University of Idaho
Extension

Seafood at Its Best

Lesson 1

What Is Seafood?

Lesson 1

Goals

- Provide a brief introduction to the U.S. seafood industry
- Participants will gain a better understanding of the large variety of seafood products available.

Lesson 1

Objectives

Increase knowledge of the following:

- What is seafood?
- Where does our seafood come from?
- Consumer preferences
- Future seafood supply and demand

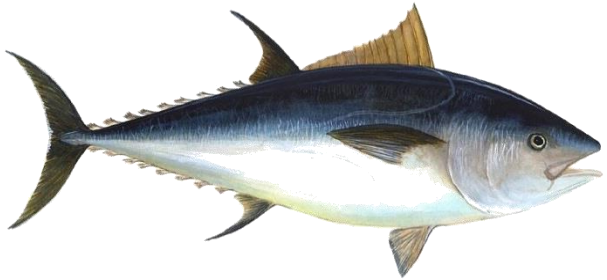
Definition of Seafood

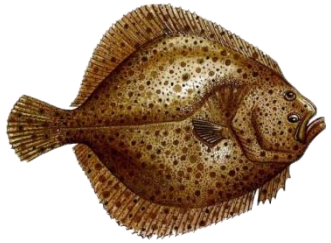
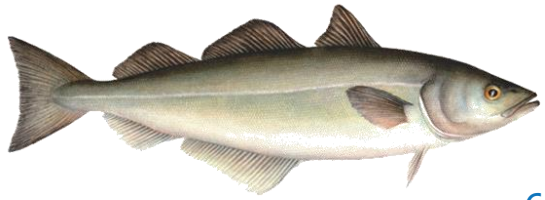
- Seafood includes freshwater and saltwater:
  - Fish
  - Molluscan shellfish
  - Crustaceans
- Commercially caught or farm raised

Fish

- Aquatic vertebrates that have gills, fins, and usually an elongated body covered with scales
- Rainbow trout, catfish, tilapia, flatfish, pollock, salmon, tuna





Molluscan Shellfish

- Aquatic invertebrates characterized by a shell (sometimes lacking) of one or more pieces that wholly or partly enclose the soft, unsegmented body
- Oysters, clams, mussels, scallops

Crustaceans

- Arthropod animals characterized by a hard, close-fitting shell that is shed periodically
- Crabs, lobsters, shrimp, crayfish

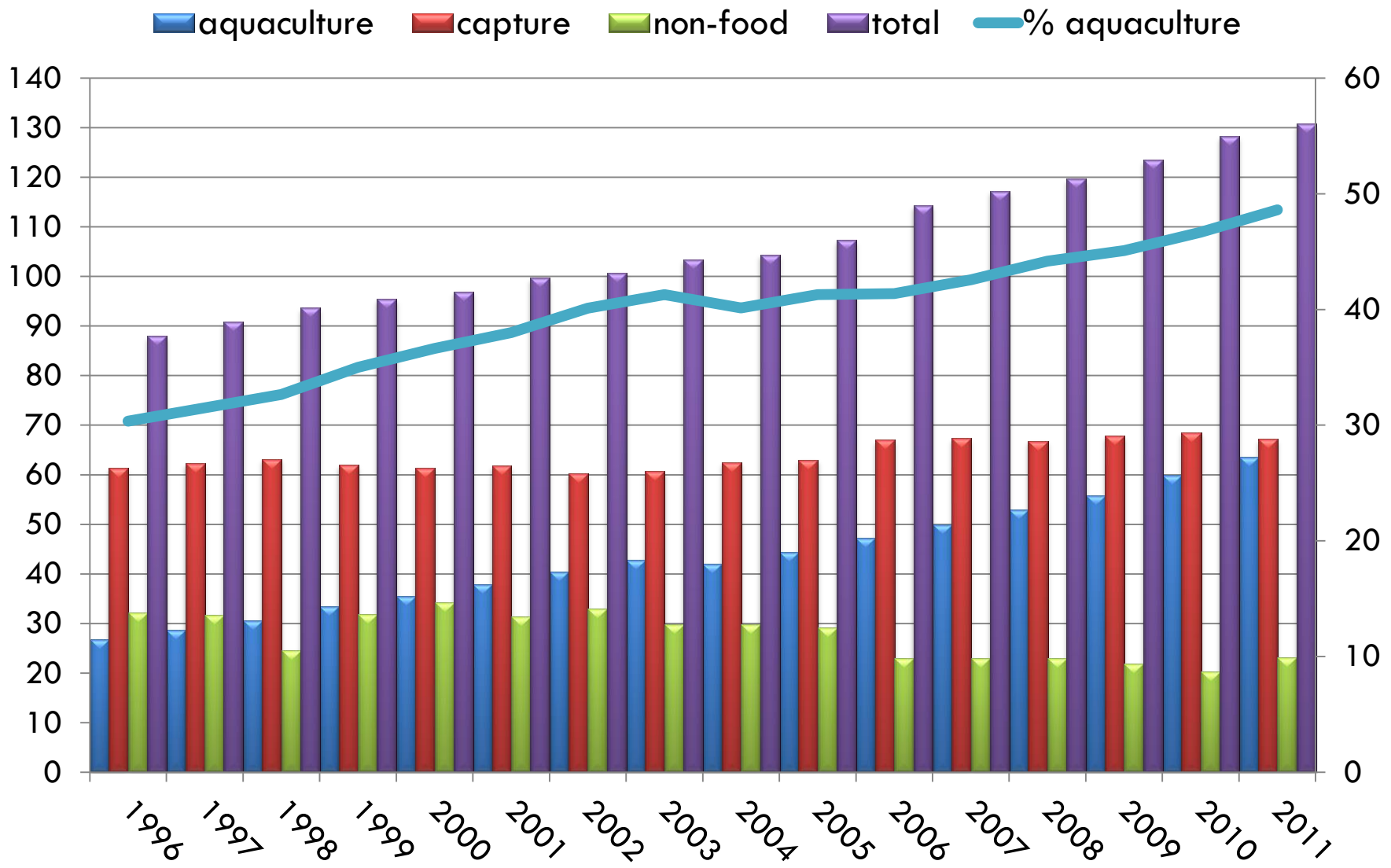
Imported Seafood

- About 5.3 billion pounds of edible seafood is imported annually, which results in a $10.4 billion trade deficit
- About 90% of seafood is imported
- Imports are mostly from China, Thailand, Canada, Indonesia, and Vietnam
- Leading seafood imports by value:
  shrimp, lobster, salmon, canned tuna

Aquaculture

- Aquaculture (fish farming) – production of aquatic animals and plants under controlled conditions for all or part of the life cycle
- Approximately 48% of world seafood supply comes from aquaculture
- Common aquaculture species include:
  rainbow trout, catfish, salmon, shrimp, clams and oysters

FAO World Fisheries and Aquaculture Production (mmt)



Advantages of Aquaculture

- Steady supply
- Consistent quality
- Moderating prices
- Uniform product size

U.S. Aquaculture

- High-quality, safe, wholesome, and affordable seafood
- Farm-gate value of over $1 billion
- Provides employment in rural areas

U.S. Aquaculture

Catfish

- Catfish represents the largest domestic aquaculture industry in the U.S.
- Approximately 300 million pounds produced in 2012
- Leading catfish-producing states include Mississippi, Alabama, Arkansas, and Louisiana
- Catfish are grown in earthen ponds and fed grain-based feeds

U.S. Aquaculture

Rainbow Trout

- Rainbow trout are grown both for the table and for stocking ponds
- Produced in flow-through raceways
- Rainbow trout are grown in numerous states
- In 2012, 47.7 million ponds of market-size trout produced

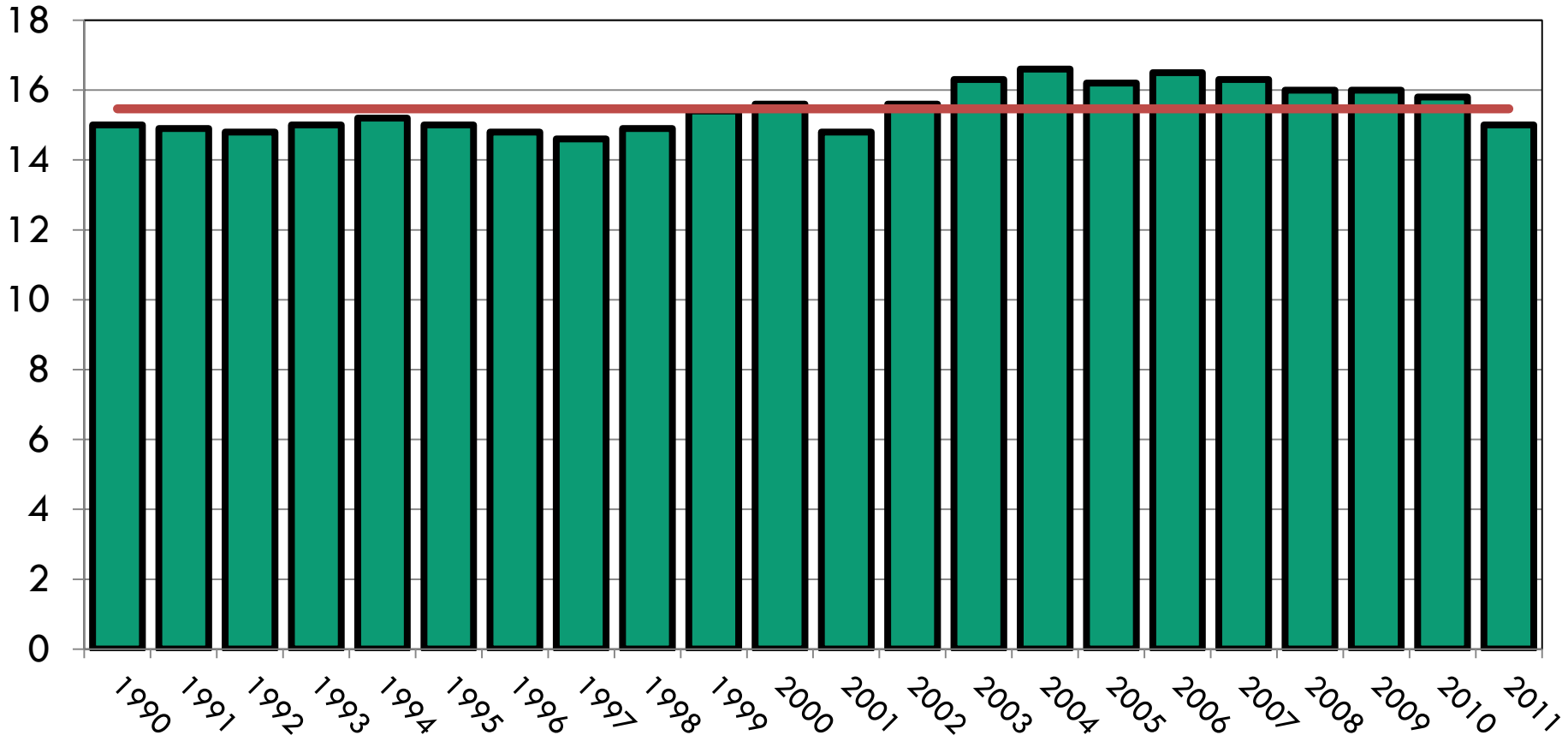
U.S. Aquaculture

Other Species

Other species grown for food include salmon, hybrid striped bass, tilapia, sturgeon, crayfish, shrimp, oysters, clams and mussels

U.S. Per Capita

Seafood Consumption (lbs.)

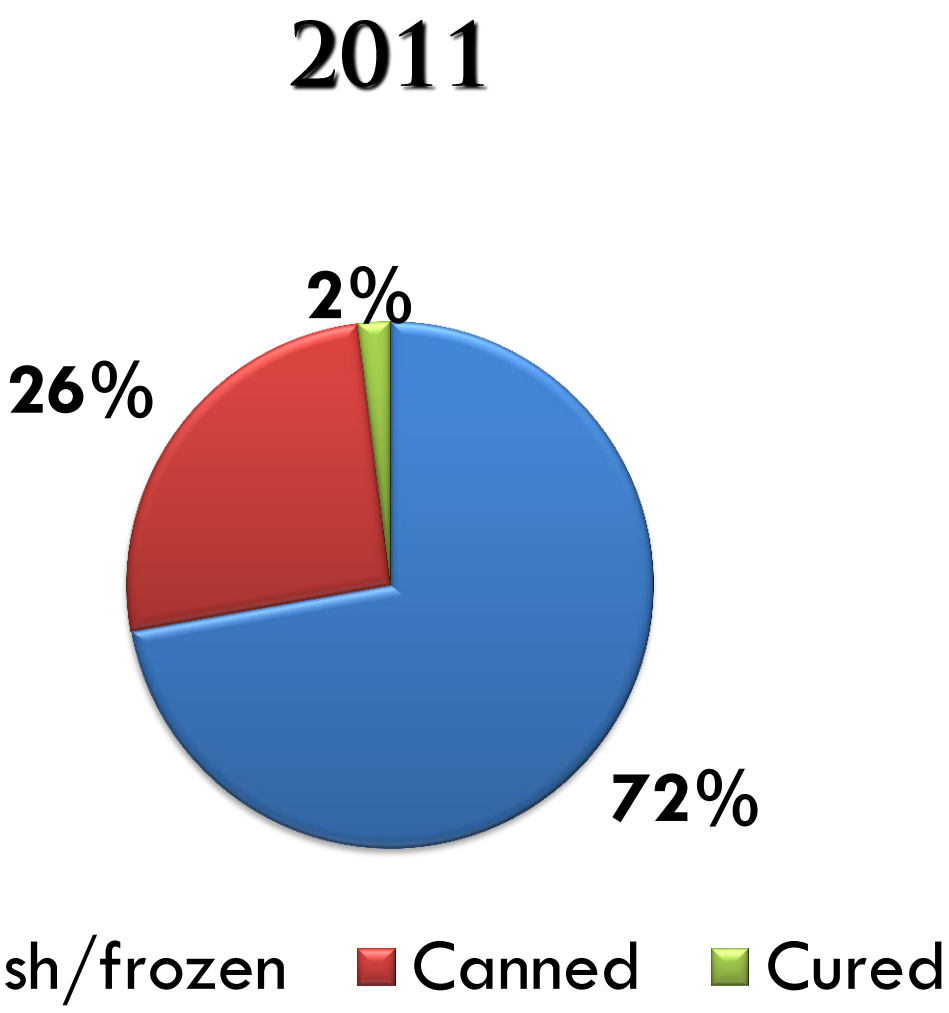


Top 10 Species Consumed

U.S. Per Capita (lbs.)

2001		2011	
Species	**Pounds**	**Species**	**Pounds**
Shrimp	3.40	Shrimp	4.20
Canned Tuna	2.90	Canned Tuna	2.60
Salmon	2.02	Salmon	1.95
Alaska Pollock	1.21	Alaska Pollock	1.31
Catfish	1.15	Tilapia	1.29
Cod	0.56	Pangasius	0.63
Clams	0.47	Catfish	0.56
Crab	0.44	Crab	0.52
Flatfish	0.39	Cod	0.50
Scallops	0.35	Clams	0.33

Preferred Product Type



Where Do We Eat Seafood?

- Americans eat most seafood away from home at food service establishments such as restaurants
- Significant amounts of low-cost, familiar, or easily prepared items such as canned tuna, salmon, tilapia, and shrimp are consumed at home

"Fisherman's Wharf" by Katharine Shilcutt

"Smoked Wild Canned Fish (The Fishery) by Renee S. Suen

How Much Money Do We Spend on Seafood?

- In 2011 – $57.7 billion at food service establishments (restaurants, carry-outs, caterers, etc.)
- In 2011 – $27.6 billion in retail sales for home consumption
- Average household spending for in-home seafood purchases in 2011 was $117
- Asian, African & Hispanic Americans; higher income; and older households spend more on seafood

Future U.S. Seafood Demand

- USDA predicted per capita consumption would be 16 pounds by 2020
- There is a potential need by 2020 of an additional 4 to 5 billion pounds (round weight) to satisfy demand

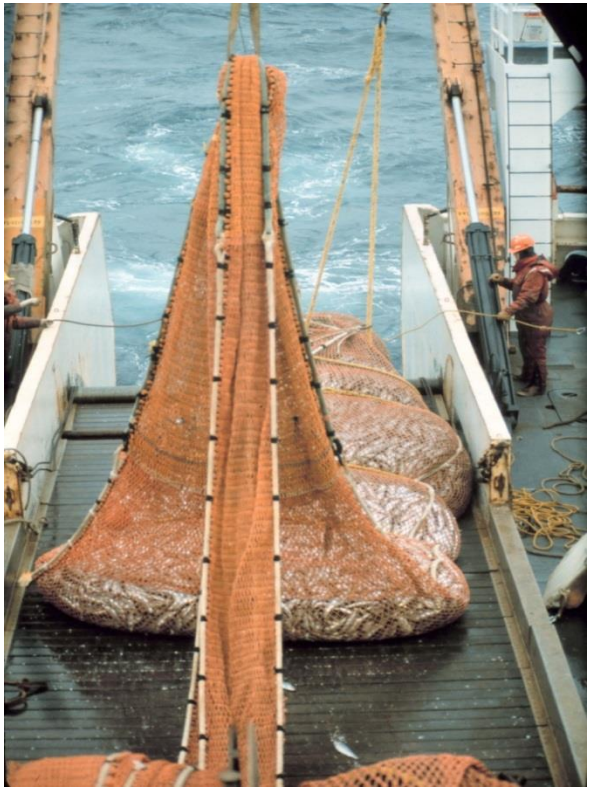
Population Demographics Will Influence Seafood Demand

- By 2020, 84 million Americans will be over the age of 60
- They will eat more seafood, dine out more often, and prefer prepared meals for in-home consumption
- Continued growth of minority population
- Minorities eat more seafood than the national average

Future Seafood Markets

- Organic seafood: small volume, high value
- "Functional" seafood with FDA-approved health claims and/or added nutrients
- Greater convenience: heat-and-eat entrees, "ready to cook" meals

Where Will Our Seafood Come From?



Future Seafood Supply

- Production from capture fisheries has leveled off, and most fishing areas have reached maximum potential
- Estimate: at current consumption levels, global seafood supplies will need to increase by ~ 30 million tons by 2030
- Aquaculture will continue to be an important source of seafood

Summary

- Seafood includes freshwater & saltwater fish, molluscan shellfish, and crustaceans
- Almost all of our seafood is imported
- Aquaculture supplies about 48% of all seafood worldwide
- Americans consume around 15 $^{1}/_{2}$ pounds of seafood each per year

Summary

- The three most popular sea foods are:
  - Shrimp, canned tuna, and salmon
  - They comprised 58% by weight of the seafood we consumed in 2011
  - Aquaculture supplies a significant amount of shrimp and salmon
- Majority of seafood products (72%) are fresh and frozen and the balance canned or cured

Summary

- Most seafood is consumed away from home, where two-thirds of our seafood dollars are spent
- Population demographics will impact seafood demand
- Aquaculture will be a major supplier of seafood in the future