



What Species Can I Raise?

Paul O'Bryant

Obryant.4@osu.edu

Ohio Center for Aquaculture Research and Development

OSU South Centers

Piketon, OH

Bringing Knowledge to Life





Getting Started in Aquaculture

1) Learn about the aquaculture industry

Is Aquaculture for you?

2) Assess your goals and resources

3) Determine what system to use

4) **Select your species**

5) Construct your business plan

6) Conduct a pilot operation

Species Choices

Food Fish

- Yellow Perch
- Trout
- Tilapia
- Bluegill/Hybrids
- Largemouth Bass
- Hybrid Striped Bass
- Freshwater Prawn
- Paddlefish

Sportfish/Pond stocking

- Largemouth Bass
- Catfish
- Yellow Perch
- Trout
- Bluegill/Hybrids
- Striped Bass
- Baitfish
- Ornamentals
- Aquatic Plants



Yellow Perch

- Ponds, cages, RAS, aquaponics
- Fingerlings, pond stockers, food
- Takes 18 months to 8" market
- Optimum temp. 55 – 78 degrees F
- Stocking density 3000 lbs/acre
- High demand
- Gaps in production
 - Fingerling availability/price
 - Genetic selection (30-40% larger)
 - Sexual dimorphism
 - Nutrition
 - Year-round spawning



Bluegill/hybrids

- Ponds, cages, RAS, Aquaponics
- Sold as pond stockers, food, bait
- Great tasting fillet
- Gaps in Production
 - Low dress-out (30%)
 - Sexual dimorphism
 - All-male populations
 - Fingerling availability
 - Nutrition
 - Marketing



Freshwater Prawn (aka shrimp)

- Grown in ponds
- Sold for food (\$8.00 - \$15.00/lb)
- 100-day growing period (Jun – Sept)
- Must have good marketing
- Optimum temperature range is 77 – 90 degrees F
- Yields are 600 –1000 lbs/acre/year without substrate
- Gaps in production
 - Variable yields



Trout

- Raceways, ponds, net pens, RAS
- Food and sport fish
- Optimum temp. 50 – 60 F
- Need lots of cold water
- Market size is from 0.5 to 1.5 lbs.



Largemouth Bass

- Ponds, RAS
- Food and pond stocker
- Popular in Asian market
- Three year grow out
- Optimum growing temp. 55 – 80 degrees F
- Market size is from 1.25 to 2.5 lbs
- Possible paylake market!



Tilapia

- RAS, cages, ponds
- Food – Live ethnic markets
- Algae control
- Warm water 80 – 87 F
- Mortality below 55 F
- Market size is 1.25 – 2.0 lbs.
- Competes with imported processed product
- Popular for aquaponics
- Hardy
- Poor dress-out for fillets



Koi/Ornamentals

- Ponds, RAS, cages
- Goldfish 70 F, Koi 55 – 80 F
- Market size for goldfish is 1 – 6 inches, and koi 3 – 12 inches
- High value if you understand markings
- Backyard garden market follows economy



Baitfish

- Ponds, RAS
- Entertainment, pond stocking
- Product sold live
- Minnows- Fathead, Chubs, Bluntnose
- Shiners- Spotfin, Golden
- Crayfish



Catfish

- Ponds, cages
- Sold as pond stockers, food
- Warm water fish 80 – 85 F
- Market size 0.75 to 2.5 lbs
- Popular paylake fish
- Hard to compete with cheap catfish from the south



Striped Bass

- Ponds, cages, RAS
- Food, pond stocker
- A warm water fish that grow in 77 – 86 degree F water
- Market size from 1.5 – 3.5 lbs.
- Push for cage culture in Illinois
- Fingerlings from Arkansas



Walleye

- Ponds
- Popular food fish
- Popular pond stocker
- Mostly sold as fry or stocker size
- Grown in Minnesota and Wisconsin
- Hard to manage



Paddlefish

- Large bodies of water > 5 acres
- Passive aquaculture
- Fillets and caviar
- Fillets=3 years
- Caviar=5-7 years
- Reservoir ranching
- Polyculture



Aquatic Plants and Others

- Ornamental pond plants
- Frogs
- Tadpoles
- Snails



Marine Shrimp

- RAS
- Pilot scale operation in Michigan
- New in Las Vegas
- Multi-million dollar facilities
- Wonderful product
- Future?



Reality Check

- You must think about becoming vertically integrated (hatching to marketing)
- You must think about adding value
 - Niche markets
 - Processing
 - Agri-tainment
 - High value species





Business Planning

- Very important
- Five years for profitable business
- Several on-line business plans
- We can help you develop a business plan.



Contact Information

Paul O'Bryant

Obryant.4@osu.edu

OSU South Centers

1864 Shyville Road

Piketon, OH 45661

740-289-2071

800-297-2072 (Ohio Only)

<http://southcenters.osu.edu/aqua>