

# Introduction to Catfish Economics

Matt Parker

NCDA & CS

Aquaculture Business Specialist

# Assumptions

- Land is already owned
- Fixed costs NOT included
- Stock 6000 fingerlings per acre
- Size at harvest 1.8 lbs.
- Feed conversion ratio 2.0:1
- Survival 80%
- Limited sales first year
- Sales price of \$0.80/lb
- Each pond is 10 acres

# Initial Investment

|                     | 10 Acres        | 50 Acres      | 100 Acres     | 150 Acres      |
|---------------------|-----------------|---------------|---------------|----------------|
| Pond Construction   | \$19,150        | \$95,750      | \$191,500     | \$287,250      |
| Water Supply        | \$39,000        | \$45,000      | \$52,500      | \$60,000       |
| Equipment           | \$63,000        | \$78,600      | \$98,100      | \$117,600      |
| Other               | \$4,929         | \$14,647      | \$26,794      | \$38,940       |
| Total               | \$126,079       | \$233,997     | \$368,894     | \$503,790      |
| Investment per acre | <b>\$12,610</b> | <b>\$4680</b> | <b>\$3689</b> | <b>\$3,359</b> |

# First Year of Operation

|                     | 10 acres       | 50 acres | 100 acres | 150 acres |
|---------------------|----------------|----------|-----------|-----------|
| Sales               | \$16,000       | \$80,000 | \$160,000 | \$240,000 |
| Fingerling          | \$4,800        | \$24,000 | \$48,000  | \$72,000  |
| Feed                | \$5,100        | \$25,500 | \$51,000  | \$76,500  |
| Other               | \$7,812        | \$22,754 | \$41,431  | \$60,108  |
| Total Variable Cost | \$17,712       | \$72,254 | \$140,431 | \$208,608 |
| Returns Above VC    | <b>\$1,712</b> | \$7,746  | \$19,569  | \$31,392  |

# Years 2 and Beyond

|                     | 10 acres        | 50 acres         | 100 acres        | 150 acres        |
|---------------------|-----------------|------------------|------------------|------------------|
| Sales               | \$67,200        | \$336,000        | \$672,000        | \$1,108,000      |
| Fingerling          | \$4,800         | \$24,000         | \$48,000         | \$72,000         |
| Feed                | \$24,300        | \$121,500        | \$243,000        | \$364,500        |
| Other               | \$14,462        | \$46,630         | \$86,841         | \$127,052        |
| Total Variable Cost | \$43,562        | \$192,130        | \$377,841        | \$563,552        |
| Returns Above VC    | <b>\$23,638</b> | <b>\$143,870</b> | <b>\$294,159</b> | <b>\$444,448</b> |

# Years 2 and Beyond

|                           | 10 Acres         | 50 Acres         | 100 Acres        | 150 Acres        |
|---------------------------|------------------|------------------|------------------|------------------|
| Sales                     | \$67,200         | \$ 336,000       | \$ 672,000       | \$ 1,108,000     |
| Total Variable Cost       | \$ 43,562        | \$ 192,130       | \$ 377,841       | \$ 563,552       |
| Return above VC           | \$ 23,638        | \$ 143,870       | \$294,159        | \$ 444,448       |
| Break Even Price above VC | <b>\$0.52/lb</b> | <b>\$0.46/lb</b> | <b>\$0.45/lb</b> | <b>\$0.45/lb</b> |

# Years 2 and Beyond

(price drops to \$0.55/lb)

|                           | 10 Acres         | 50 Acres         | 100 Acres        | 150 Acres        |
|---------------------------|------------------|------------------|------------------|------------------|
| Sales                     | \$39,600         | \$198,000        | \$39,600         | \$594,000        |
| Total Variable Cost       | \$35,692         | \$152,284        | \$289,025        | \$443,765        |
| Return above VC           | \$3,908          | \$45,716         | \$97,975         | \$150,235        |
| Break Even Price above VC | <b>\$0.50/lb</b> | <b>\$0.42/lb</b> | <b>\$0.41/lb</b> | <b>\$0.41/lb</b> |

# Catfish Summary

- Economies of scale
  - Larger your size, the smaller your production cost per pound
- Larger farms are more profitable
- Need to have enough money to operate the first year with limited sales
- Price drops greatly influence profitability

# Further Assistance and Information

- NCDA & CS Publications and Staff
  - <http://www.ncagr.com/aquacult/pubs.html>
  - Matt Parker
- NC Cooperative Extension Service
  - Mike Frinsko and Steve Gabel
- Other Farmers
- Aquanic
  - <http://www.aquanic.org>