Transportation

- - Railways
 - Container ships





Highways

- Entire U.S. road system: 5.4 million miles:
 - □ 2.2 million paved miles
 - □ 45,500 miles of interstate highways
- Grain: Truck replaced rail as predominant grain-hauling mode around 1985.
- Produce: Trucks haul about 90% of refrigerated perishables.
- □ 6 key domestic distribution markets:
 - □ Atlanta

 - **¤** Dallas
 - Denver

 - ■ New York

U.S. Interstate Highway System



http://www.ams.usda.gov



Waterways

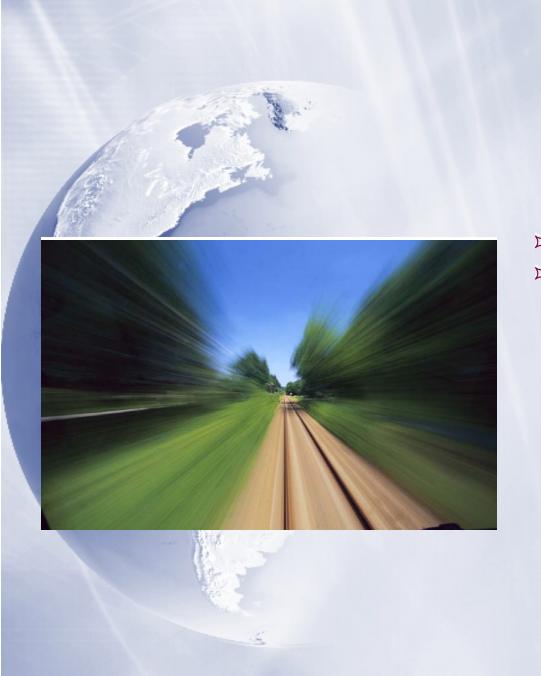
- Nearly 12,000 miles of commercially navigable inland and intracoastal waterways.
- In 2002, 62% of grain exports left from Louisiana ports.
- Louisiana ports receive 90% of exports by barge.
- Mississippi River port system world's largest in tonnage: 462 million tons of grain in 2002.
- Port of South Louisiana busiest in U.S., 3d busiest in world with 260 million tons.
- □ 11% of grain exports from Pacific Northwest via Columbia River.

Agriculturally Significant Waterways



Mississippi River & Tributaries in the Midwest Columbia & Snake Rivers in the West

http://www.ams.usda.gov



Railways

- More than 143,000 rail miles.
- ☐ 7 Class 1 railroads (98,000 miles or 68% of total):
 - Burlington Northern Santa Fe (BNSF)
 - □ Canadian National (CN)
 - □ Canadian Pacific (CP)
 - ¤ CSX

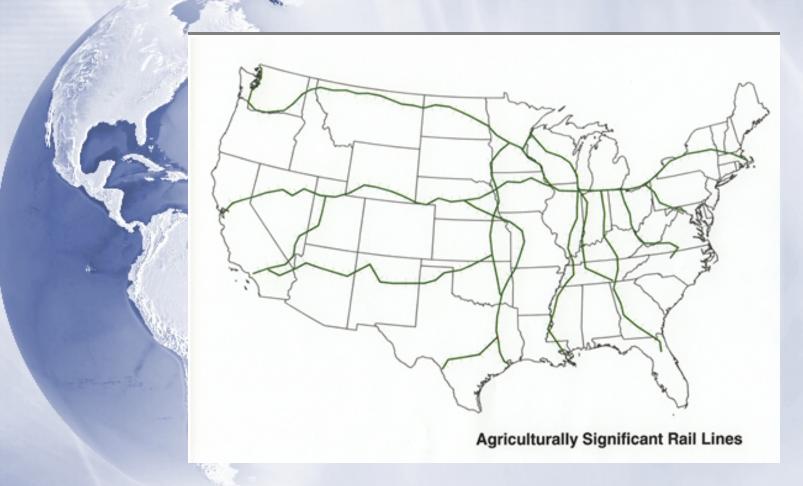
 - □ Norfolk Southern
 - □ Union Pacific (UP)





- □ Total rail shipments in 2001: 2.184 billion tons
- Agricultural shipments around 20%
- Farm products: 160 million tons (98% field crops).
- Processed food: 124 million tons.
- □ Lumber/wood: 76 million tons
- □ Paper/pulp: 8 million tons.
- □ Agri-chemicals: 25 million tons

Agriculturally Significant Rail Lines



* CSX, Norfolk Southern and Illinois Central (part of CN) in the East BNSF and UP in the West



Exports

- Nearly 50% of U.S. ag trade is shipped by container.
- □ 1.1 million containers of ag product exported in 2001.
- 9% of containers held grain/grain products (animal feed).
- 42% of ag exports in temp-controlled containers.

Top 5 ag products exported in containers:

- □ animal feed & hay
- prepared goods
- cotton
- meat/poultry
- fruits & vegetables



Container Shipments

- □ Imports
- □ Top 5 ag products imported in containers:
 - □ bananas
 - ¤ coffee
 - □ fruits & vegetables

 - □ breads/cereals

Top U.S. Container Ports for Agricultural Exports







The Dominant Meat Types Exported and imported by the U.S.



□ Beef

□ Pork

□ Chicken

□ Turkey

Meat InspectionAct

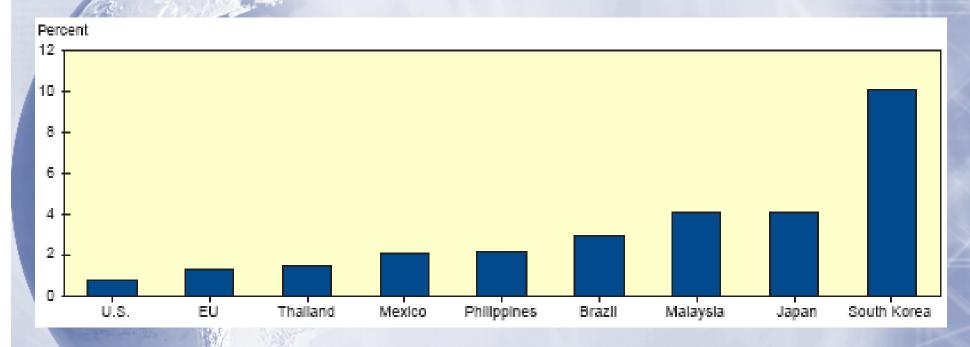
Meat Processing

Special Risk Material



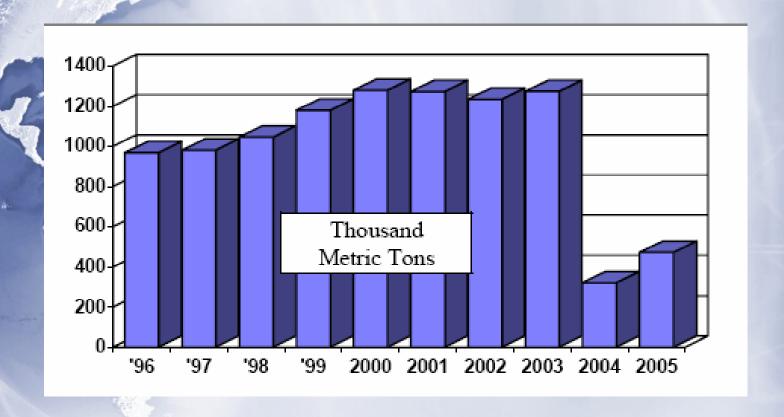
- Bovine Spongiform Encephalopathy (BSE)
- □ Transmissible Spongiform Encephalopathy (TSE)
- □ Chronic Wasting disease
- □ Scrapie Disease
- □ Foot and Mouth Disease (FMD)

Average annual change in meat consumption per person, 1964-1999



http://www.thepoultrysite.com/articles/80/current-structure-of-world-meat-trade

Total U.S. Beef Exports 1996-2005



http://www.usmef.org/TradeLibrary/Statistics.asp#histbeef

Top Export Markets for U.S Beef

Canada			
	Volume Value		
	(MT)	(\$Millions)	
2005	48,860	209	
2003	23,332	98	
2004	91,902	331	
2003	97,673	298	
2002	95,728	287	
2001		308	
1999	98,521		
	96,082	281	
1998	97,657	294	
1997	104,569	318	
1996	106,994	331	

Japan			
	Volume	Value	
	(MT)	(\$Millions)	
2005	2,307	7.9	
2004	797	3.7	
2003	375,455	1,391	
2002	332,197	1,028	
2001	513,174	1,617	
2000	546,010	1,814	
1999	511,978	1,723	
1998	481,997	1,602	
1997	434,266	1,638	
1996	515,373	1,931	

China/Hong Kong		
	Volume	Value
	(MT)	(\$Millions)
2005	1,000	2.4
2004	1,960	3.7
2003	40,199	119
2002	39,790	102
2001	32,445	87
2000	37,007	95
1999	23,602	61
1998	21,869	55
1997	22,582	66
1996	22,722	68

	Republic of Korea		
	Volume	Value	
	(MT)	(\$Millions)	
2005	2,106	1.2	
2004	672	.930	
2003	246,595	815	
2002	238,001	648	
2001	149,772	390	
2000	159,238	512	
1999	114,650	344	
1998	58,272	149	
1997	95,404	301	
1996	81,206	254	

□ Japan

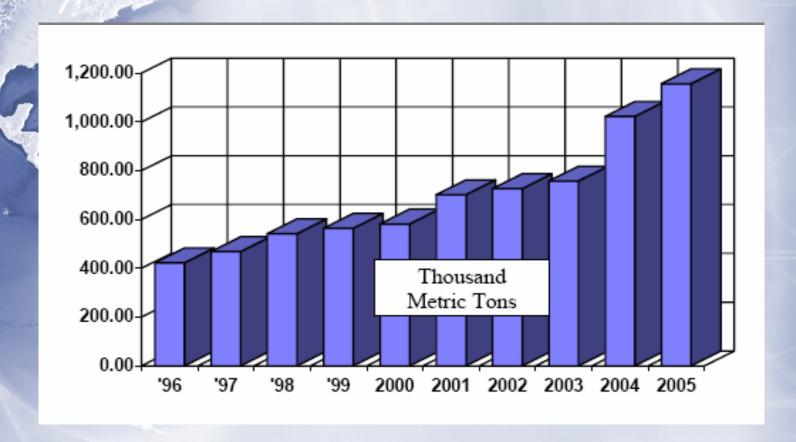
□ China

□ Canada

□ Taiwan

http://www.usmef.org/TradeLibrary/Statistics.asp#histbeef

Total U.S. Pork Exports 1996-2005



http://www.usmef.org/TradeLibrary/Statistics.asp#histbeef

Top Export Markets for U.S Pork



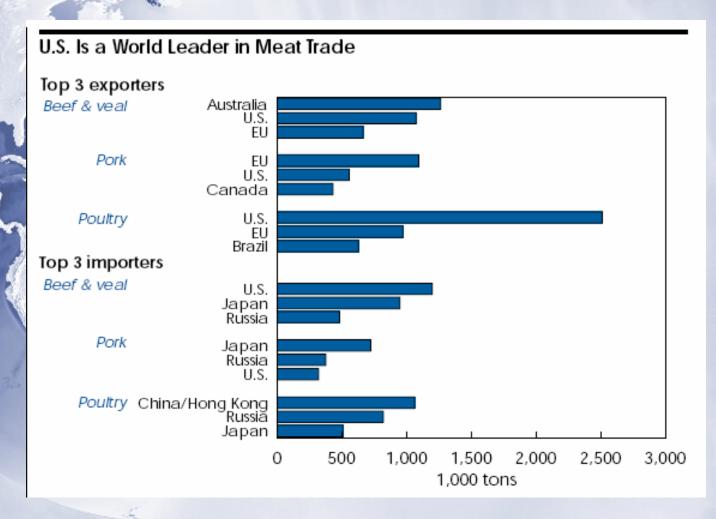
Hong Kong/China		
	Volume	Value
	(MT)	(\$Millions)
2005	92,255	111
2004	79,701	91
2003	56,667	60
2002	47,019	51
2001	57,759	66
2000	42,281	58
1999	45,701	59
1998	56,431	79
1997	48,736	77
1996	35,126	51

	Japan		
	Volume	Value	
	(MT)	(\$Millions)	
2005	353,928	1,088	
2004	313,574	979	
2003	269,621	784	
2002	271,071	848	
2001	257,028	858	
2000	208,870	751	
1999	201,832	658	
1998	190,095	620	
1997	175,787	695	
1996	183,772	758	

Republic of Korea		
	Volume	Value
	(MT)	(\$Millions)
2005	71,856	155
2004	27,876	56
2003	28,852	79
2002	23,776	41
2001	14,818	25
2000	15,216	31
1999	19,167	37
1998	9,918	20
1997	11,550	29
1996	11,091	26

- □ Japan
- □ China
- □ Canada

Export and Import



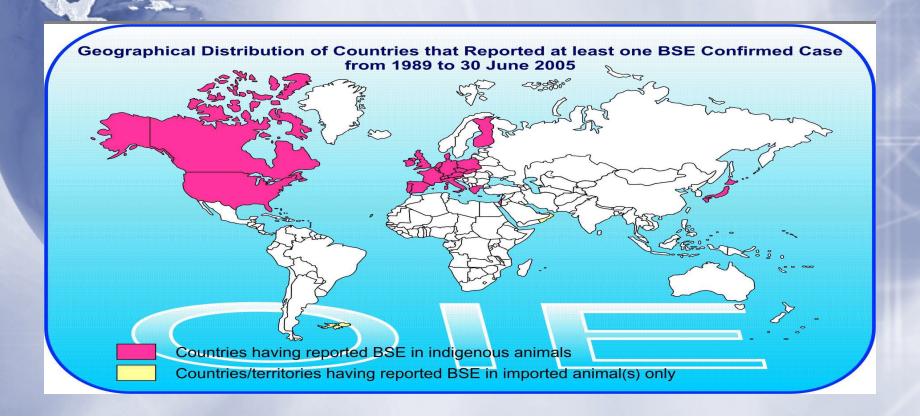


Meat Transportation

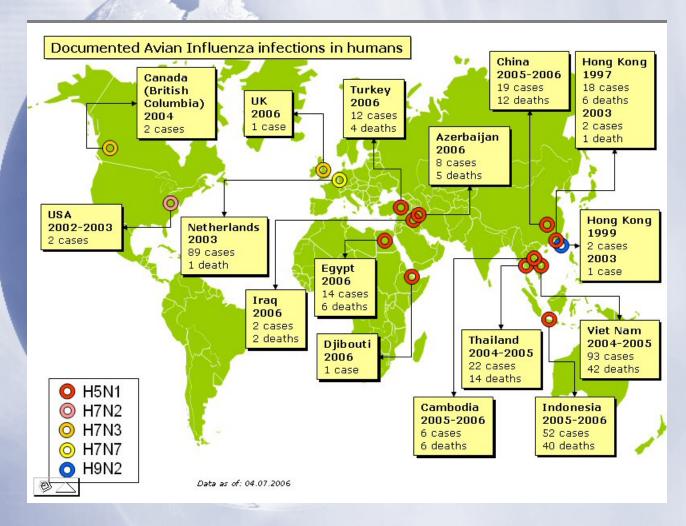
- Meat has a short shelf-life
- developed countries generally prefer to buy fresh meat
- Chilled meat, which is kept at quite low temperatures but never frozen, is a close substitute for fresh meat
- controlled-atmosphere refrigerated containers, vacuum packing

Closed boarders

- □ Japan 2006
- □ Canada



Avian Influenza



become infected by eating poultry if it is cooked and prepared properly

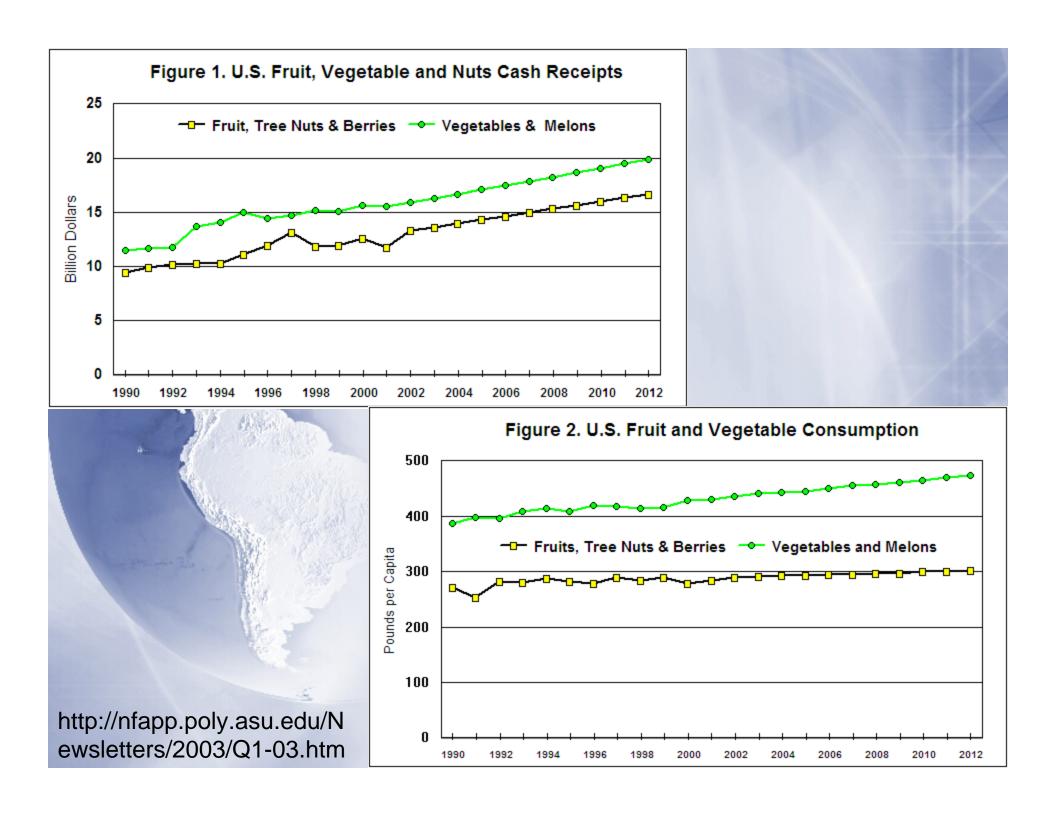


Quick Facts

- 1/3 of all U.S. crop cash reciepts (29%)
- 1/5 of all Ag. Exports (17%)
- Top crops: potatoes, tomatoes, lettuce, sweet corn, onions, oranges, grapes, bananas, and pineapples
- 132,000 farms in 2002
- 100 separate commodities in production

The Vegetables and Melons Outlook

- Provides current intelligence and forecasts the affects of changing conditions in the market
- ¤ Dec. 06:
 - For fresh veggies production increased 16%
 - Melons increased 14%; import was 11%
 - □ Processing of Veggies: 10% increase
 - Imports: canned veggie 8%; frozen 7%; and dehydrated 19%



Supply and Demand

- □ 100 million short tones of fruit, nut trees, and veggies during 02-04
- Main States: CA, FL, TX, NY, AZ, OR, MN, MI, WS, and Wisconsin
- ■Summer and Fall: U.S. production
- Winter: imports, FL, CA, AZ, and TX



Supply and Demand

□ Demand:

- Spent \$224 on average per person in '04
- Highest it's ever been; still below recommended level of consumption
- Leaning more toward fresh foods
- Accounts for 20% of all food retail





□ Fresh market sales increased - 22%

□ Canned veggies – 16%

Canned fruit – 9%

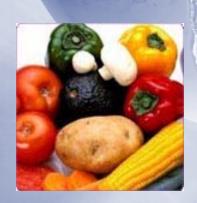
□ Frozen veggies – 11%

□ Frozen Fruit, juices, ades – 4%

□ Dried – 7%

□ Processed foods – 16%

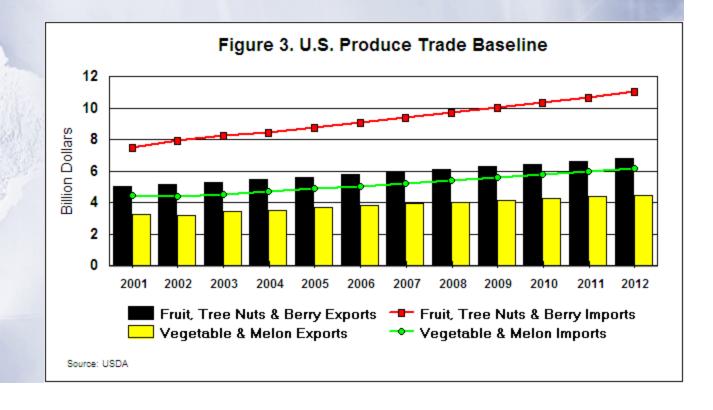






Trade

- '05: \$10.0 billion in exports made; spent \$14.1 billion in imports
 - Negative since 1998
 - High-income countries



Trade

- ☐ Trade agreements
 - NAFTA; CAFTA; independent with Chili and Australia
- Tariffs
- **Exports**:
 - Up to 1/3 of major U.S. crops exported
 - Canada 33%; Japan 12%; Mexico 9%; Germany and Spain 3%

 Germany and Spain 3%

Trade con't

Imports:

- Driven seasonally
- 21% of consumption in '02-04
- Increased 44% in fruit and 16% in veggies
- Mexico and Chili for fruit
- □ Crops:
 - Bananas #1; from Guatemala, Ecuador, and Costa Rica
 - ☐ Grapes #2; from Chili

Horse Trade



- **AUSTRALIA**
- (Complled July 2006)
- The approximate export value per kllogram in 2004 was \$3.30 compared with \$2.70 in 1999.[2] This translates to a great deal more on the dinner table, over US\$50/kg according to some sources.[3]
- It is not we Australians who are eating our horses because it is illegal to eat horsemeat here. It is diners mainly in Europe who are indulging, plus some Japanese
- Horse meat has about 40% fewer calorles than even the leanest beef, while supplying 50% more protein and up to 30% more iron

\$40billion industry



- "Horses have a special place in American culture and history. They helped settle this country, and provided inspiration for the horsepower that now powers the vehicles that make this nation go," said T. Boone Pickens.
- House Majority Leader John Boehner, (R-Ohlo), said the House will vote in September on a bill seeking to end horse-butchery for human cuisine, by outlawing the transport and sale of horses for slaughter.
- \$40billion Industry
- "Passage of this irresponsible bill would be devastating to the horse market and the \$40billion horse industry," said Dick Koehler, vice president of the meat processing firm BelTex

"The Big Picture"

- The U.S. exported some \$60million in horse meat in 2005, helping to improve the US trade deficit and "making a product of something that would otherwise go to waste".
- "How would Americans react if Hindus told us to stop eating beef because the cow is sacred?" he said.
- Many zoos use horse meat. Carnivores like it. It's cheaper and more abundant than zebra, giraffe or water buffalo and more nutritious than beef or chicken.
- "These animals are going to be abandoned and suffer. We're looking at the big picture," said Mr. Fouraker, whose zoo buys horse meat from the Dallas Crown plant in Kaufman. "People look at horses as pets. We just have to look beyond the pet emotion. ... It just provides a more humane end to many, many unwanted horses."

Shipment

- A federal court decision that upheld a Texas ban on horse meat for human dining has thrown the horse-slaughter industry into flux
- Representatives of Texas' two slaughter plants giving conflicting reports about whether they have temporarily ceased operations.
- American Airlines and Delta Air Lines said early Thursday afternoon that they had suspended transport of horse meat to overseas markets mainly France, Belgium and Japan where it is consumed.
- "We're not confident that it is legal to ship horse meat out of the state of Texas, so we're not accepting shipment," American spokesman Tim Wagner said.
- Delta spokeswoman Betsy Talton sald the airline "has suspended shipment of this cargo, based on the recent ruling."

International Seafood Trade

- Seafood trade is one of the world's largest and fastest growing international industries
- Almost 200 countries supply fish and seafood products to the global marketplace, consisting of more than 800 commercially important species of fish, crustaceans and mollusks, including 30 species of shrimp alone
- Canned tuna to fresh boneless salmon fillets, from salted herring roe to dried shark fins, frozen Pollock block, individually quick frozen breaded cod portions, smoked mackerel, clam Juice, live lobster, fish meals and oils

Total Value of U.S. Seafood Industry

- □ Commercial \$3.1 Billion
- Aquaculture \$1.0 Billion
- □ Processing \$8.3 Billion
- Total \$12.4 BIIIIon
- Carp, oysters, clams, mussels, salmon, shrimp and tilapla. The United States primarily raises catfish, trout, crawfish, salmon, oysters and tilapla
- □ U.S. Imports are close to \$10 billion/year
- □ U.S. trade balance for flsh and seafood products Is
 □ Just over \$3 In Imports to every \$1 In exports



Salmonella

- International seafood markets will continue to expand and may become increasingly segmented

Charts



Food Safety

Food Borne Illness~ caused by consuming contaminated foods or beverages.

Center of Disease Control & Prevention

- >76 million cases of food borne disease occur annually
- ≥325,000 are hospitalized
- ≥5,000 deaths each year

<u>Food and Drug Administration</u> (FDA): domestic and imported food, except meat and poultry

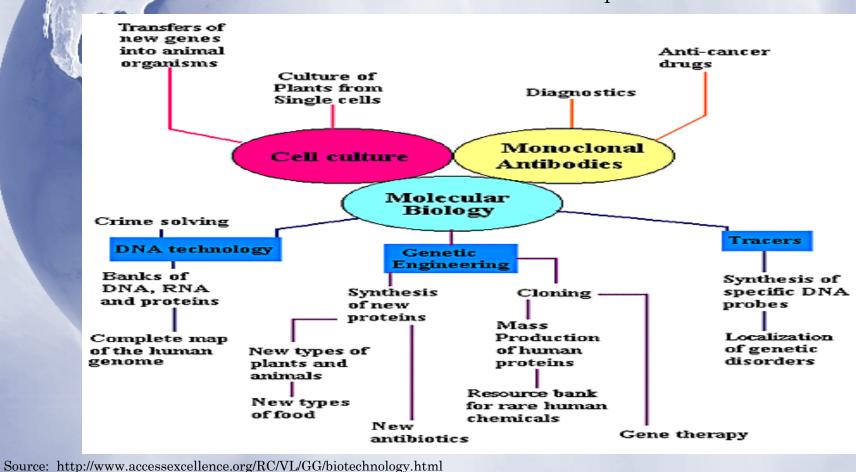
<u>United States Department of Agriculture</u> (USDA): meat and poultry

<u>Environmental Protection Agency</u> (EPA): drinking water, new pesticides, and toxic substances and wastes.

Source: http://www.fsis.usda.gov

Food Safety Issues

- Pesticides
- **Herbacides**
- □ Biotechnology
- E. Coli 0157
- □ Salmonella
- □ Listeria
- □ Camylobacter
- Hepatitis A



American Consumers Food Safety Concerns

2001

<i>D</i>	Bacterial Contamination	0/20
	Pesticide residues	%38
	Chemical additives	%33
	Hormones	%30
	GMOs	%26
	Antibiotics	%23
	Irradiated Foods	%21
	1989	

Pesticide/Herbacide	%82
Antibiotics/Hormones	%61
Nitrates	%44
Additives/Preservatives	%30
Artifical Food Colors	%28

Source: Cheeke, Peter. Contemporary Issues in Animal Agriculture, 3rd Edition. Table 9-1, 9-3



Food Safety Pathogen & Chemical

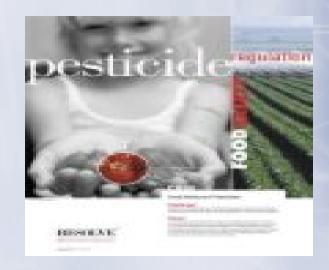
¤ E. Coli 0157:H7~

- Found in intestines of healthy cattle, deer, goats, & sheep
- Produces a powerful toxin
- 1st recognized in 1982 ~
 contaminated hamburger
- Leads to severe cramping, bloody diarrhea, vomiting & death.
- ☐ Spinach & Taco Bell Outbreak



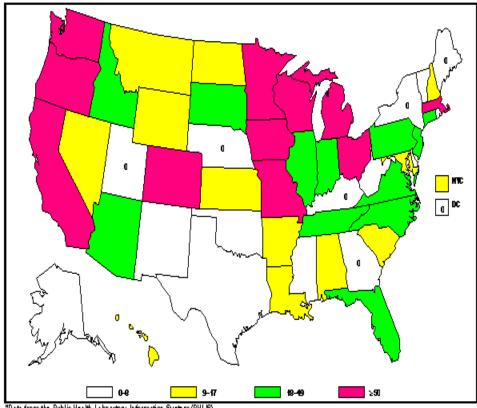
□ Pesticide

- Any substance or mixture of substances intended for preventing, destorying, repelling, or mitgating any pest.
- □ EPA's tolerance to ensure food safety



Source: http://www.cfsan.fda.gov

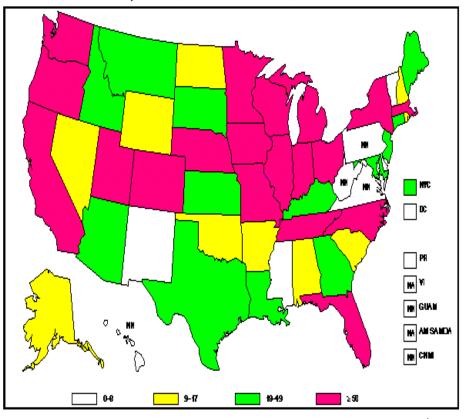
ESCHERICHIA COUI O157:H7 — reported isolates,* United States, 1997



*Data from the Public Health Laboratory Information System (PHLIS).

Only E. acti O157:H7 isolates that are confirmed by a state public health laboratory are reported to PRLIS. Many public health laboratories are now able to subtype isolates using pulsed-field gel electrophoresis, a procedure that facilitates comparison of stains among states.

ESCHERICHIA COII O157:H7 — reported cases, United States and territories, 1997

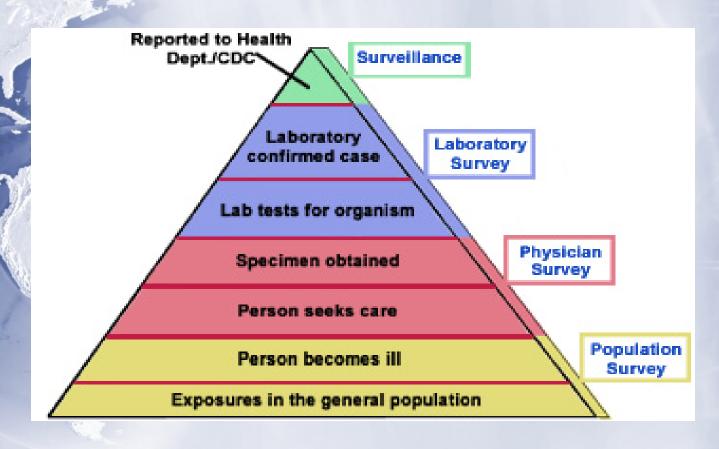


The number of states in which \mathcal{E} , actif 0157:H7 infection is a notifiable disease increased from 44 in 1996 to 45 in 1997. However, because <60% of clinical laboratories routinely test all stools — or even all bloody stools — for \mathcal{E} , actif 0157:H7, many infections are not recognized or reported.

Source: http://www.cfsan.fda.gov

Food Net Surveillance

FoodNet ~ network identifies and characterize culture=confirmed infections that may be foodborne.



Source: http://ww.cdc.gov

How Do We Keep Food Safe?

KEEP FOOD SAFE!



CLEAN

- Moisten hands with warm water, apply soap and rub hands together for 20 seconds before rinsing thoroughly.
- Wish work areas and utensits in hot scapy water after preparing each food term and before going on to the next one.
- Use plastic or non-pourus cutting boards. Wash in dishwasher or with hot scapy water after each use.
- . Use disposable towels or machine wash cloth towels with hot spaps water often

SEPARATE

- Store raw meat and poultry on the bottom shelf of the refrigerator so juices don't drip onto other foods.
- Use one cutting board for raw meet products and another for salads and other foods which are ready to be eaten.
- Always wash work areas with hot soapy water after they have come in contact with new meat or poultry.
- . Never place cooked food on a plate which previously held raw meat or poultry





- Never defrost food on the kitchen courters. Use the refrigerator, cold running water
 set the miscourse.
- Divide large amounts into small, shallow containers for quicker cooling. Label and date containers
- . Don't pack the refrigerator. Cool air must circulate to cool food quickly
- . Keep cold foods at or below 40°F

COOK

- Use a meat thermometer, which neesures the internal temperature of ceoked meat and positry to make sure that the meat is cooked thoroughly.
- Cook ground boof and ground pork to 160°F, ground turkey and ground shicken to 165°F, chicken and turkey breasts to 170°F, whole poultry, legs, thighs and wings to 180°F.
- . Re-heat cooked meats and food to 165°F, tring sauces, soups and gravy to a boil when reheating
- Make sare there are not cold spots in food when cooking, stir often. Keep hot foods at or above 140°F before and during serving.



INGLEWOOD, CA 90302 www.donleefarms.com



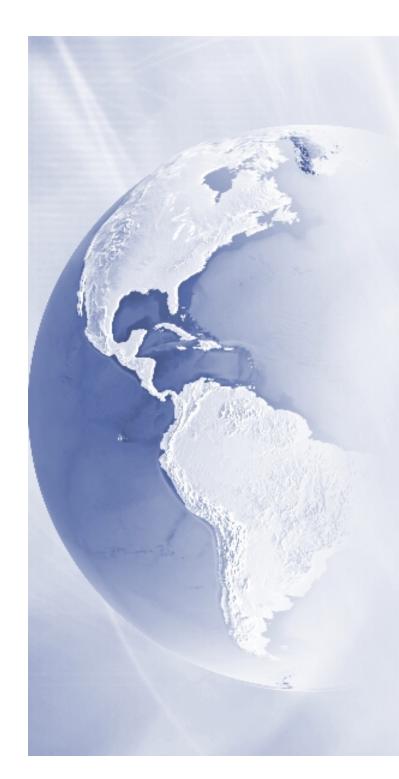


- ✓ Clean It
- ✓ Separate
- ✓ Chill
- ✓ Cook
- > Education
 - Fight Bac!
 - National Food Safety Month



Source: http//:www.fsis.usda.gov





Trade Agreements

□ World Hunger
 □

¤ Economics

□ Biotechnology

(according to www.ustr.gov)



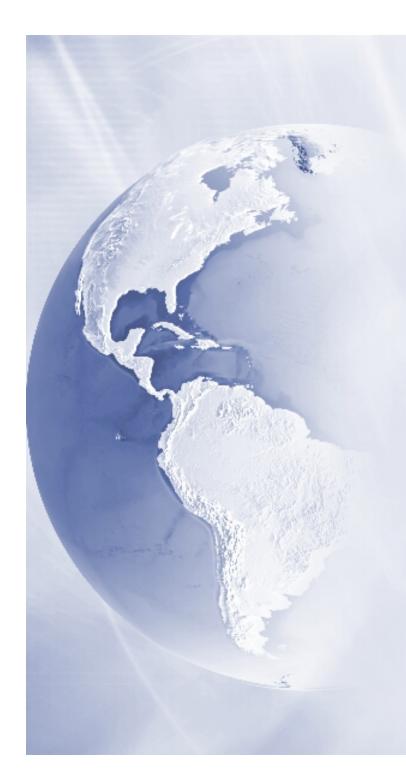
World Hunger

WTO

UNICEF

UN World Food Program

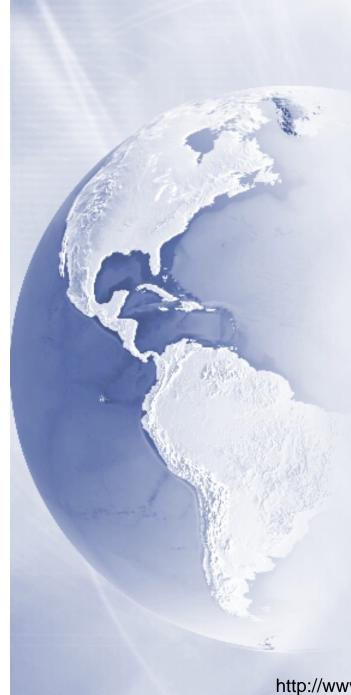
"Every 5 seconds a child's life is lost because of hunger-related disease: 18,000 a day, more than 6 million a year." www.ustr.gov



Economics

-1 in 3 acres in the US is planted for export.

-Agriculture exports support 926 thousand jobs in the U.S. (estimate for 2004 by Dept of Agriculture).



Biotechnology

- -EU moratorium on US exports due to biotech
- -US claims this is unreasonable
- -WTO rules that the EU must allow US products after a reasonable scientific review to prove the products safety
- -EU will allow products after review



Loss of Jobs

I Environment

□ Quality of Product/Life

□ Proliferation of GMO's





Cuban Embargo

1962

□ Economic

□ Commercial

□ Democracy

■ UN condemnation

□ US support



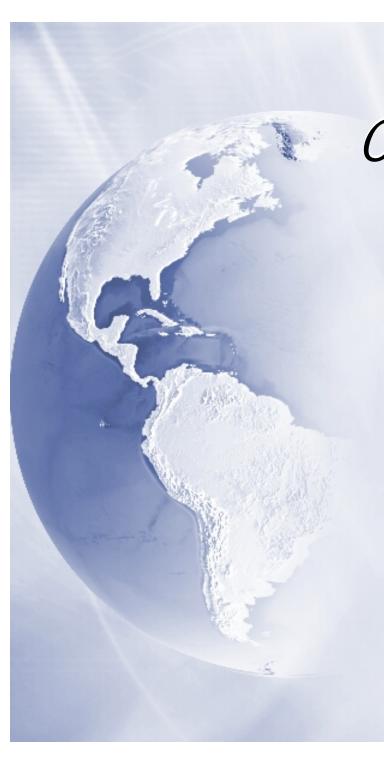
Soviet Union

□ Grain Embargo

1980

□ Did not reduce grain in Soviet Union

□ Hurt American Farmer



Contemporary Issues

□ Clinton Administration

¤ Cuba

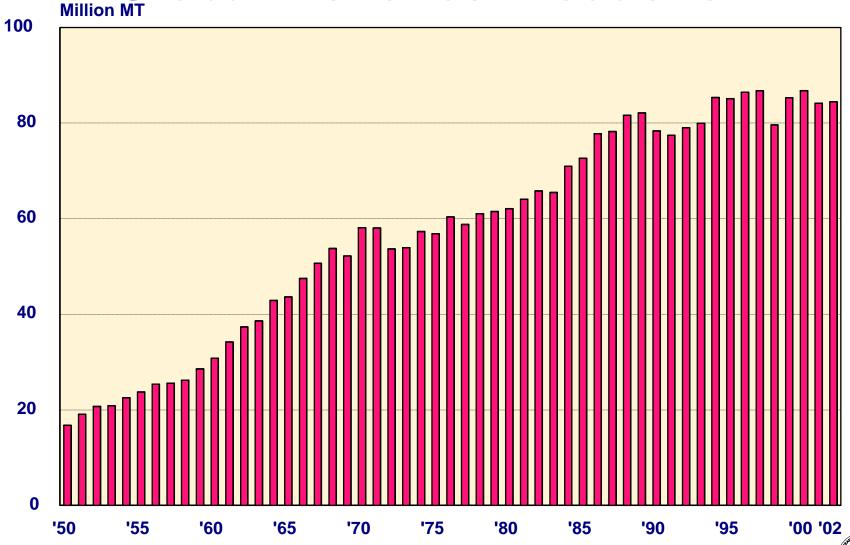


SEAFOOD SUPPLY

AND

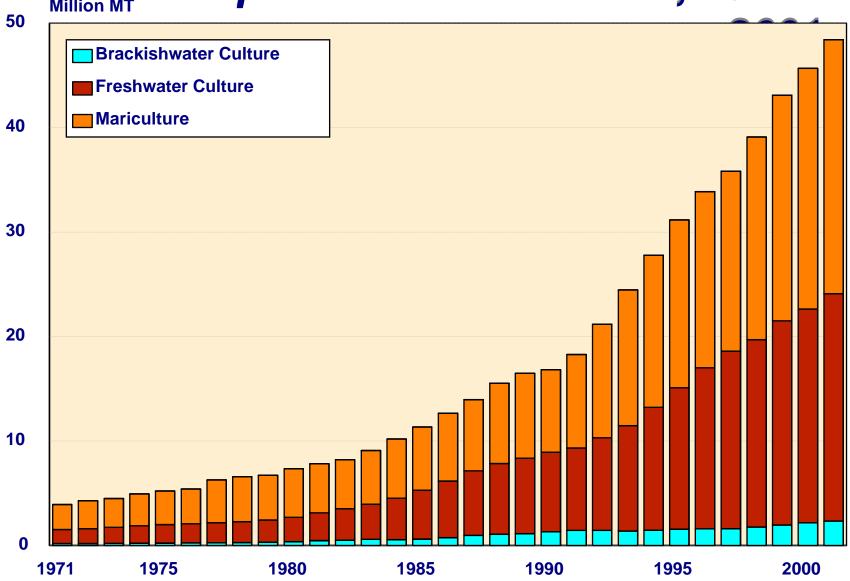
U.S. TRADE

Global Fisheries Production



Source: FAO FishStat

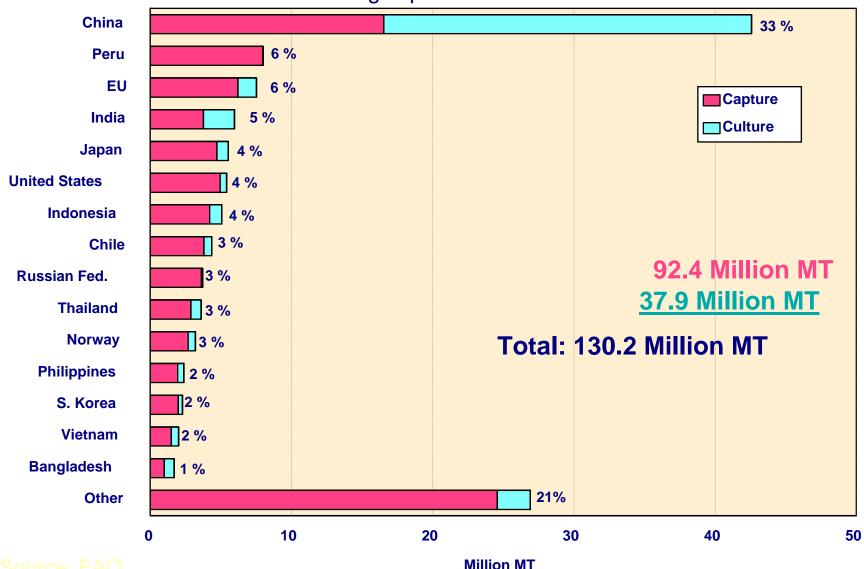
Global Aquaculture Production, 1971 -



SOURCE: FAO

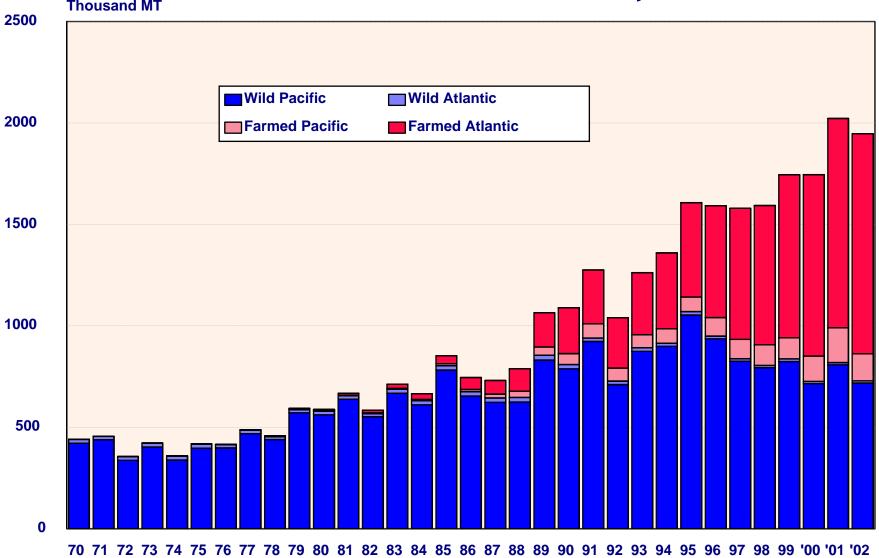
TOP FISHERIES PRODUCERS, 2001







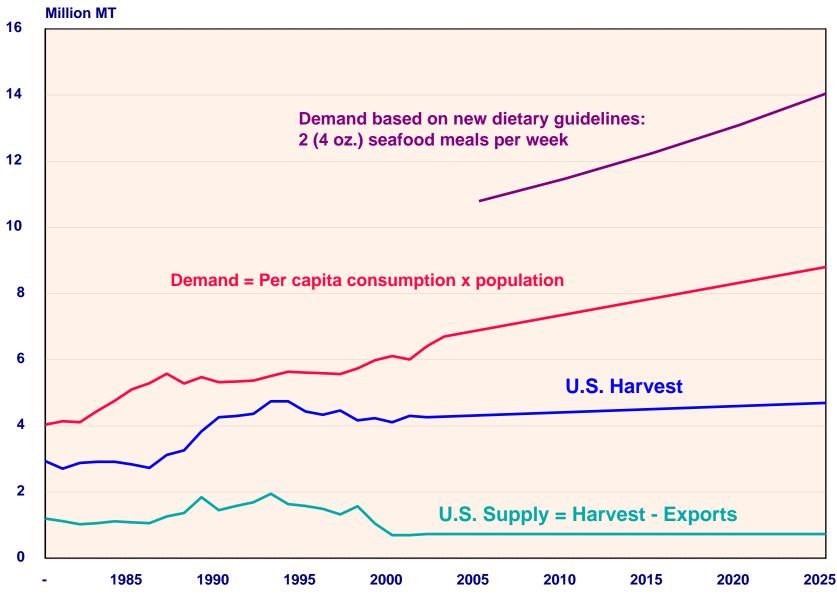
GLOBAL SALMON PRODUCTION, 1970 - 2002 Thousand MT



SOURCE: FAO FishStat

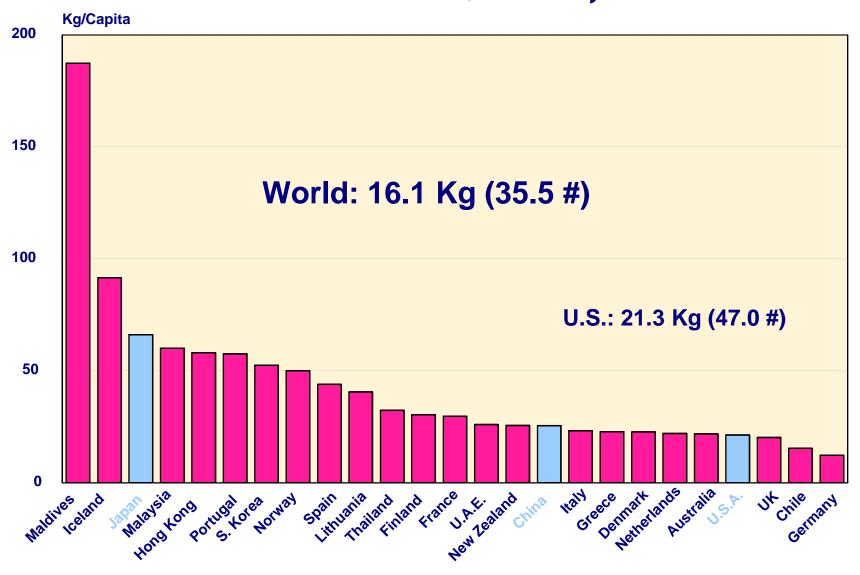
U.S. SEAFOOD SUPPLY AND DEMAND: PAST AND PROJECTED

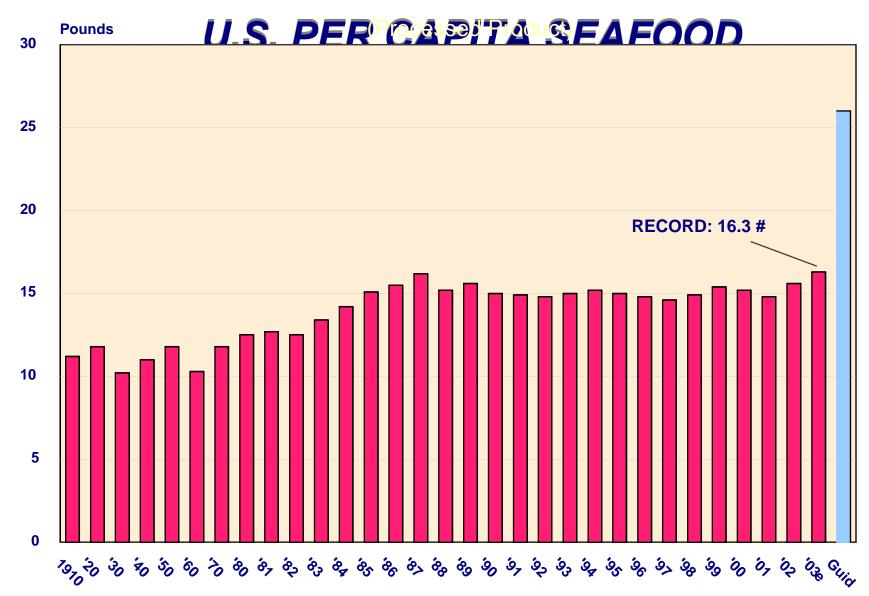
(Round Weight)





PER CAPITA CONSUMETION, 1999 - 2001



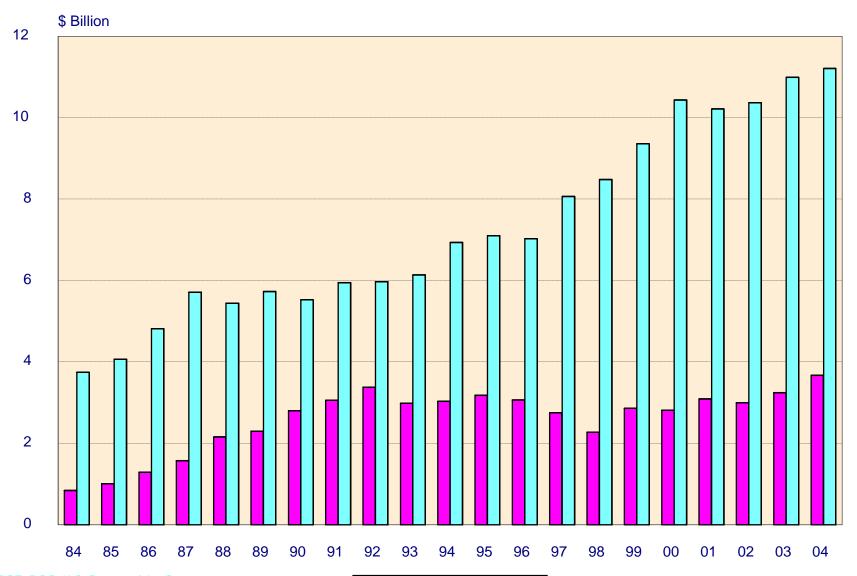






VALUE OF U.S. SEAFOOD EXPORTS AND IMPORTS

1984 - 2004



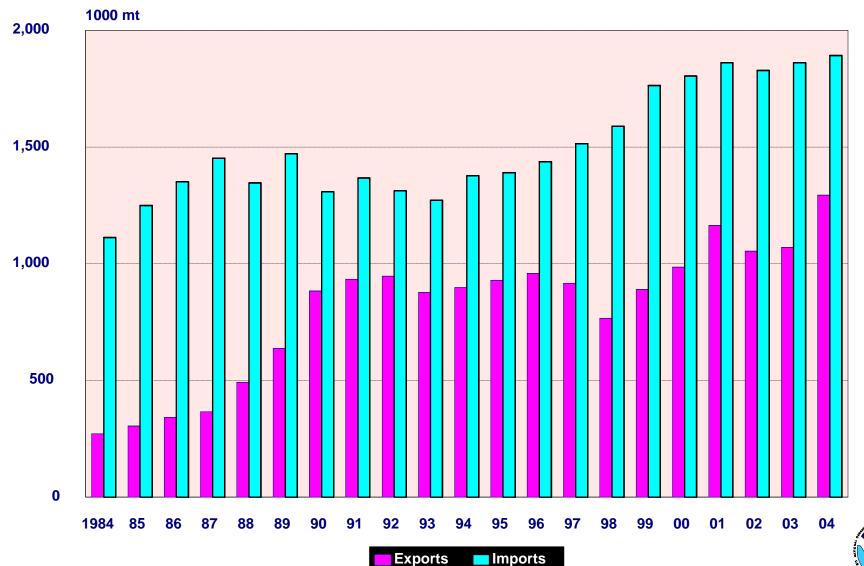


SOURCE: DOC, U.S. Bureau of the Census

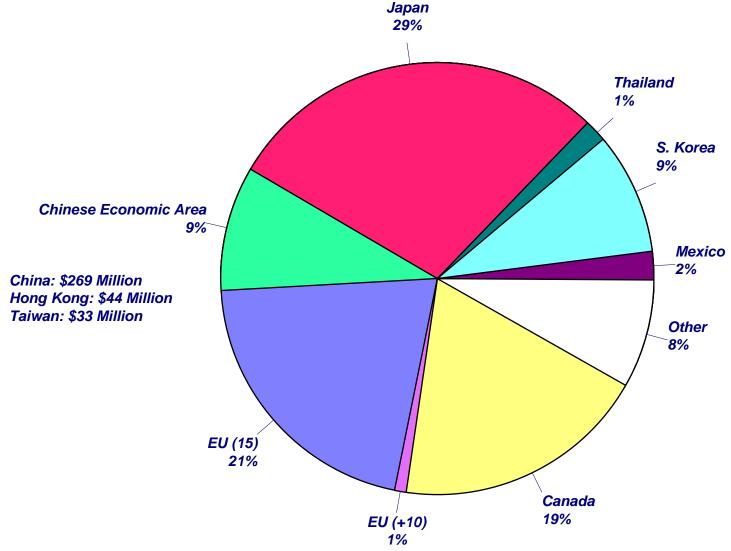
Exports

Imports

VOLUME OF U.S. SEAFOOD EXPORTS AND IMPORTS, 1984 - 2004



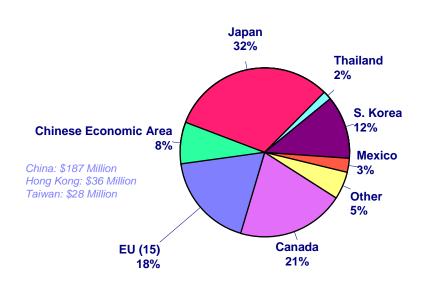
TOP U.S. EXPORT MARKETS, 2004



Total Exports: \$3.7 Billion



TOP U.S. EXPORT MARKETS, 2003 - 2004



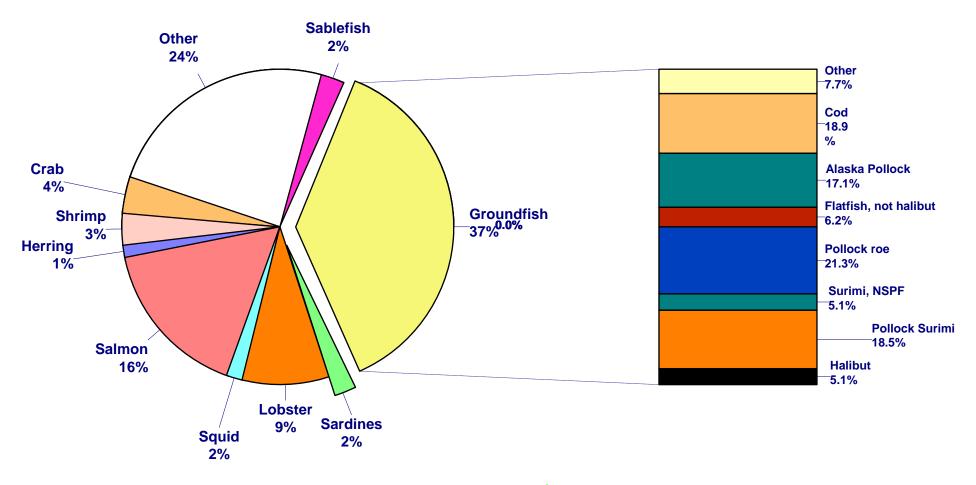
Japan 29.1% Thailand 1.4% S. Korea 9.1% **Chinese Economic Area** 9.3% Mexico 2.2% China: 269 Million Hong Kong: 44 Million Other Taiwan: 33Million 9.0% EU (15) 20.9% Canada 19.1%

Total '03 Exports: \$3.2 Billion

Total '04 Exports: \$3.7 Billion



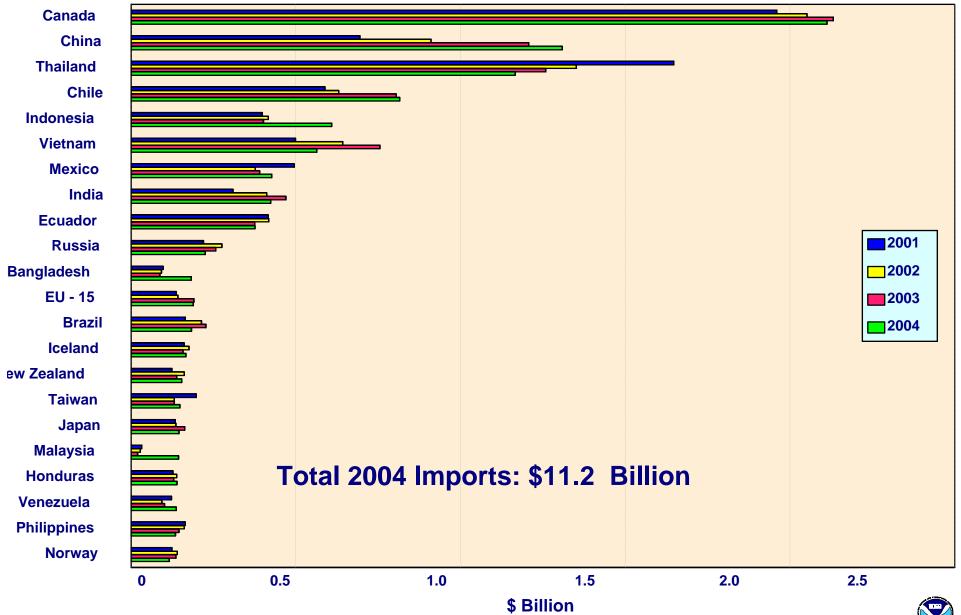
COMPOSITION OF U.S. SEAFOOD EXPORTS, 2004



Total Exports: \$3.7 Billion

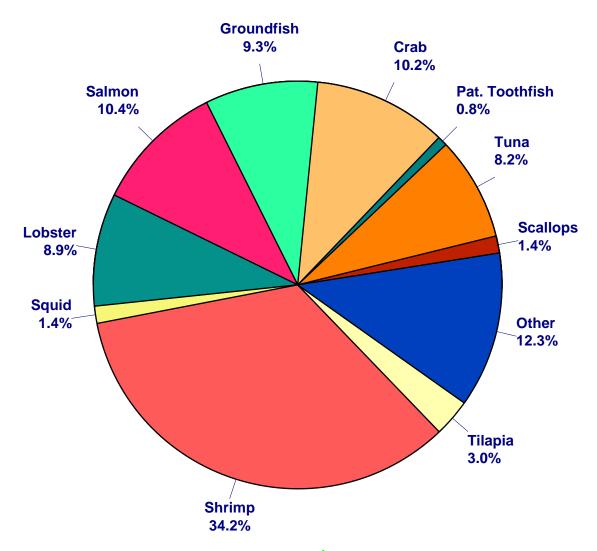


SOURCE OF U.S. SEAFOOD IMPORTS, 2001 - 2004





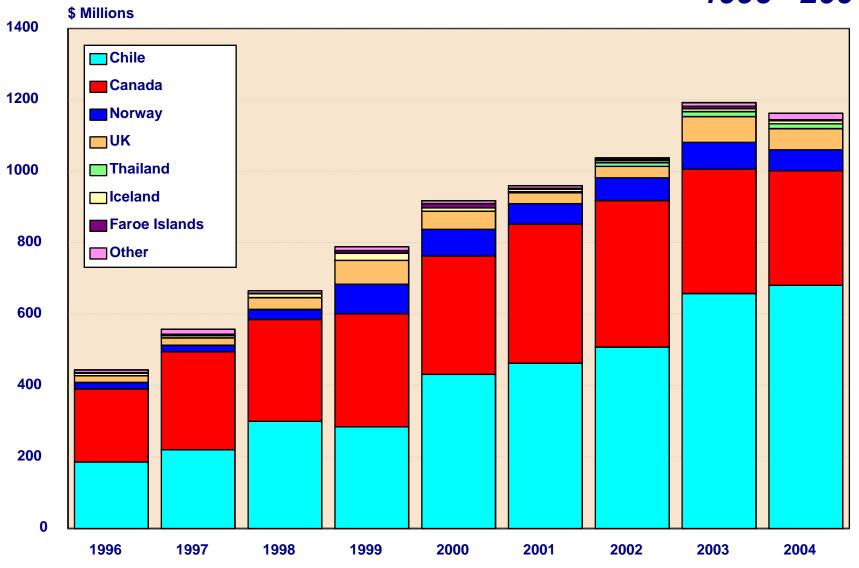
COMPOSITION OF MAJOR U.S. SEAFOOD IMPORTS, 2004



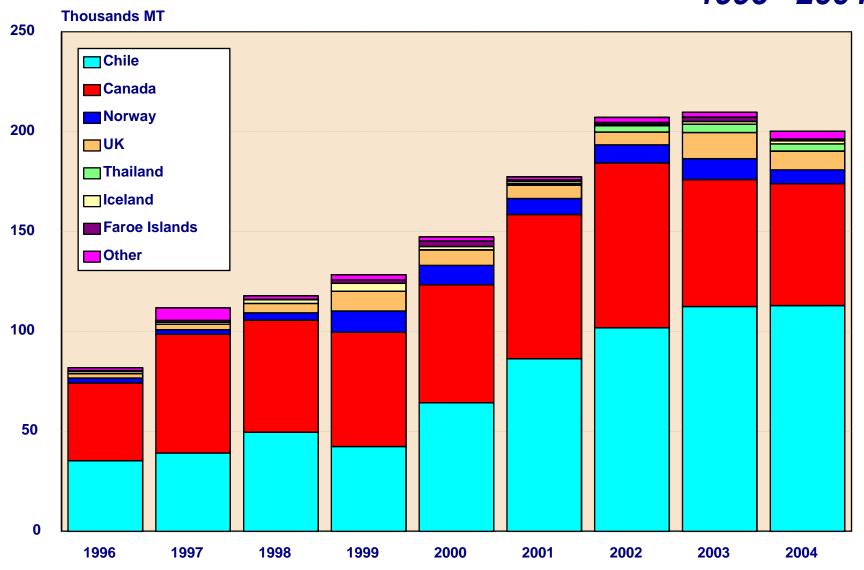
Total Imports: \$11.2 Billion



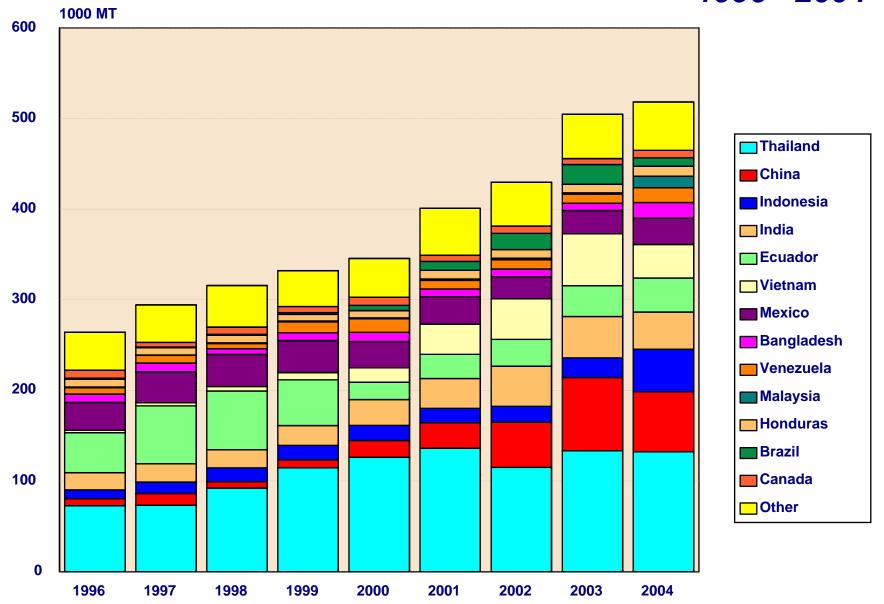
SOURCE OF US FARMED AND WILD SALMON IMPORTS, 1996 - 2004



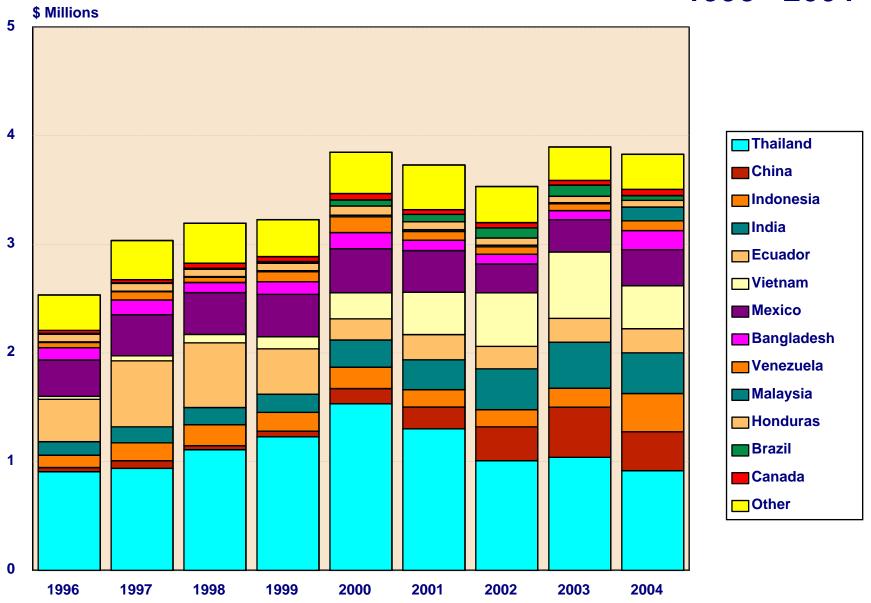
SOURCE OF US FARMED AND WILD SALMON IMPORTS, 1996 - 2004



SOURCE OF US FARMED AND WILD SHRIMP IMPORTS, 1996 - 2004

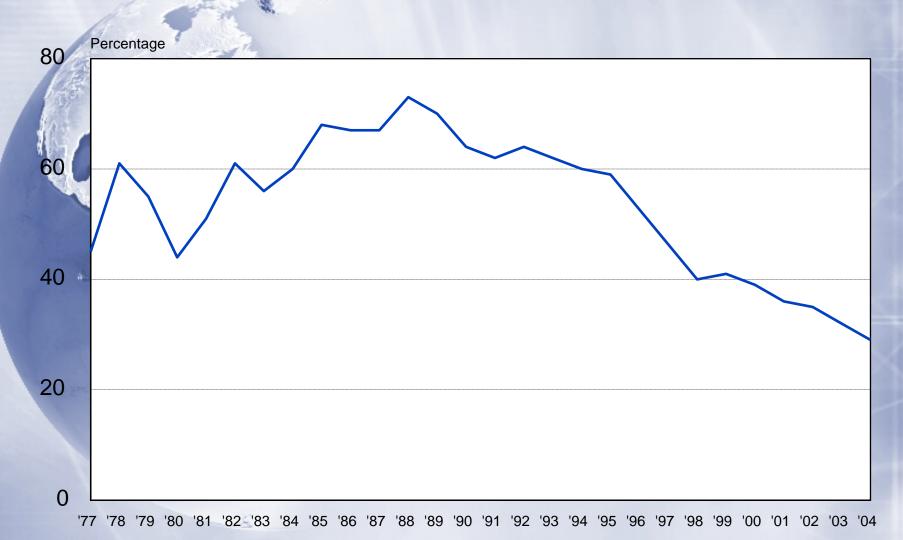


SOURCE OF US FARMED AND WILD SHRIMP IMPORTS, 1996 - 2004

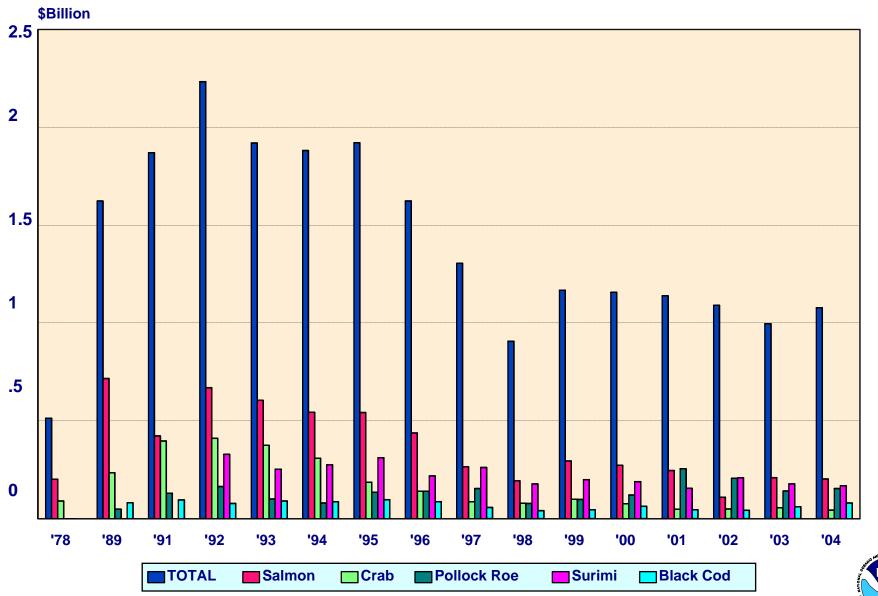




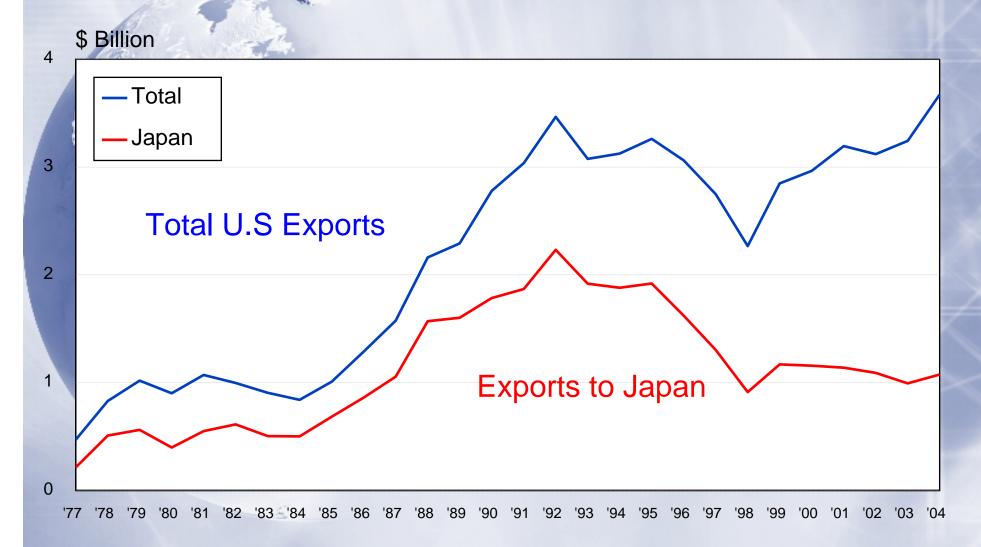
SEAFOOD EXPORTS TO JAPAN AS A % OF TOTAL SEAFOOD EXPORTS



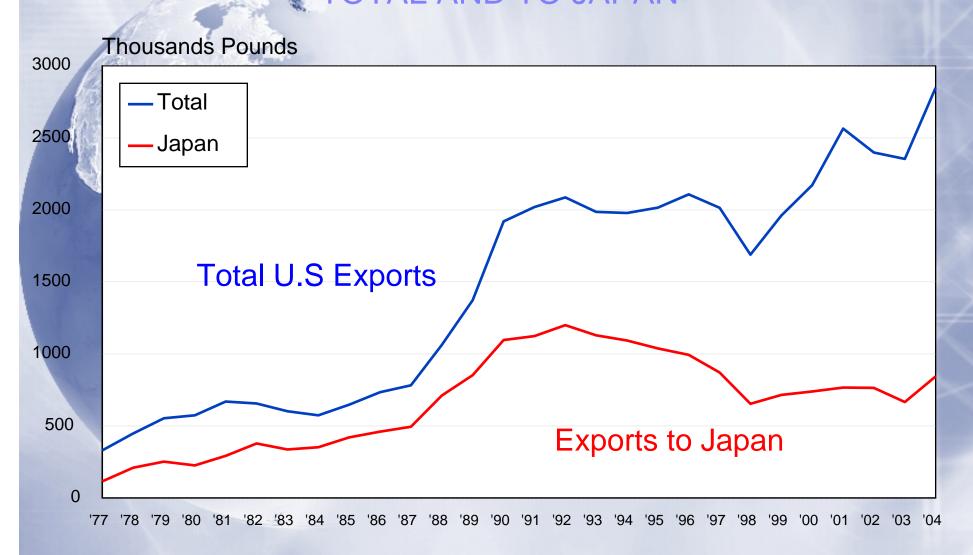
U.S. EXPORTS TO JAPAN, 1991 - 2004



U.S. SEAFOOD EXPORTS, 1970-2004



U.S. SEAFOOD EXPORTS, 1970-2003

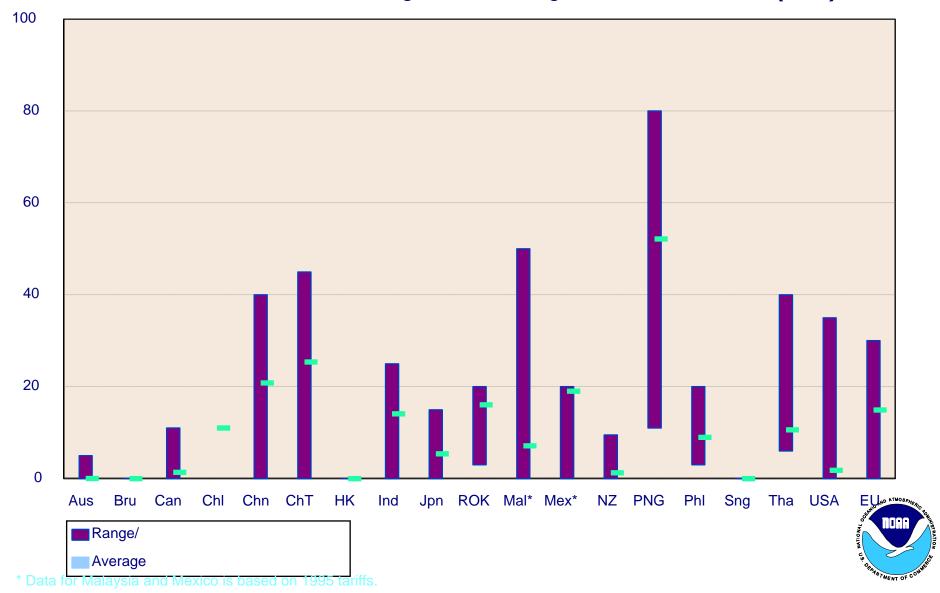


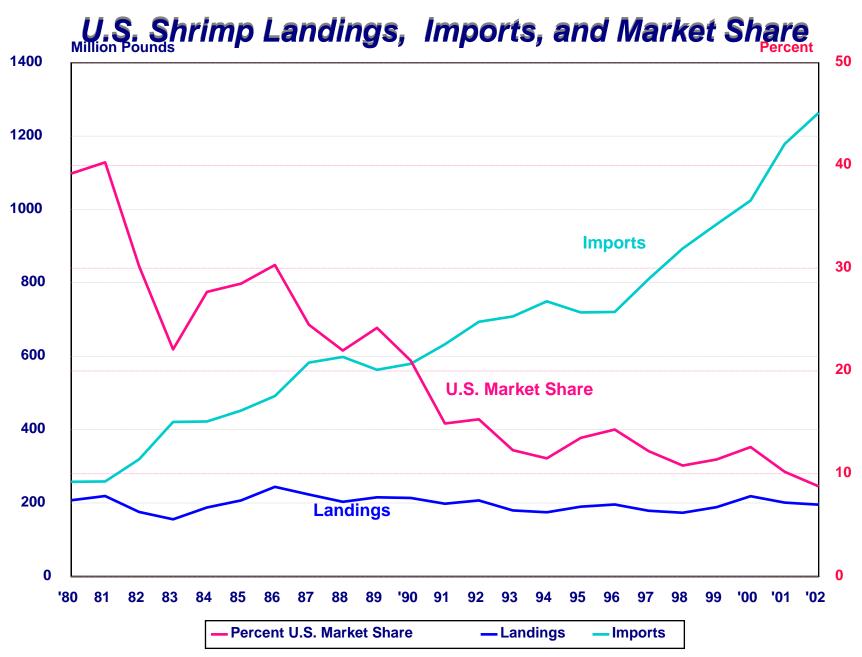


TRADE ISSUES

- Market Access
 - Tariffs
 - Non Tariff Measures
 - Import Quotas
 - Import licensing
 - Sanitary standards
 - Inspection Requirements
 - Labeling
- Subsidies
- Anti-dumping cases
 - Shrimp
 - Catfish
 - Salmon

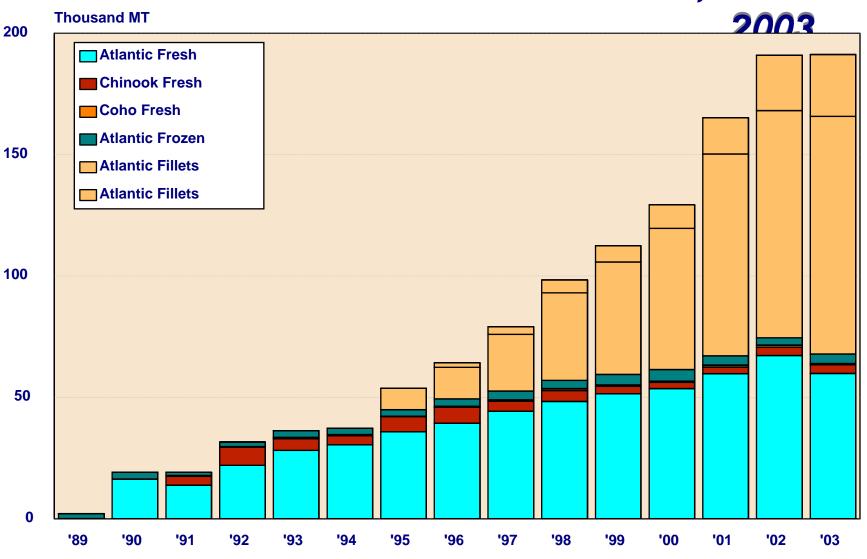
1998 APEC AND EU TARIFFS (%)







US IMPORTS OF FARMED SALMON, 1989-



U.S. SEAFOOD EXPORTS TO EUROPE, 2004



