

ORGANIC & NATURAL AQUACULTURE

Issues - Challenges - Potential



Organic in the USA

"Organic agriculture is an ecological production management system that promotes and enhances biodiversity, biological cycles and soil biological activity. It is based on minimal use of off-farm inputs and on management practices that restore, maintain and enhance ecological harmony."

"Organic crops are raised without using most conventional pesticides, petroleum-based fertilizers, or sewage sludge-based fertilizers. Animals raised on an organic operation must be fed organic feed and given access to the outdoors. They are given no antibiotics or growth hormones."



Natural is

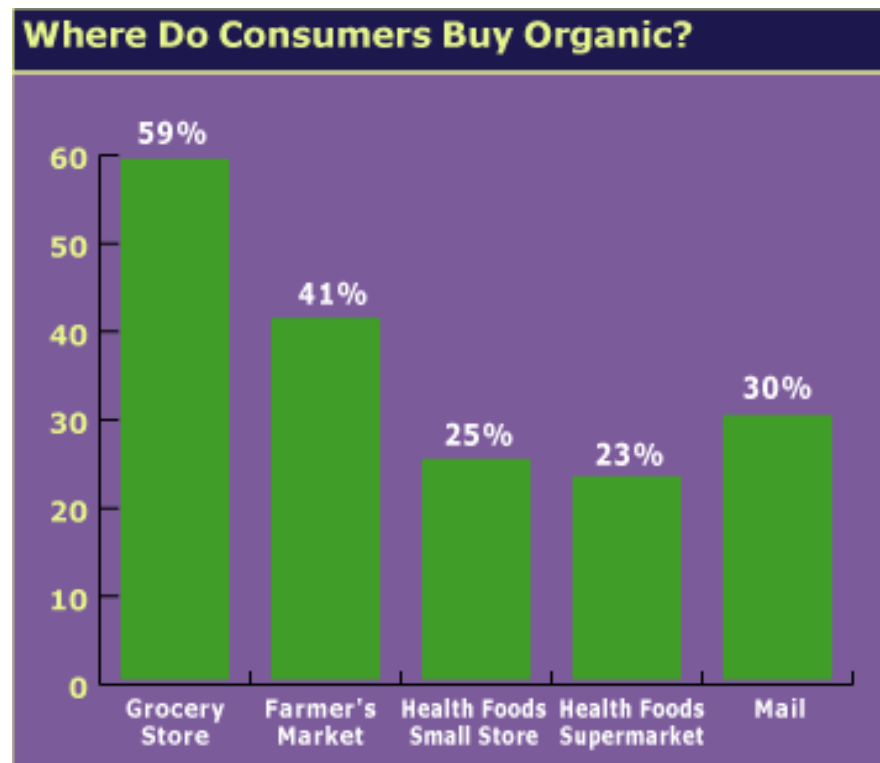
...more confusing, because USDA states that natural meats must be “minimally processed, with no artificial ingredients, no preservatives.”

Despite USDA’s minimal definition, the generally-accepted practices of the best-known brands are that their Natural or All-Natural meats have not been fed antibiotics, growth hormones, or animal by-products, and have not been treated with pesticides.



WHERE

- ❖ 59% of shoppers buy organic and natural foods at conventional supermarkets
- ❖ Half of U.S. shoppers bought organic foods in the past six months



Sources: FMI, Natural Grocery Buyer

WHERE

- ❖ 94% of 2003 conventional stores opened included natural and organic “store within a store” concept
- ❖ This is an increase from 66% prior year
- ❖ 58% of food retailers devote a special section to natural and organic foods



Sources: FMI, Natural Grocery Buyer

Natural Trends in Restaurants



USA TODAY Classifieds: Cars | Jobs | Data

Home News Travel Money Sports Life Tech Weather

Money

DJIA 10,461.34 ▼ -84.98 NASDAQ 1,999.35 ▼ -19.44

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Posted 2/3/2005 9:45 PM Updated 2/4/2005 4:08 AM

Fast-food 'natural' chicken takes wing on safety fears

ajc.com
The Atlanta Journal-Constitution

A natural option for carnivores

Chemical-free meats move up the menu at casual restaurants

By [ELIZABETH LEE](#)

The Atlanta Journal-Constitution

Published on: 01/25/05

Chipotle

Arby's®

Panera
BREAD



Great taste begins with a slow rise, careful raising.

Now Serving **flavorful all-natural chicken**

We at Panera appreciate a slow rise and careful tending of our bread and we've found kindred spirits in the folks who now supply our chicken. Their chickens are raised right, under healthy, humane conditions with fresh air, exposure to sunlight and plenty of room to move. They eat only natural, all-vegetarian diets with no animal by-products. And they never receive antibiotics.

Sure, it takes a little more time and a lot more attention, but we think it's worth it. This careful treatment results in superior meat quality and wonderful, all-natural taste. We serve this delicious all-natural chicken sliced and slow-roasted in our new Prime Chicken sandwich. We also serve our chicken grilled with a pepper-mustard rub on our new Chicken Caesar sandwich and the Grilled Chicken Caesar salad, and with a refreshing citrus-herb rub in the Asian Sesame Chicken salad. Enjoy it on your next visit.



Who Buys Organic & Natural?

The demographics of the shoppers who bought in past 6 months:

-***“You & me.”*** No significant tie to income level, ethnicity, education.

-***3 basic consumer segments:***

1. **Core buyers** ---(some might call this group “tree-huggers”) Only 10% of the consumers
2. **Mid-level buyers** ---Make up 53% of consumers, and majority of purchases.
3. **Periphery buyers** ---Impulse buy on convenience or price

Source: Feedstuffs Mar 29, 2004 *Research roots out myths behind buying organic foods*



What's Driving The Growth?

❖ 1. Health & Safety!

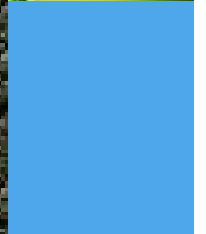
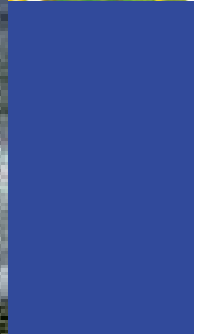
“Health concerns about everything from mad cow disease to E. coli bacteria have consumers seeking higher-quality meat.”

USA Today, 2/3/2005

A 2004 study correlated food safety concerns and natural/organic sales growth:

- Roughly half of the respondents are **“highly concerned”** about food safety
- Another one-third described their concern as **“medium.”**

Mintel Research, 8/05



What's Driving The Growth?

❖ 2. Flavor!

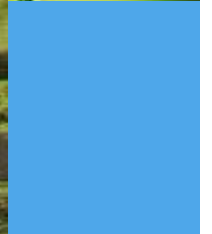
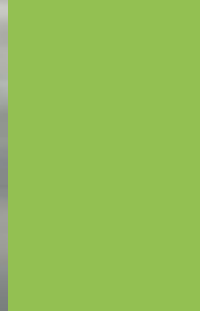
Oft-used phrase:
“There’s a good reason why many chefs use organic foods in their recipes – they taste better. “



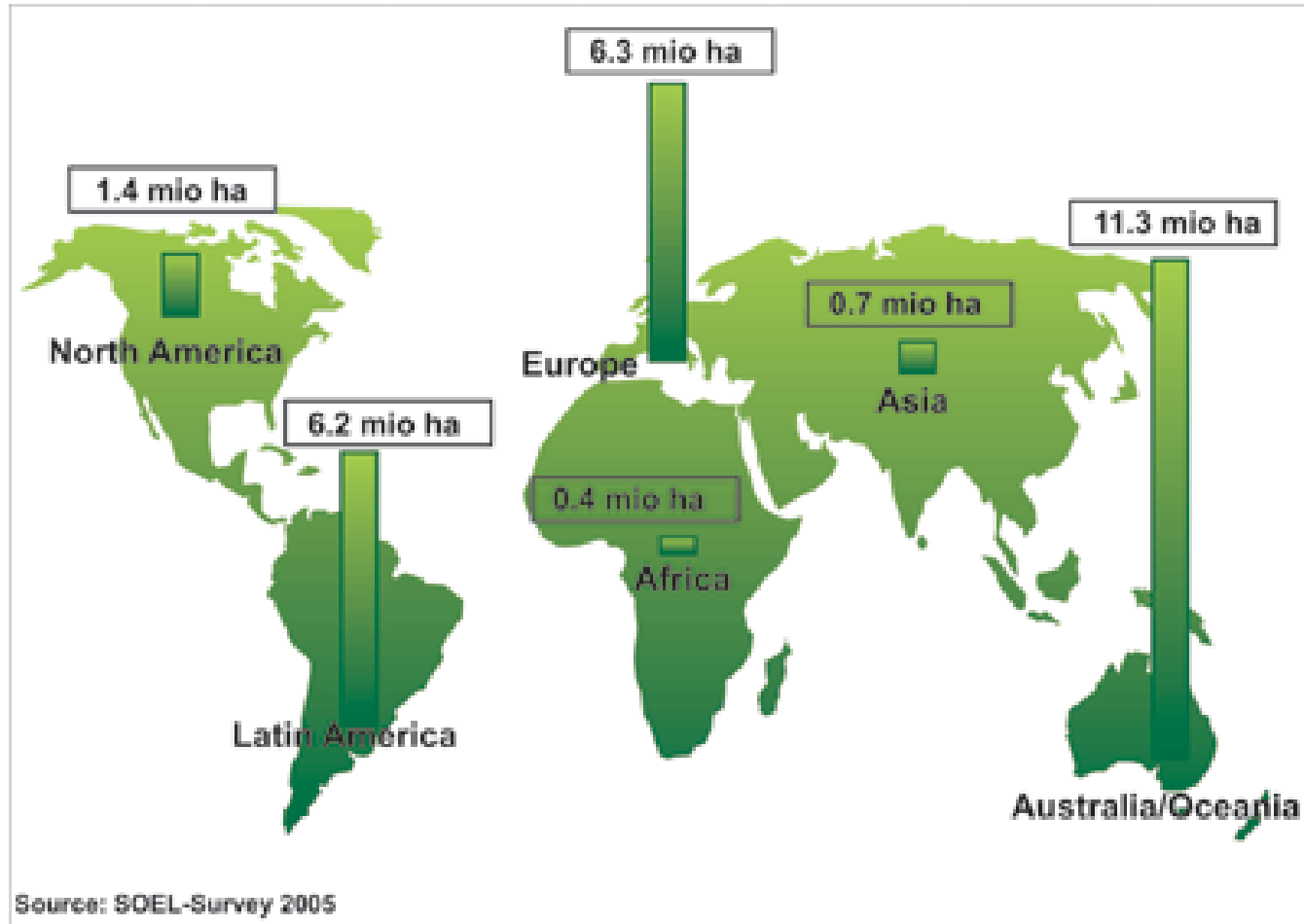
What's Driving The Growth?

❖ 3. Concerns about our Environment!

Air and water pollution
Wasted resources
Wildlife habitat destruction
Over-fishing
Global warming
The list goes on



US is actually “Behind the Curve”



In the US



The growth in Organic and Natural products may have resulted in part from a consumer reaction to the “Walmart-ization” of the retail supply:

- perceptions of lower price, but at the expense of
- fewer varieties
- more water and other additives
- less flavor or poorer quality

More consumers are “reading the label!”

Organic Seafood Confusion in US

No US rules for aquaculture or seafood mean that no seafood is “organic” in US market today. However, Europe has several Organic certifying groups, who do have standards for aquaculture.

Organic Certifying Bodies

The term ‘organic’ refers to a production system and its certification is therefore primarily certification of a production method. Even though most certifiers concentrate on organic agriculture, some public and private certification bodies have developed also standards for organic aquaculture.



One of the first certifier to develop organic aquaculture standards was the German private label ‘Naturland’ - Association for Organic Agriculture established in 1982. Currently, the standards cover the production of carp, trout, salmon, mussels and shrimp.



BioGro, a non-profit organic producer and consumer organisation, is New Zealand's leading organic certification agency and has developed standards for organic Greenshell mussels.

Other certifiers providing standards on organic aquaculture are for example BioSuisse (Switzerland), Soil (UK), KRAV (Sweden) and BioErnte (Austria).

US Organic Seafood

USDA's National Organic Program: Task force currently working on aquaculture.

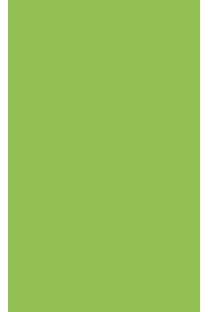
NOP named a task force for wild seafood, but it has not begun work yet.



Organic Aquaculture --- Issues

Technical Issues--- Aquatic environment, and aquatic animals, are different!

Political Issues--- Many constituencies with conflicting views



Technical Issues

Basic animal and environment differences present big challenges to Organic rule-making

- Traditional livestock
- Herbivorous
- Air and land
- Manure

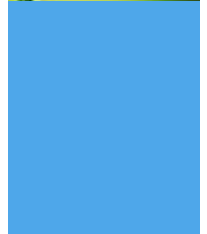
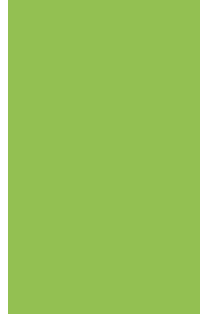
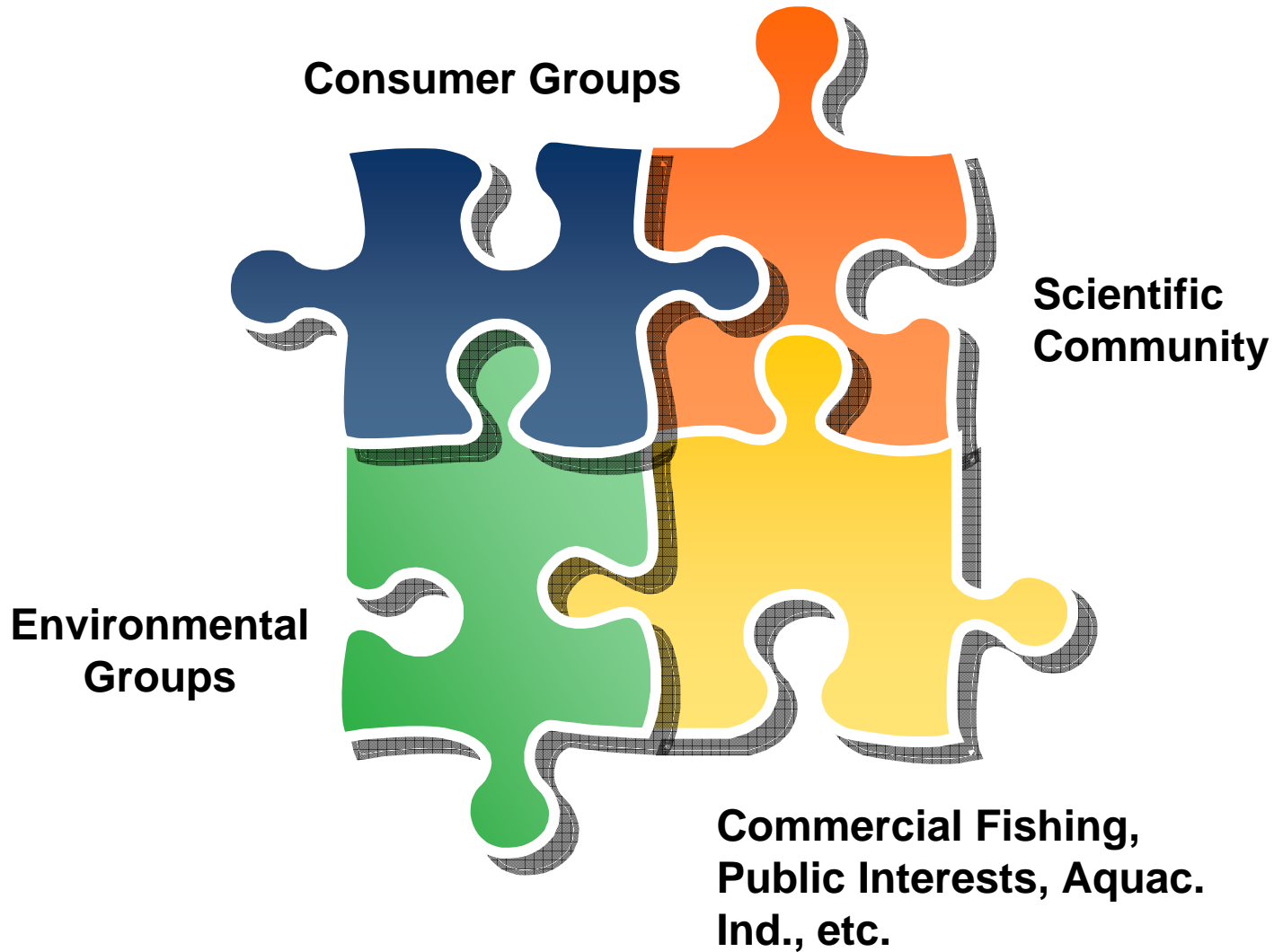


- Huge variation in species
- Often carnivorous
- Water
- Metabolic wastes



Political Issues

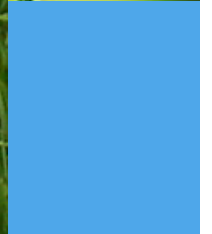
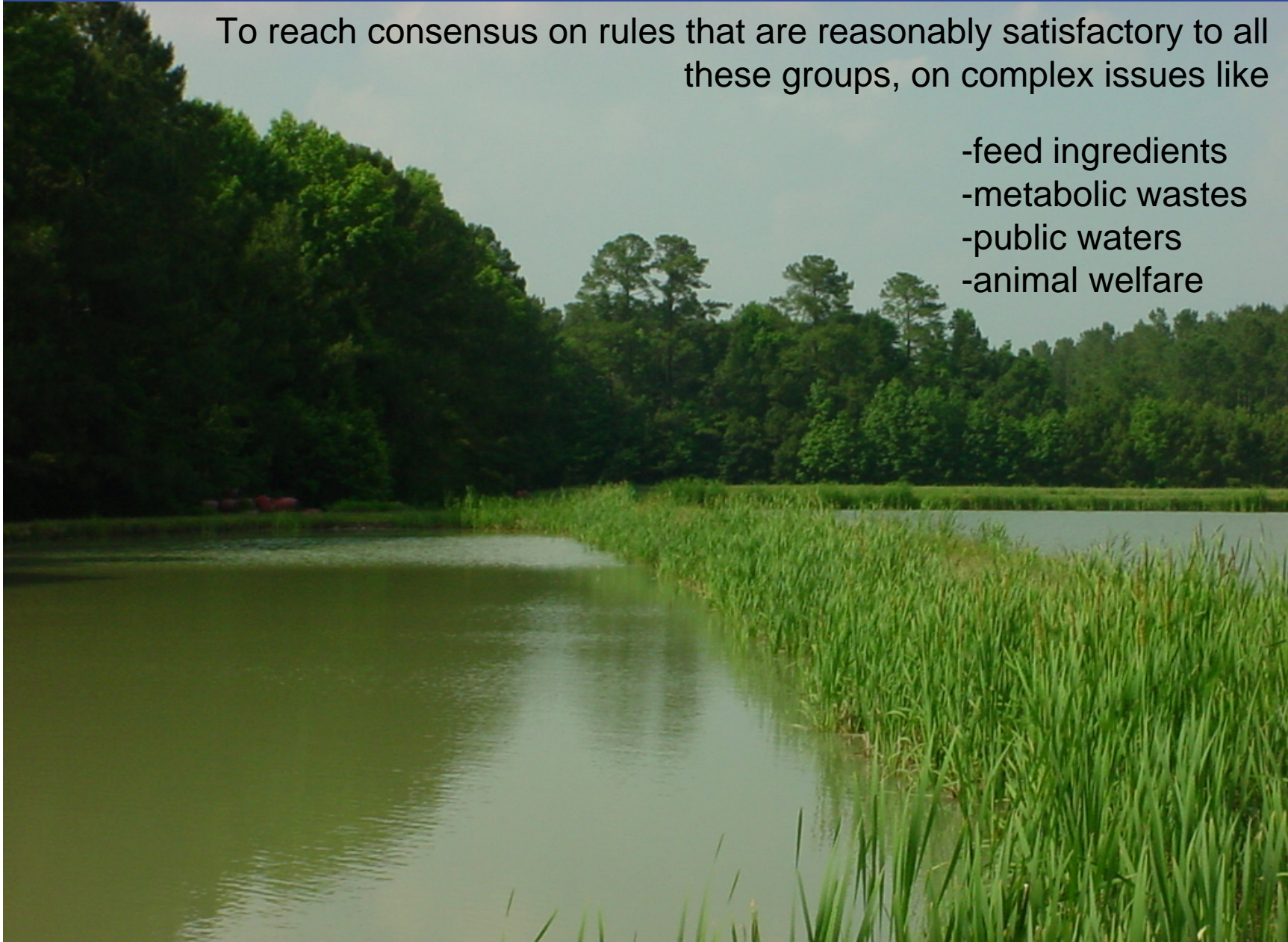
Numerous groups with differing views



Challenges

To reach consensus on rules that are reasonably satisfactory to all these groups, on complex issues like

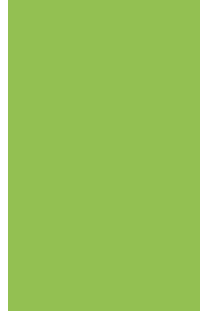
- feed ingredients
- metabolic wastes
- public waters
- animal welfare



Seafood Consumers

Special Considerations:

- News media send mixed messages about seafood safety/health benefits. These include
 - Omega 3s and benefits to heart health
 - Omega 3s and benefits to cognition
 - Omega 3s and benefits to asthma sufferers (this week!)
 - general benefit of high-protein, low-bad-fat meat
 - Risks of mercury
 - Risks of pcb's
 - Risks of dioxin



What US Organic species will be farmed?

❖ Feed rules will be a key determinant...

- Fertilizer-fed species
- Herbivorous species
- Carnivorous species??



Cost of Organic Aquaculture Products?

- ❖ Antibiotic-, hormone-, and pesticide-free
- ❖ Sustainable fish issue
- ❖ GMO-free feedstuffs
- ❖ Animal welfare/humane handling



Potential

- ❖ There is a proven market for Certified-Sustainable wild, Natural farmed, and Organic farmed seafood---at an 'acceptable' price.



Potential

- ❖ **Consumers will purchase species that can be farmed Organically at an 'acceptable' price, and will otherwise choose Natural and Certified-sustainable.**



CONCLUSION



The perceived health benefits, and also risks associated with eating seafood, give Organic & Natural aquaculture products a big potential in the market.



Successful species will be determined by Organic rules, and by production costs of products. Consumers will pay a reasonable premium for Organic & Natural.

