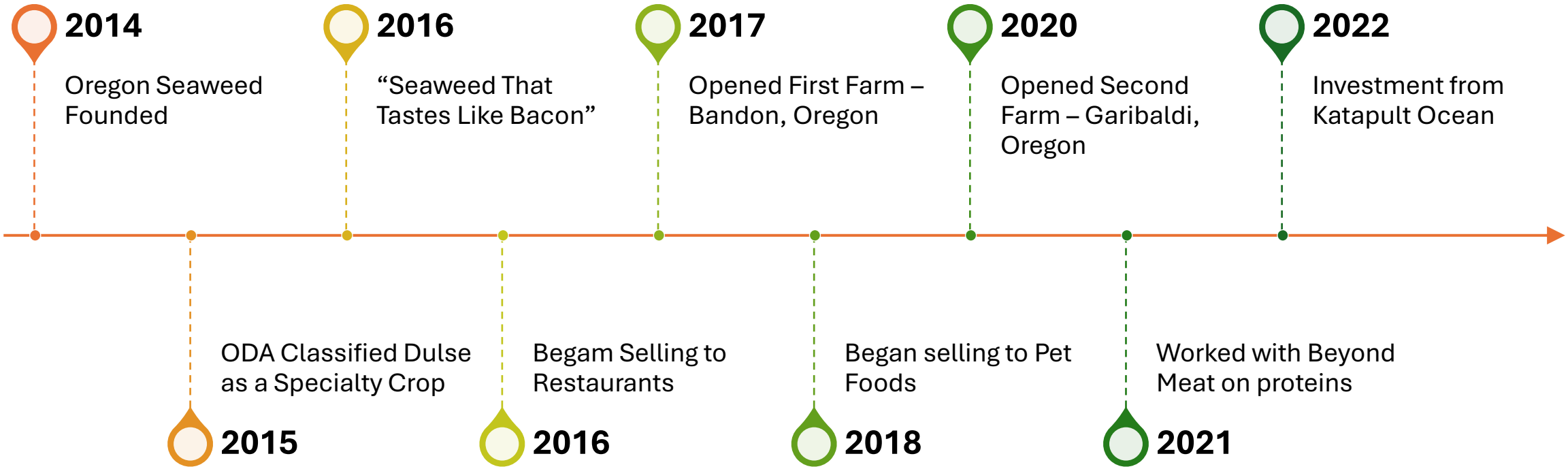
Creating a Sustainable Economy on the Oregon Coast

Oregon Seaweed

Aquaculture In Oregon

- **1970's & 80's**
  - Weyerhaeuser and other timber/landowners tried to diversify into salmon aquaculture
  - Developed an aquaculture infrastructure on the Oregon coast
  - Oregon State University partnered with industry
- **1990's**
  - Oregon State isolated several strains of local intertidal seaweeds
    - **Clonal Propagation**
    - **High in Protein**
    - **High Productivity (200 grams/square meters/day)**
  - Abalone feed
- **2014**
  - Oregon Seaweed was founded
  - Seaweed that tastes like bacon

Timeline


2014
Oregon Seaweed Founded
2015
ODA Classified Dulse as a Specialty Crop
2016
“Seaweed That Tastes Like Bacon”
2016
Begam Selling to Restaurants
2017
Opened First Farm – Bandon, Oregon
2018
Began selling to Pet Foods
2020
Opened Second Farm – Garibaldi, Oregon
2021
Worked with Beyond Meat on proteins
2022
Investment from Katapult Ocean

Oregon Seaweed

Controlled Environment Seaweed Aquaculture

CESA

Reinventing Commercial Agriculture
Revitalizing The Oregon Coast & Beyond

Our Vision

Present

- *Core Markets – Existing Farms*

- Restaurant
- Pet Food
- Ingredient

High Margin
Low Volume


Garibaldi - 2025

Future

- *New Markets – New Farms*

- Cattle Feed
- Proteins
- Natural Dyes

Low Margin
High Volume


Oregon Coast - 2026

History of Agriculture

Batch Process

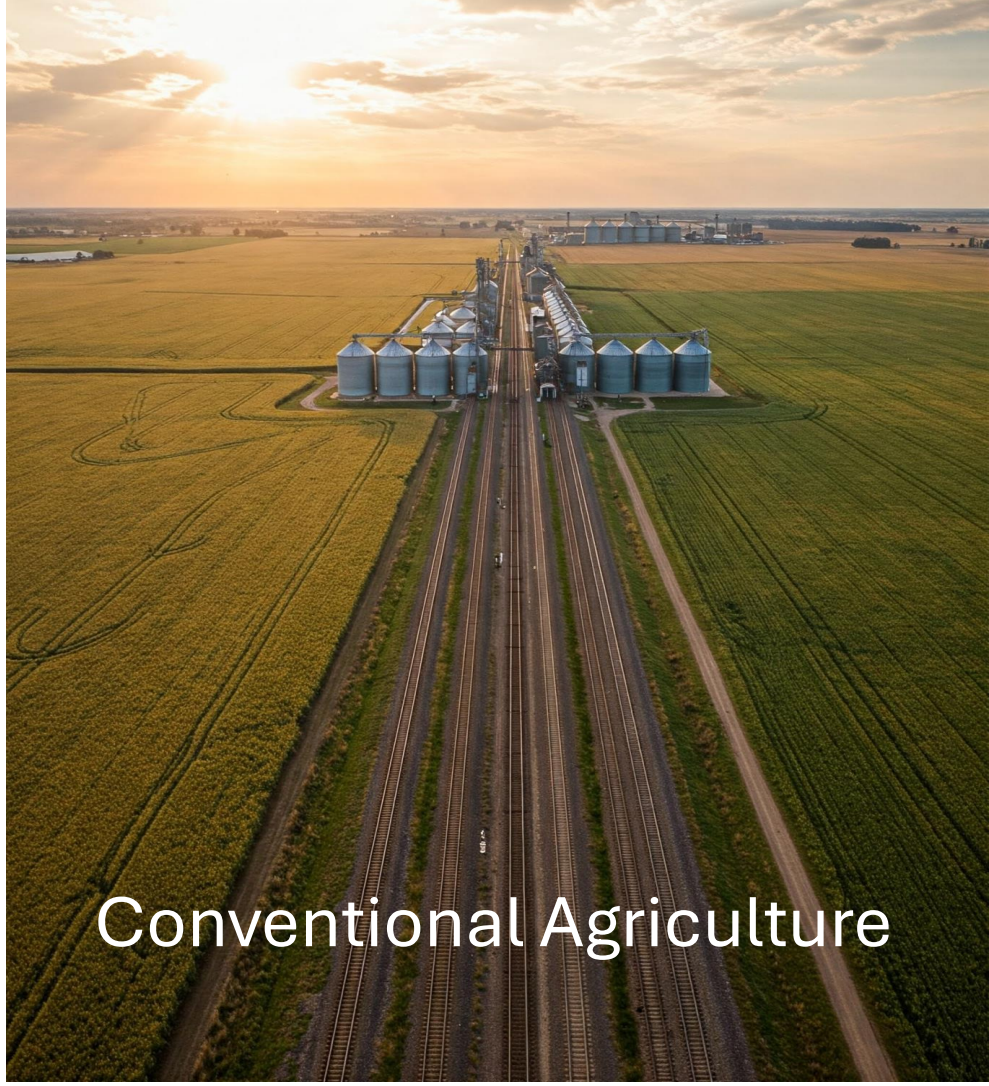
Continuous Process

Oregon Seaweed

Pre-10,000 BCE	**10,000 BCE**	**18th – 19th century**	**1940's-1960's**	**1970's – 2020's**	**2020 - future**
Hunter-Gatherer	Ag. Revolution	Ind. Agriculture	"Green" Revolution	GMO Agriculture	**CESA**

Batch System of Production

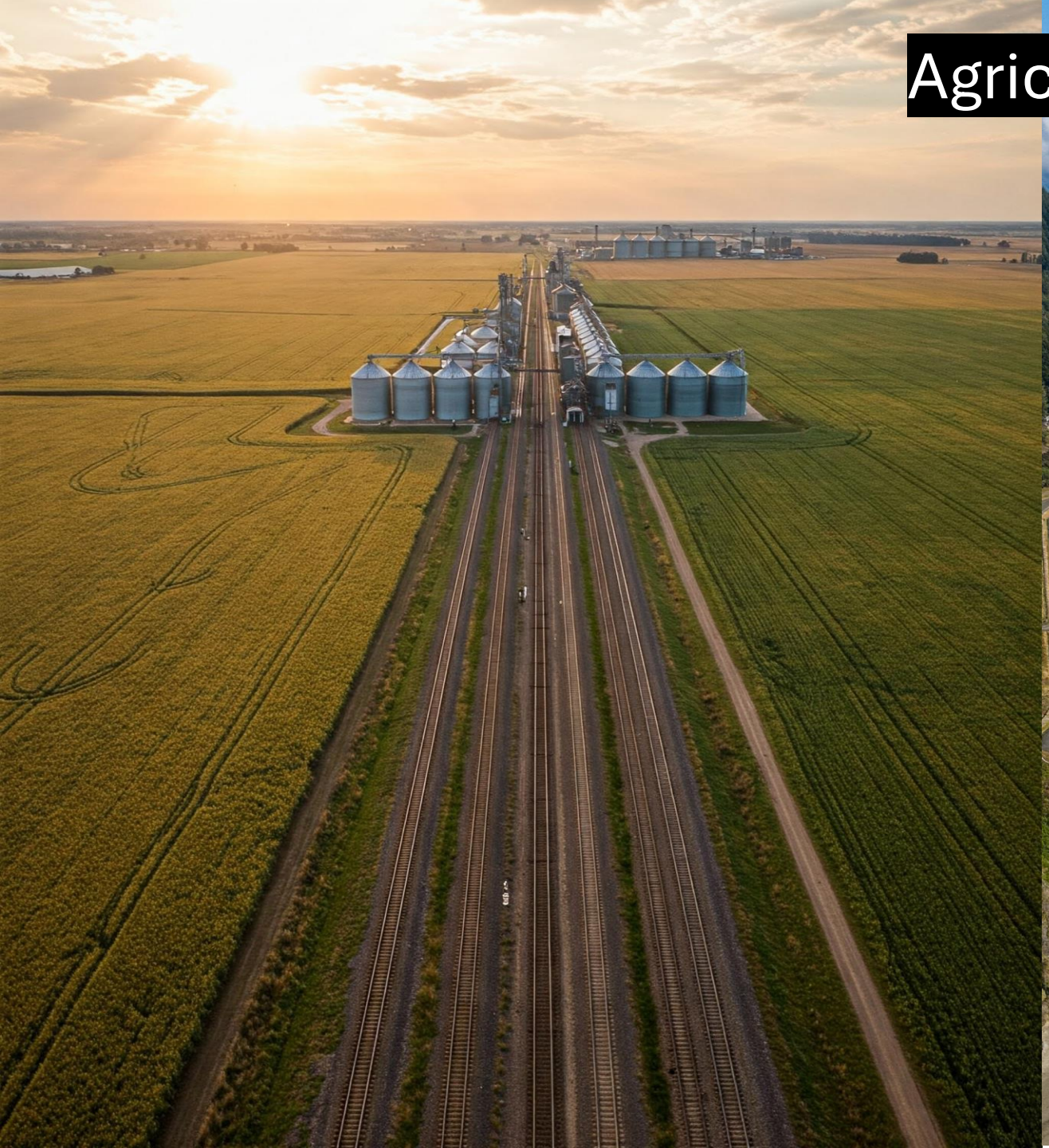
- Sunk cost Infrastructure ($5 trillion)
- High Inventory ($240 billion)
- Perpetual subsidies ($2 trillion)
- Decaying soils
- Plummeting fresh water supply
- GMO monopoly seeds
- Synthetic fertilizers/pesticides
- Concentrated supply chain/regulatory capture



Textile Manufacturing

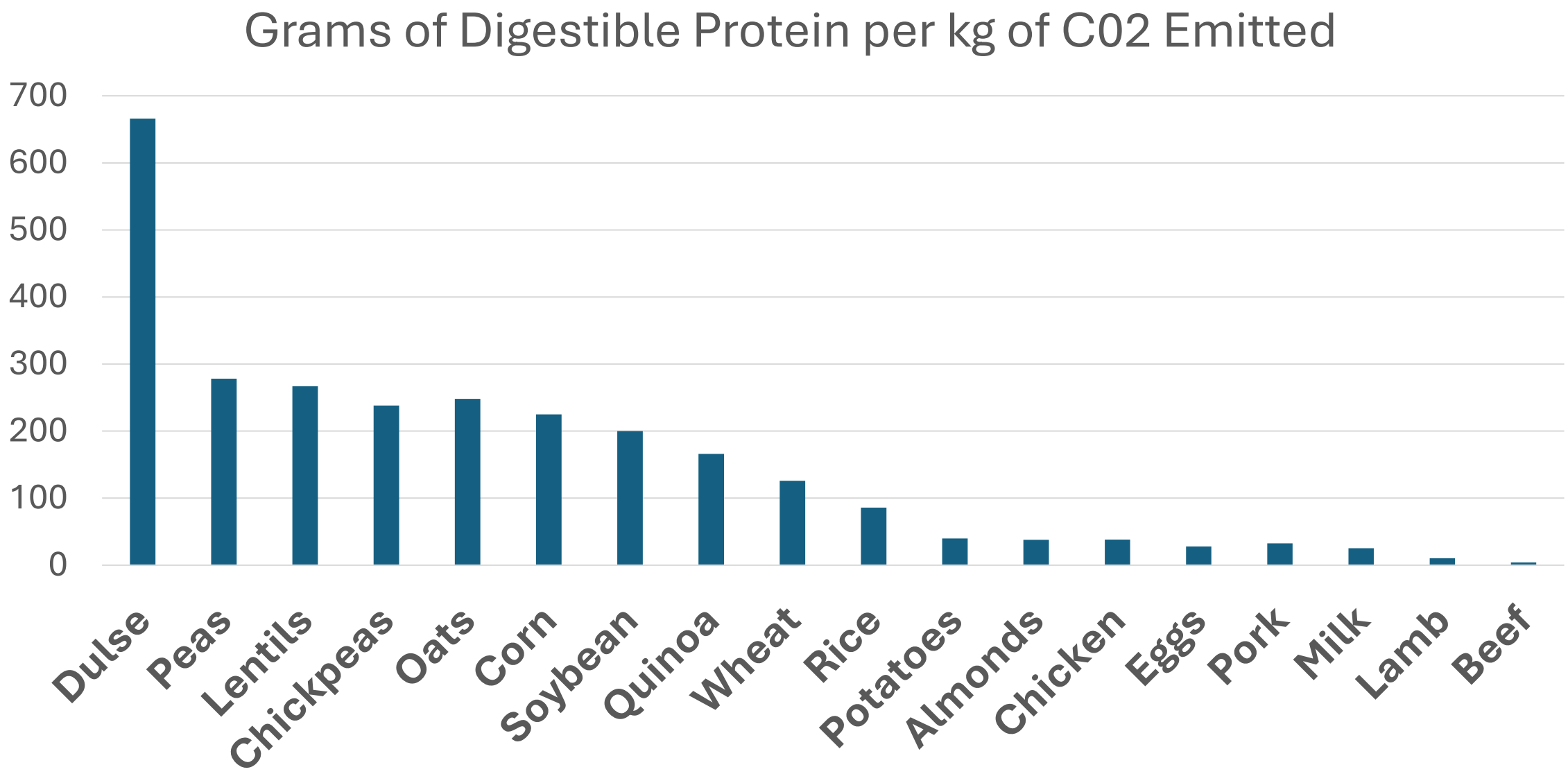
Paper Manufacturing

Agriculture



Continuous Process

- Continuous production
- No subsidies needed
- No soil needed
- No seeds needed
- No fresh water needed
- No fertilizer needed
- No pesticides needed
- Save 155 billion protein miles per year


Grams of Digestible Protein per kg of C02 Emitted
700
600
500
400
300
200
100
0
Dulse
Peas
Lentils
Chickpeas
Oats
Corn
Soybean
Quinoa
Wheat
Rice
Potatoes
Almonds
Chicken
Eggs
Pork
Milk
Lamb
Beef

Oregon’s Energy & Land – Better Investment

- Oregon is becoming a hub for energy intensive data centers
  - Energy
  - Water
- What if we used this same energy to produce a sustainable protein? $7 billion industry
  - Energy
  - Water

Process Data or Grow Protein?

Oregon Can Have Both

$200 billion market will open to Oregon

Our Proteins Compete With Soy

- Produce Dulse Protein @ $2.50 kg
- Hyperscale Energy Price
- No Freshwater
- No Seeds
- No Synthetic Fertilizers
- No Pesticides

Oregon Can Assume Sustainable Leadership

Data Centers

Sustainable Agrciulture

Economic Development

- Revitalize Oregon Coast
- Oregon's Green Workforce Goals
- Easy to Scale

Oregon Food Production

Improves the climate

Next generation agriculture

Oregon Call to Action

Recognize

- Recognize dulse farming as a strategic energy use

Prioritize

- Prioritize abandoned coastal properties

Tend

- Tend energy policy frameworks (e.g., low rates, green PPAs to food innovation)

Fund

- Fund pilot-scale projects to demonstrate the full potential ($5 million)