

# SUSTAINABILITY: OUR GLOBAL CHALLENGE

David Green | July 3, 2015

EXPO Milano



Photo Courtesy  
of Alaska Seafood.

**U.S.  
SUSTAIN  
ABILITY**

**THIS IS HOW WE GROW**

# U.S. Sustainability Alliance – Our Partners



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THIS IS HOW WE GROW



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# THE SUSTAINABILITY OF U.S. AGRICULTURE, FISHERIES & FORESTRY

EU stakeholder views with representatives from supermarkets, processors, importers, industry groups, academics, NGOs & media in United Kingdom, Germany, the Netherlands and Brussels

Unanimous interest in learning more about U.S. systems and processes:

- Stakeholders want to see a balanced view.
- Demonstrate real on-going commitment & improvement.
- Demonstrate an understanding of EU consumer concerns.
- Support claims with hard data.
- But put a human face to the issue.

Linking the individual sustainability accomplishments of U.S. agriculture, forestry and fisheries through the long history of conservation stewardship.

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# A CENTURY OF U.S. REGULATION AND INNOVATION

## 1900s

- federal meat inspection required
- early wildlife protection statutes created

## 1910s

- National Park Service created
- early regulation of pesticides

## 1930s

- food safety laws expanded
- soil conservation laws created

## 1940s

- first federal clean water laws established

## 1950s

- first federal clean air laws developed
- poultry inspection required

# A CENTURY OF U.S. REGULATION AND INNOVATION

## 1970s

- laws on clean air and clean water expanded
- occupational safety law established
- endangered species protection created

## 1980s

- environmental stewardship required for farm program benefits
- major new soil conservation programs developed

## 1990s

- major wetland protection programs developed
- wildlife habitat, other incentive programs created

# A CENTURY OF U.S. REGULATION AND INNOVATION

## 2000s

- conservation, environmental incentive programs expanded to livestock
- established new clean water regulations for livestock
- major public-private study of livestock air emissions

## 2010s

- food safety laws greatly expanded



# U.S. Laws and Policies Relevant to Agricultural Sustainability

## Department of Agriculture

Conservation Compliance

Conservation Reserve Program

Conservation Stewardship Program

Environmental Quality Incentives Program

Agricultural Conservation Easement Program

Technical Assistance and Other Conservation  
Programs

Coordinated Framework for the Regulation of  
Biotechnology

National Organic Program

Lacey Act

# **U.S. Laws and Policies Relevant to Agricultural Sustainability**

## **Department of Commerce**

Magnuson-Stevens Fisheries Management &  
Conservation Act

## **Environmental Protection Agency**

Clean Air Act (including air emission aspects of  
CERCLA and EPCRA)

Clean Water Act

Renewable Fuel Standard and Biofuels Policy

Federal Insecticide, Fungicide, and Rodenticide Act

# **U.S. Laws and Policies Relevant to Agricultural Sustainability**

## **Department of Health and Human Services**

Food Safety Laws (including USDA laws)

## **Department of the Interior**

Endangered Species Act

## **Department of Labor**

Occupational Safety and Health Act

# OUR VALUES:

As producers, we are deeply invested in stewardship of the land and water, because the earth is our legacy.

We believe being sustainable is not reaching an arbitrary threshold; it requires a commitment to innovation and continuous improvement.

There is no greater motivation to protect our natural resources than our personal duty to posterity, and our belief that these principles lead to commercial success and economic prosperity.

# U.S. agriculture, fishery and forestry provides

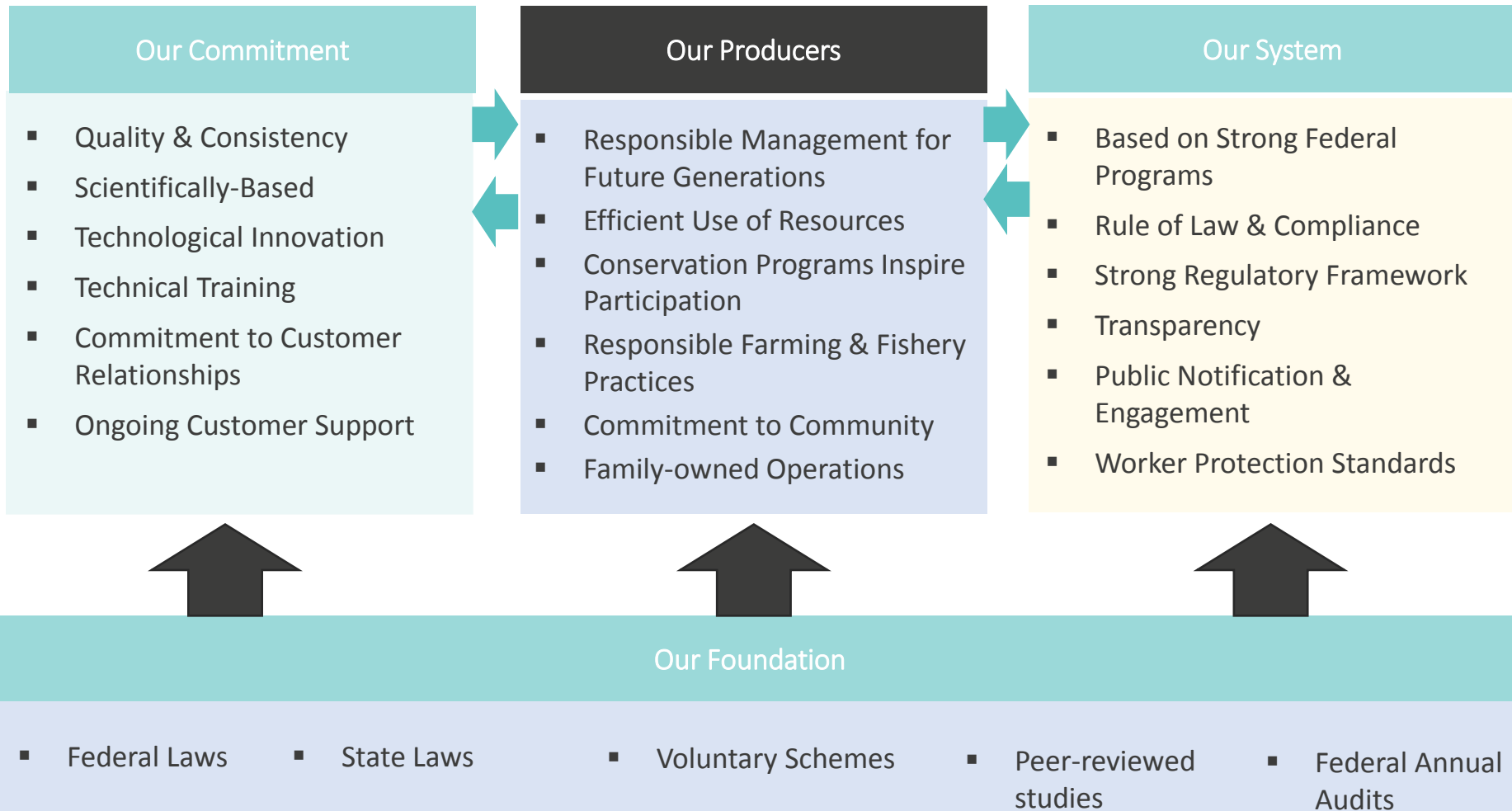
- A consistent, predictable and trusted supply.
- Safe food, fishery and agricultural products.
- A diverse agricultural profile.
- Commitment to continuous economic, social and environmental improvement.



# U.S. AGRICULTURE, FISHERY & FORESTRY

## Toward the Shared Goal of Sustainability:

Predictable, Consistent Supply of Safe Products · Diverse Agricultural Profile · Continuous Environmental Improvement



VISIT –[THESUSTAINABILITYALLIANCE.US](https://thesustainabilityalliance.us)  
AND  
[THISHOWWEGROW.ORG](https://thisshowwegrow.org)



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**THIS IS HOW WE GROW**

Photo Courtesy  
of Alaska Seafood.

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# THIS IS HOW WE GROW

America's Dairy Farmers: A Legacy of Stewardship, Sustainability and Social Responsibility

Chad Frahm  
July 3, 2015



# DAIRY SUSTAINABILITY



# GUIDING PRINCIPLES

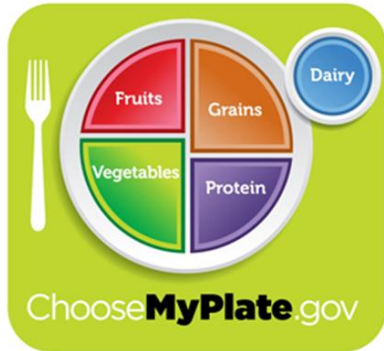


The U.S. Dairy Industry supports socially responsible, economically viable and environmentally sound dairy food systems that promote the current and future health and well being of:

- **Our consumers** – *through access to safe, nutritious, high-quality products.*
- **Our communities** – *through contributing, participating, and investing where we live and operate.*
- **Our cows** – *through animal stewardship.*
- **Our employees** – *through ensuring a safe and respectful workplace.*
- **Our planet** – *through the stewardship and responsible use of natural resources.*
- **Our businesses** – *through a focus on long-term economic vitality.*

# HEALTH AND WELL-BEING OF OUR CONSUMERS

Health and well-being through access to safe, nutritious, high-quality dairy products.



## Milk nutrition

USDA dietary guidelines call for more consumption of nutrient dense foods like low-fat or fat-free milk or milk products and foods that supply “nutrients of concern” like Calcium, Potassium, and Vitamin D.

Milk is the No. 1 food source



## Milk safety – cow to consumer

- Pasteurized Milk Ordinance
  - Federal/state cooperative program
  - Requirements on farm and at processing
- Food safety training for dairy processors, artisan cheesemakers, ice cream manufacturers, etc.

# HEALTH AND WELL-BEING OF OUR COWS

Animal care and stewardship

Education, documentation, transparency

Animal Care Manual

Animal care guidelines, protocols, and practices for entire lifespan of dairy cattle

Herd Health Plan

Written in consultation with herd veterinarian, established protocols, and reviewed annually

Quick Reference User Guide, Animal Care DVD - all materials available online in English and Spanish



## ■ On-Farm Evaluation

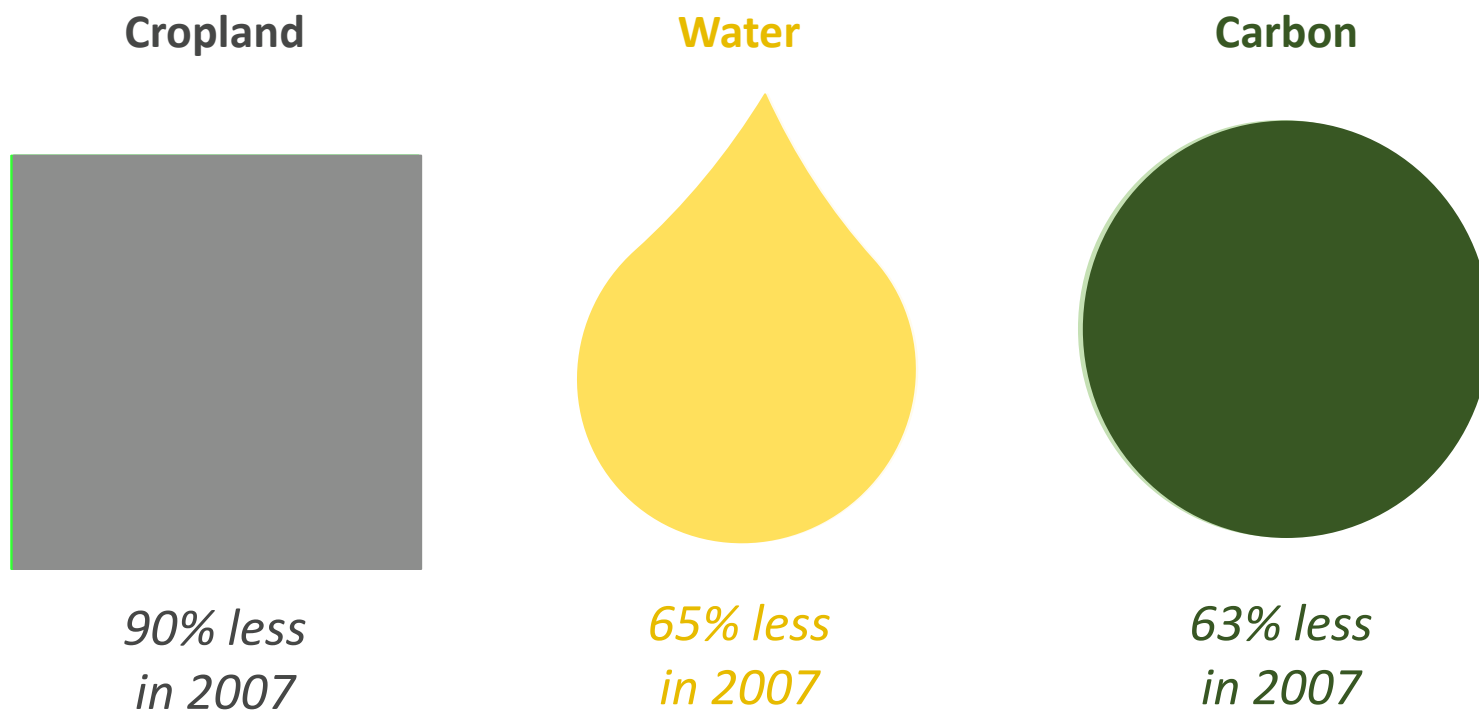
- External review of animal care practices using management checklists

## ■ Third-Party Verification

**90% of U.S. Dairy Industry Enrolled**

# HEALTH AND WELL-BEING OF OUR PLANET

Through the stewardship and responsible use of natural resources, producing a gallon of milk now requires much fewer resources than 1944.



Source: Capper JL, Cady RA, Bauman D. The environmental impact of dairy production: 1944 compared with 2007. *J Anim Sci.* 2009;87(6):2160-2167.

# AMERICAN DAIRY FARMERS' LEADERSHIP POSITION

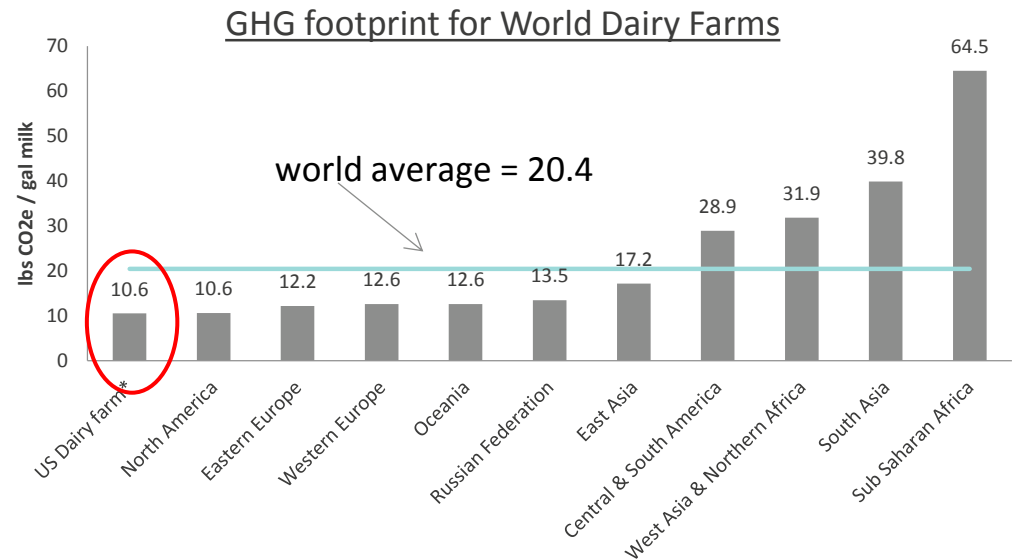
One of largest producers of milk in the world

U.S. produced 201 billion lbs. of milk in 2013

One of the highest producers of milk per cow per year in the world

U.S. dairy cows produce 4 times more milk than the world's average cow

U.S. dairy farmers have the smallest impact

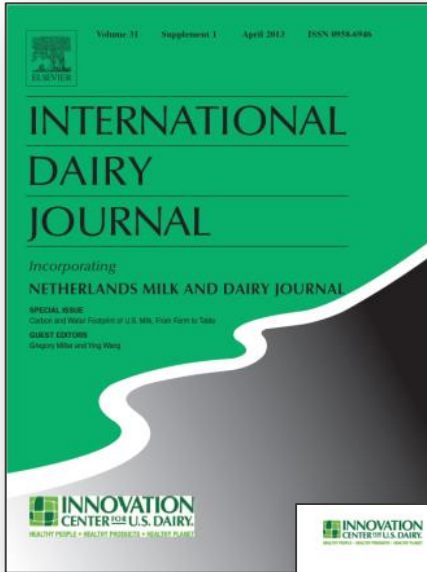


FAO n.d. Livestock Primary. Production. FAOSTAT. Food and Agriculture Organization. Accessed on August 18th, 2011.

Website: <http://faostat.fao.org/site/569/default.aspx#ancor>

FAO 2010. Greenhouse Gas Emissions from the Dairy Sector. A Life Cycle Assessment. Animal Production and Health Division. Food and Agriculture Organization of the United Nations

# GROUNDING IN SCIENCE



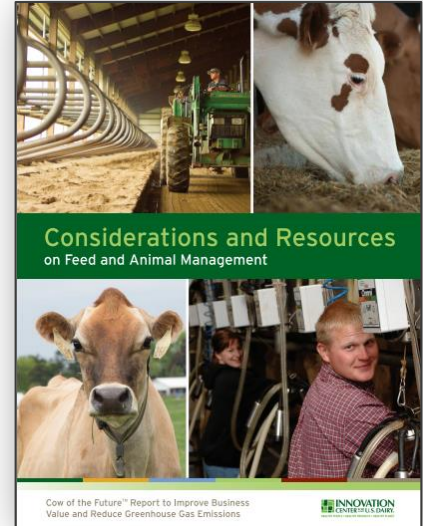
[Click here for LCA Special Issue](#)



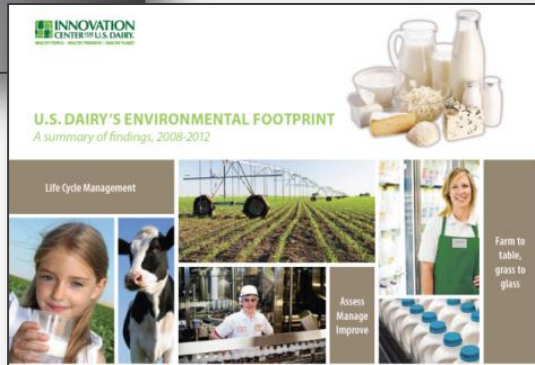
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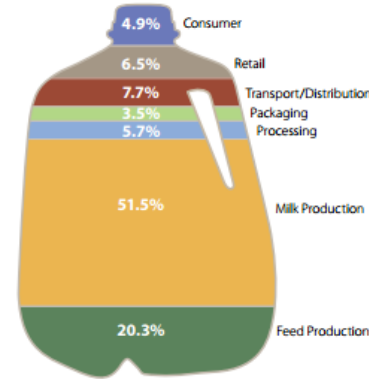


[Click here for Considerations and Resources Report](#)



[Click here for U.S. Dairy's Environmental Footprint](#)

## U.S. Fluid Milk Carbon Footprint



# SUSTAINABILITY ALIGNMENT



**Field to Market™**

The Alliance for Sustainable Agriculture







- Alliance Dairies
- Fair Oaks Farms
- Fiscalini Farms
- Foster Brothers Farm
- Gar-Lin Dairy Farm
- Graywood Farm
- Haubenschild Farms Inc.
- Holsum Dairies
- Kooistra Farms
- Maddox Dairy
- MarBec Dairy
- Medeiros & Sons Dairy
- McCarty Family Farms
- Mystic Valley Dairy
- Nobis Dairy
- Prairieland Dairy
- Rovey Dairy
- Simonson Dairy
- Spruce Haven Farm
- Triple A Farms
- Werkhoven Dairy



Suppliers

Coops & Farmers

Crop Production



Dairy Processor

Cheese

RUAN

Transport

Retail & QSR

Community

**Sustainability Council**

*We commit to being leaders in sustainability, ensuring the health and well-being of our planet, communities, consumers and the industry*



# BOLD LEADERSHIP

## 1. Dairy Industry Greenhouse Gas Reduction:

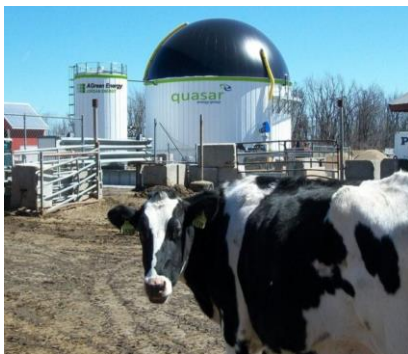
Voluntary GHG reduction goal...

**25% by 2020**

GHG emissions per gallon of milk

## 2. USDA partnership:

- Historic memorandum of understanding for collaborative work to reduce GHG, signed 2009 in Copenhagen.
- Biogas Opportunities Roadmap, part of the President's Strategy to Reduce Methane



## 3. Sustainable nutrient management:

New dairy-farmer owned company will focus on economically viable nutrient management solutions, generation of renewable energy and other solutions.



# THANK YOU!



Chad Frahm  
Senior Vice President, Sustainability  
Innovation Center for U.S. Dairy  
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# ORGANIC AGRICULTURE AND SUSTAINABILITY IN THE UNITED STATES



PRESERVE | GROW | TRANSFORM

*SINCE 1985*  
**Organic**  
*trade association™*

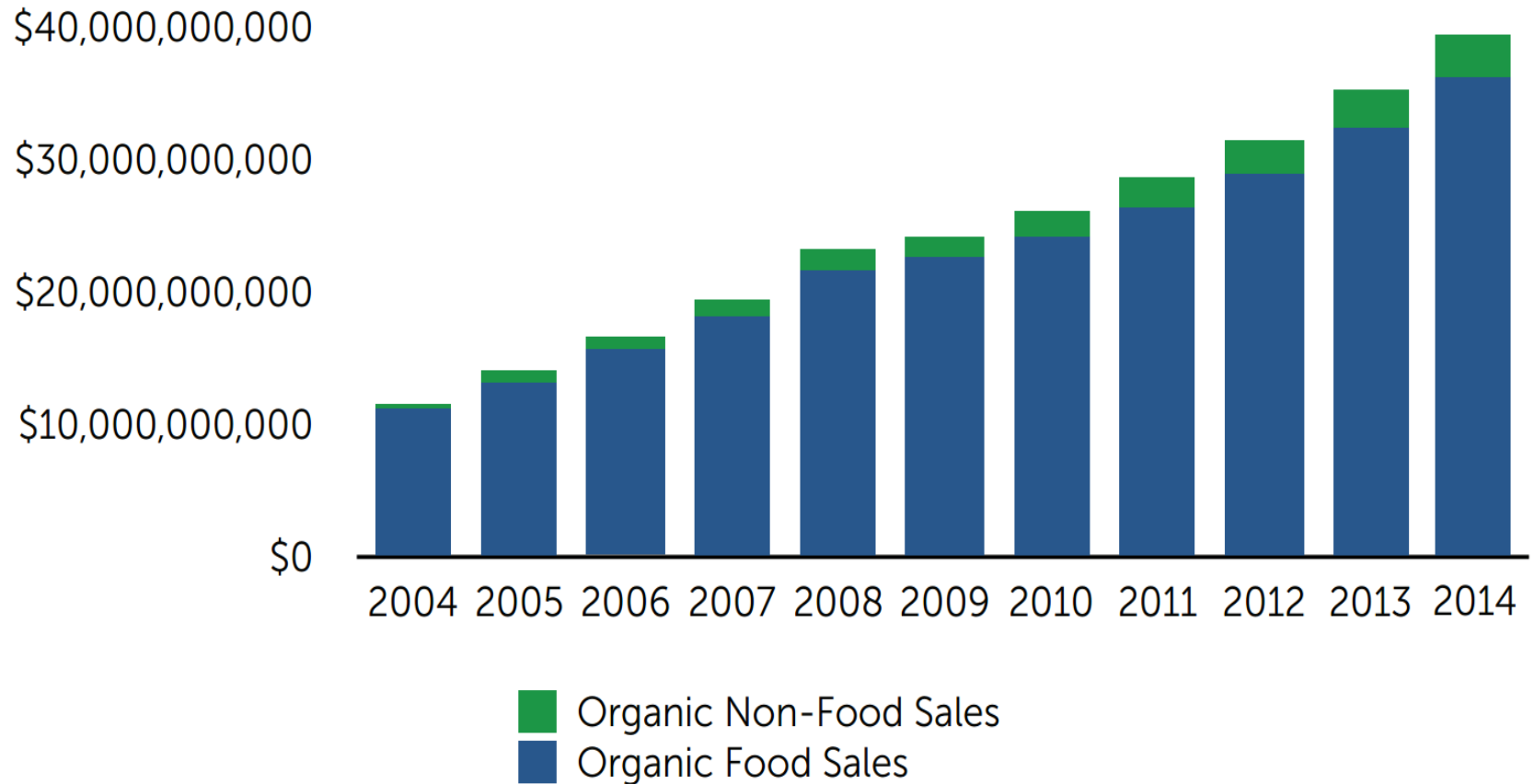
# Organic Agriculture in the USA

- 6,049,094 Acres
- 2,447,982 Hectares
- 19,474 Certified Operations
- 3,240 Farms in Transition



# 2014 Sales totaled \$39.1 billion USD

## - Market Growth: 11.3%



# ENERGY EFFICIENCY & CLIMATE STABILITY

Reduced energy use per  
yield unit

Contributes to long-term  
climate stability

Sequestering carbon

Decreased greenhouse  
gas release

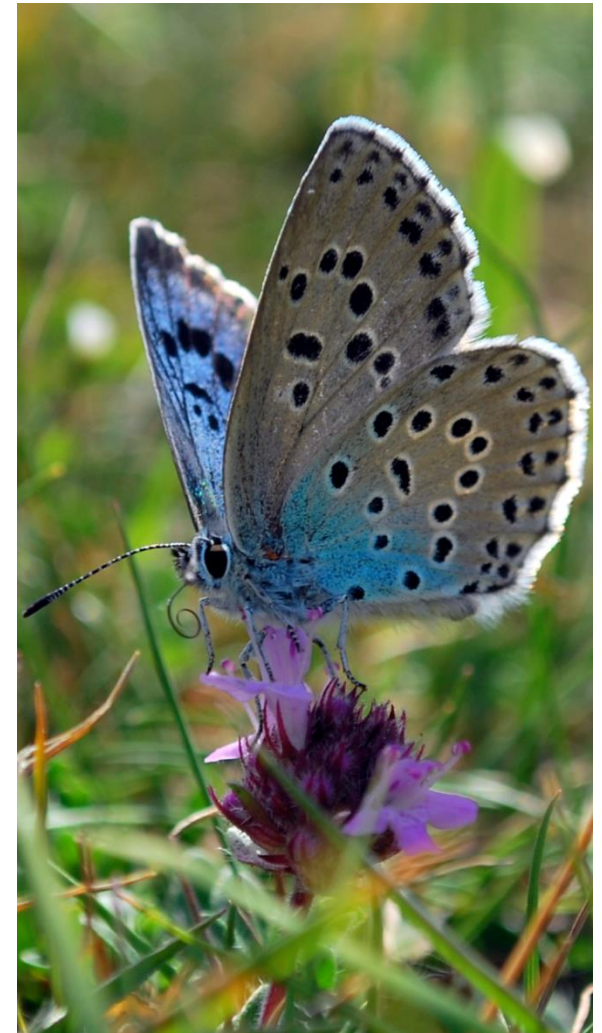


# SUPPORTING POLLINATORS

Focused on increasing diversity and abundance of pollinators

Supports a thriving agricultural ecosystems long into the future

Pollinator health is an important consideration in pest control methods





# AVOIDING SOIL HEALTH DEGRADATION

Organic supports soil sustainability

Contributes to high oil nutrition levels,

Boosts microbial diversity and activity,

Offers excellent soil structure





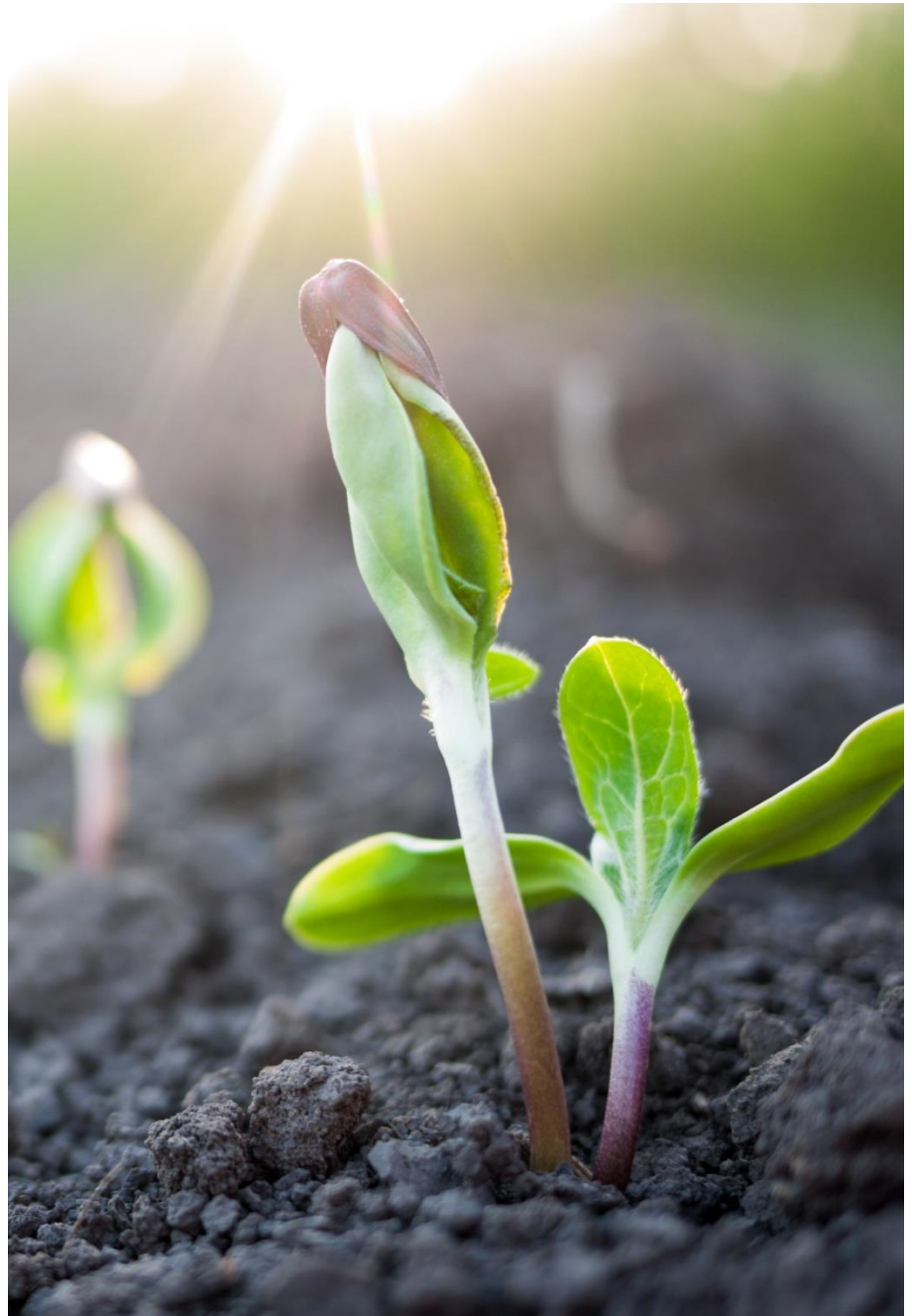
[www.ams.usda.gov/nop](http://www.ams.usda.gov/nop)

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[www.jmsmucker.com](http://www.jmsmucker.com)  
[kim.dietz@jmsmucker.com](mailto:kim.dietz@jmsmucker.com)



# THE ALASKA SEAFOOD SUSTAINABILITY STORY

Jon Harman  
Alaska Seafood Marketing Institute



# CONTEXT

## Globally Seafood major protein source

17% of animal protein we consume, 7% of total protein

High value protein, low in sat. fat, and carbohydrates, packed with micronutrients, vitamins and omega 3

Three main sources, wild marine, wild inland and aquaculture

Total world supply 154MMT

Wild Caught 80-85MMT; fairly consistent last 25 years  
( $\pm$ 3% last 10 years)

US wild fishery  $\sim$  4.2MMT,  
circa 5% of wild catch

Alaska accounts for 2.4MMT  
worth \$1.7bn



## ALASKA MAIN SPECIES:

SINCE 1959, THE ALASKA CONSTITUTION HAS MANDATED THAT “FISH...BE UTILIZED, DEVELOPED AND MAINTAINED ON THE SUSTAINED YIELD PRINCIPLE”

Alaska Pollock (1.3MMT)

Salmon: 5 species

King, Coho, Sockeye, Pink & Keta (0.3MMT)

Crab:

King crab, Snow Crab & Dungeness Crab  
(0.25MMT)

Alaska flatfish (0.25MMT)

Alaska Pacific Cod

Halibut

Black Cod

Other species: Shrimp, oysters, sea cucumbers, sea urchins etc.



# BALANCING SUSTAINABILITY IN A WILD RESOUF



Economic > Environment and stocks > Social and cultural  
Complex inter-relationship requiring constant fine tuning, rarely in a  
“steady state” and more often in constant flux

## 1976: US passed Magnuson-Stevens Act

- Limited access to fisheries (US)

- Rights control & ownership, management.

- Focused on eliminating overfishing

- Reduce bycatch & environmental impacts

## US Fisheries:

- exceedingly well managed

- 91% stocks NOT overfished

- AK no stocks overfished

- Compare 66% NOT overfished NE Atlantic,  
Med. Stocks 50% NOT overfished.

- US and AK high proportion of fish caught with



## ALASKA: FISHING ECONOMICALLY IMPORTANT

Largest private employer : 60,000 direct jobs, 10-20,000 indirect jobs

Annual catch worth around \$1.7bn

Commercial fishing and seafood processing are vitally important for many rural, coastal communities in Alaska.

The industry accounts for roughly a third of all private sector employment occurring in rural Alaska.

Alaska's commercial fleet is about 6,500 boats.

There are 120 shoreside plants.



# SOCIAL TRADITION

- Entire communities intimately involved with harvesting and processing Alaska seafood for generations.
- Fisheries are a source of income; a way of life; a relationship with the land and sea; and a culture of fishing that defines the community.



Communities have a willingness to help enforce the sustainability practices mandated by the state.

Alaskans recognise the need to protect and maintain the fisheries and the surrounding habitat for future generations.



# SUSTAINABLE FISHERIES

Since 1959, the Alaska Constitution has mandated that “fish...be utilized, developed and maintained on the sustained yield principle”

(Note: concept of MSY introduced EU 2006)

Every aspect of Alaska’s fisheries has been strictly regulated, closely monitored and rigidly enforced for nearly five decades

All Alaska seafood is wild and sustainable, and it is managed for protection against overfishing, habitat damage, and pollution

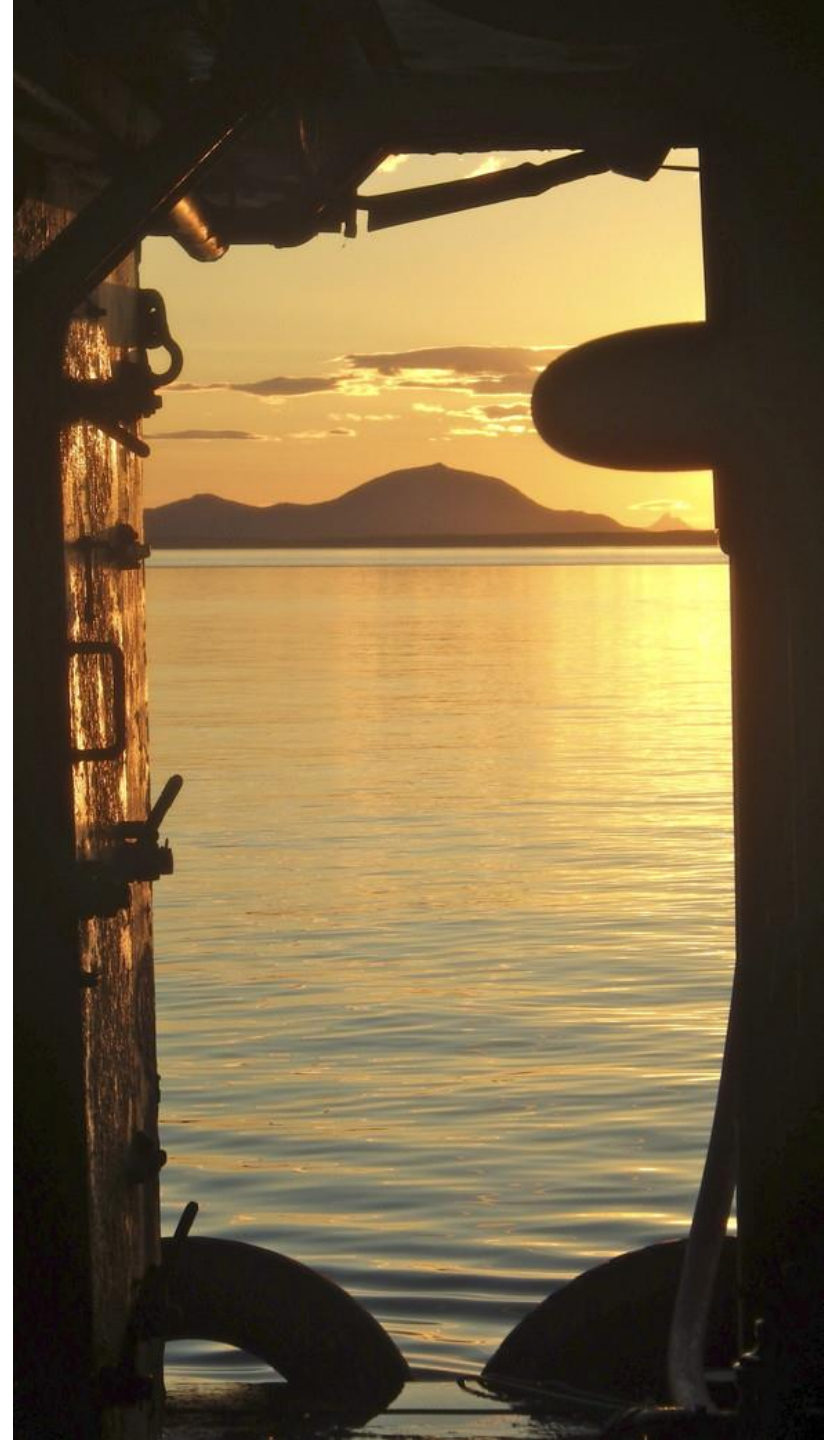
Alaska is dedicated to preserving and protecting this superior seafood for future generations

Alaska sets the standard for precautionary resource management

Alaska’s successful management practices are considered a model of sustainability for the entire world



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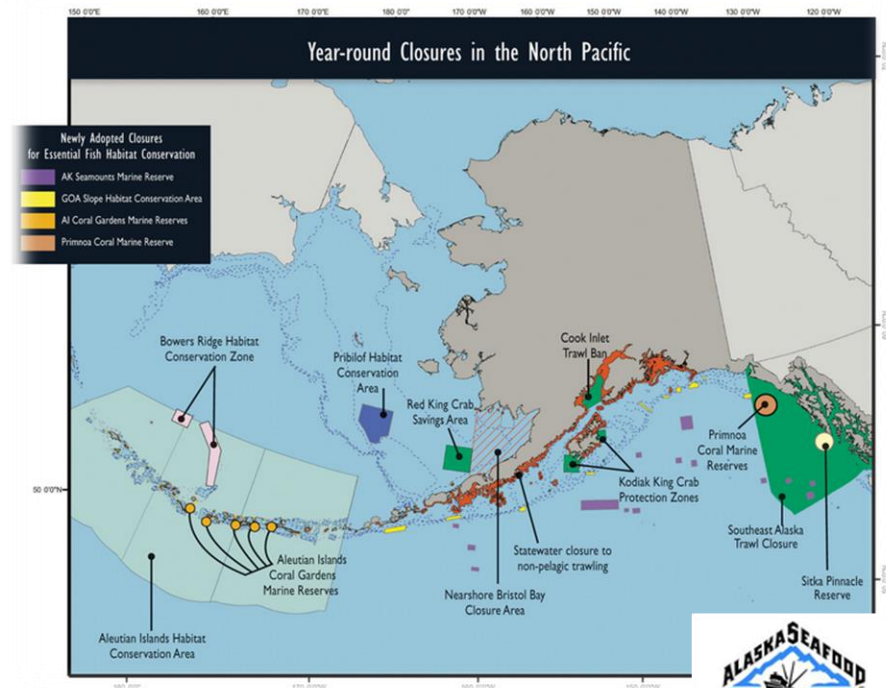


# MARINE PROTECTED AREAS

Collaboration between the federal government and the State of Alaska to monitor environment and to protect aquatic habitats and ecosystems

Over 40 Marine Protected Areas (MPAs) established to protect ecological structure and function

Of these 40 Marine Protected Areas, 31 prohibit either all commercial fishing or all bottom contact gear, such as trawls



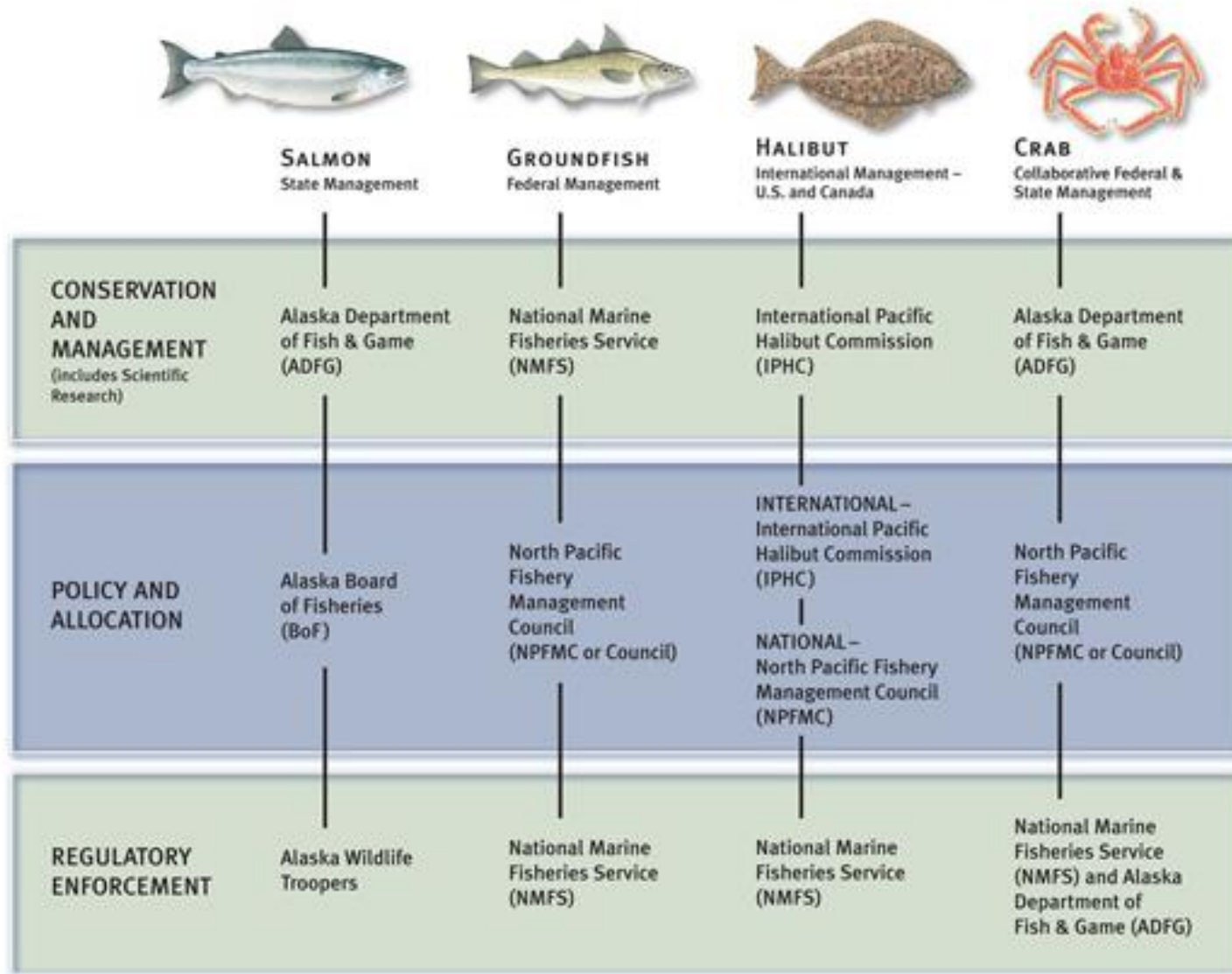
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# RESOURCE MANAGEMENT



Wild, Natural & Sustainable®

## STATE, FEDERAL AND INTERNATIONAL MANAGEMENT OF ALASKA'S FISHERIES





# THE ALASKA SALMON STORY

Commercially fished since 1880's

Early 1950's recognized to be in some difficulty

River systems surveyed and assessed for required fish numbers = escapement

Escapement allows for spawning, sport fisheries and the predators like the bears!

The salmon season is operated in a series of "openings" to allow those numbers to enter river system

The Alaska Department of Fish and Game monitors salmon "escapement" by basically counting the fish

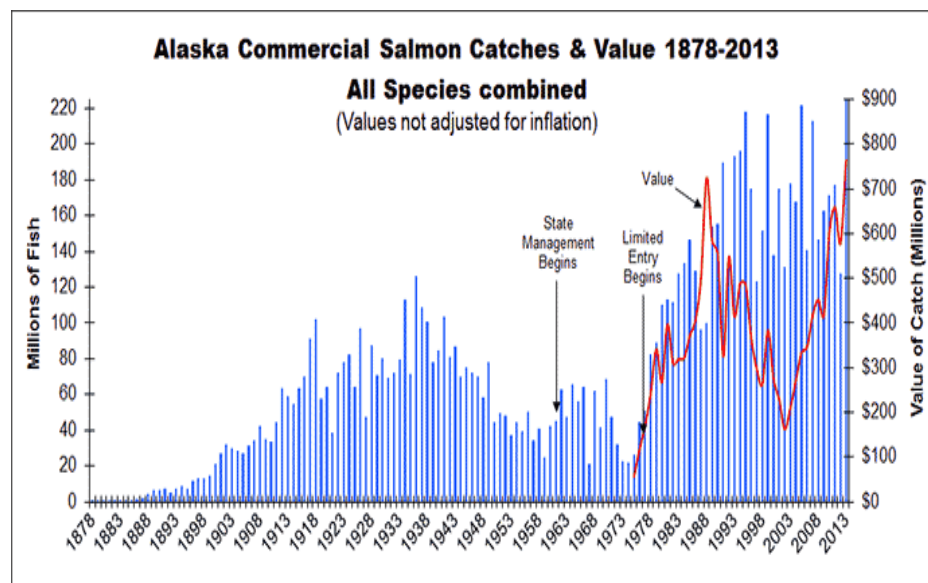
When escapement goals are met, the fishery is opened for a set amount of time in a set area.

Alaska also regulations on size limits for boats and the gear types available for use.

The number of fishers participating in the fishery is also limited.



Biologists at a salmon weir in Kodiak, Alaska





## THE ALASKA POLLOCK STORY

Alaska pollock largest sustainable fishery on the planet.

All vessels operate on-board observers who give independent verification of the catch & location.

Satellite technology tracking of exact position at any given time.

Completely traceable products, to the boat's position, date, time of catch, temperature of a specific haul.

Genuine Alaska pollock is 100% traceable back to the vessel and all Genuine Alaska pollock is fished in Alaskan waters.



# THIRD PARTY CERTIFICATION

Sustainability is nothing new in Alaska.

Alaska RFM is a third-party certification of the management of the major Alaska commercial fisheries and cover the major Alaska fisheries

Based on the United Nations Food and Agriculture Organization (FAO)

Code of Conduct for Responsible Fisheries (Code)

FAO Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries (Guidelines) –

Both recognized around the globe as the best criteria for responsible fisheries management.

MSC certification cover Alaska Pollock, Flatfish, Salmon, Pacific Cod



Thank You!





# U.S. SUSTAINABILITY: "THIS IS HOW WE GROW"

Jim Miller

American Soybean  
Association Director and  
USSEC Vice-Chair

July 3, 2015

Milan, Italy



## MEET MY FAMILY

- I am a 4<sup>th</sup> generation farmer and began farming in 1978
- We raise soybeans, corn and hogs in Belden, Nebraska
- My wife, 3 kids and 6 grandchildren live and work on the land
- Grandkids will be 6<sup>th</sup> generation farmers!



## ABOUT MY STATE, NEBRASKA

- 49,969 farms across 18 M hectares (45 M acres)
- Average farm size is 367 hectares (907 acres)
- Nebraska ranks 5<sup>th</sup> in U.S. agricultural exports
- Average soybean yield is 2.88 MT per hectare (105 bushels per 2 acre or 53 bushels per acre)



MMT=Million Metric Ton  
M=Million  
MT=Metric Ton

## ABOUT MY FARM

- 1,375 hectares of crops (3,400 acres) & 280 hectares (700 acres) of pasture/grazing
  - 120 SOW FARROW-TO-FINISH OPERATION
  - 140 HEAD COW/CALF HERD
  - CROP ROTATION:
    - 50% soybeans
    - 50% maize



## ABOUT MY FARM



### Storage

- Enough on the farm for each year's production (11,000 MT of storage)
- Market some grain at harvest
- Sold forward 2015 knowing approximate production

### Risk Management

- Forward pricing
- Use Cargill marketing program



## WHY DO U.S. FARMERS CHOOSE SUSTAINABLE FARMING?

- Sustainable farming is a way of life - Farmers care about the future
- Family-owned businesses
- Crop rotation improves diversity and reduces inputs
- Meeting customer demands
- Improved profitability

# CONSERVATION ON MY FARM

## Biotechnology

- Began using herbicide tolerant soybeans and insect-resistant maize modes of action in 1996
- Method has proven essential for sustainability goals
- Biotechnology has reduced the amount of crop protection agents used

## Sustainability

- No tilling since 1996
- Fuel savings
- Increased organic matter of soil
- Decreased soil erosion



# CONSERVATION TILLAGE

# IMPROVES SOIL – REDUCES ENERGY USE





# 10 DAYS AFTER PLANTING SOYBEANS



## CONSERVATION TILLAGE: SUSTAINABILITY AT A NATIONAL SCALE

- 65% of U.S. soy production uses conservation tillage
- Builds up soil, increases earthworm populations, and is very sustainable:
  - 66% DECREASE IN SOIL EROSION
  - 70% REDUCTION IN HERBICIDE/PESTICIDE RUN-OFF
  - 150,000 MT (326 MILLION POUND) REDUCTION IN CO2 EMISSIONS
  - 80% REDUCTION PHOSPHORUS SEEPAGE INTO SURFACE WATERS
  - GREATER THAN 50% REDUCTIONS IN FUEL USE
- Since 1980 U.S. soy yield has increased by 96% using 8% less energy

# PRECISION AGRICULTURE

- Reduces inputs with precise applications down to the millimeter



# U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

## U.S. SOYBEAN SUSTAINABILITY ASSURANCE PROTOCOL

*A Sustainability System That Delivers*  
MARCH 2013



- Based on U.S. national system of conservation laws
- 95% of U.S. soybean farmers participate
- Aggregate approach
- Quantifiable results
- Third-party audit
- Annual certification
- Benchmarked against RoundTable on Responsible Soy (RTRS)



# LOOKING TO THE FUTURE



**USSEC**  
U.S. SOYBEAN EXPORT COUNCIL

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THANK YOU

