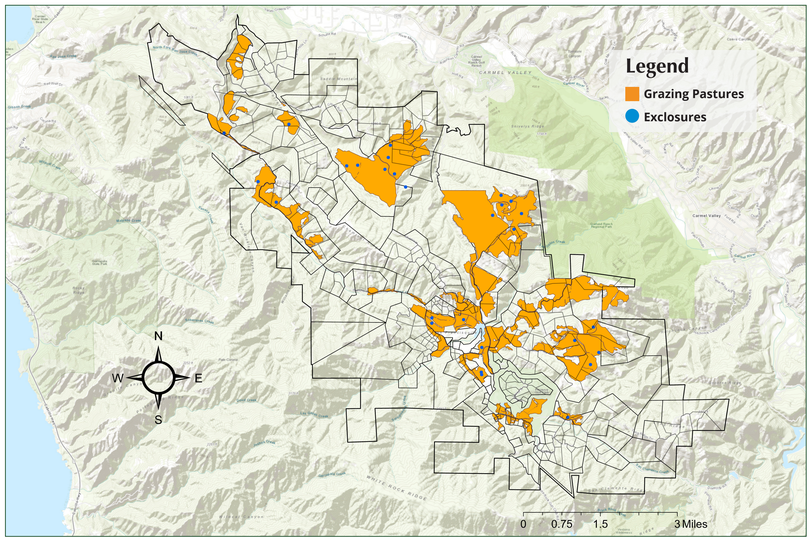
RESTORING THE GRASSLAND ECOSYSTEM

The Conservancy's herd of 120 cattle is rotated through Preserve's pastures every 18 months and grazes over 2,800 acres per year.

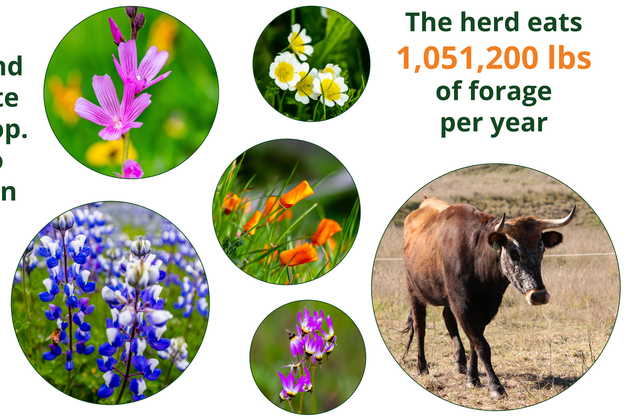
We study our grazing impact with **28 experimental test plots known as "exclosures"** that we fence around within pastures to prevent the cows from grazing the plot.

Each spring, we survey the plant composition to compare between adjacent grazed and ungrazed plots and measure the effects of cattle on the ecosystem over time.

PASTURE MAP: WHERE THE COWS ROAM



Findings from our surveys and research create a feedback loop. We respond to what we see on the ground by adapting our practices to improve biological outcomes.



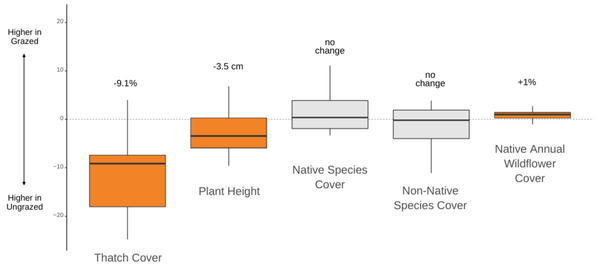
The herd eats 1,051,200 lbs of forage per year

VISUALIZING IMPACTS

BEFORE: January 2022
A year and a half of growth by invasive Harding grass built up a dense thicket of grey thatch around the San Francisquito Flats at the heart of The Preserve.

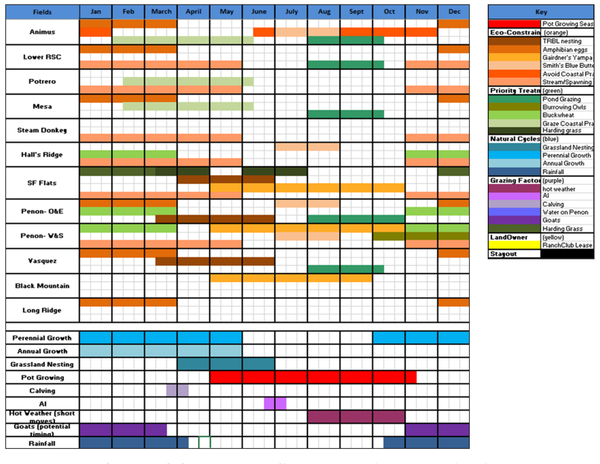
AFTER: March 2022
76 days after our herd left this pasture, plants took advantage of the clearance to produce fresh green growth for the rest of the rainy season.

EXCLOSURE MONITORING



Grazing Program Monitoring: Collecting rigorous data since 2013, we can see that our method of management -intensive grazing has successfully decreased thatch cover, shortened plant heights, and increased native annual wildflower cover over the years.

ECOLOGICAL PLANNING



Many ecological factors influence when and where we graze including tricolored blackbird nesting, amphibian spawning, Smith's blue butterfly mating, and burrowing owl nesting. This matrix helps us plan our grazing rotation to prevent negative impacts to wildlife species.

Poster Created by Alix Soliman, Andrew Evans, Jenna Allred, and Rodrigo Sierra Corona. © Santa Lucia Conservancy 2022.