

# Catfish Cash Flow Model

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# Introduction

- January 2004 began development of this Catfish Cash Flow spreadsheet model
- What we had prior to Jan 2004
  - Existing Cash Flow
  - Enterprise Budget Spreadsheet
- Held discussions with lending institutions to obtain their comments on what needed to be included
- Cash Flow Tool developed specifically for catfish production – BETA version, i.e., this tool is still being developed and will need refining

# Goal & Objectives

- The overall goal of this effort was to:
  - Produce an easy-to-use cash flow model
  - Results from the model would provide the producer with a sense of how well the operation is doing
- This is a tool to be used, but requires catfish production knowledge and interpretation or results for the individual operation

# What This Presentation is For

- Present cash flow model
  - You should also pull up the User Example Version 5 to follow along with this presentation
- Go through the various screens
- Go through an example
- Go through a “what if” example

# Cash Flow Model

- 1) Visible spreadsheets
  - Inputs, loans, sensitivity analysis, annual and 5-year summary cash flows, annual and 5-year summary income statements
- 2) Hidden spreadsheets
  - Enterprise budget, feeding and harvests, equipment, electricity and fuel, chemicals, taxes, 5 annual cash flows with monthly inputs

# 1<sup>st</sup> Input Screen

## see User ver 5

### Primary Variables

- Acreage
- Income – fish price
- Expense prices
- FCR, Mort., Harvest, Stocking
- Balance Sheet Info
  - Cash balance
  - Total assets
- Starting Year
- Management Ability

### Secondary Variables

- Expense prices
- Real Estate and Equipment
  - Costs, number, useful life, repairs
- Electricity and Fuel
  - Pumping and aeration
  - Diesel and gas
- Lower and Upper Ranges provided

# 2<sup>nd</sup> Input Screen

## Loans

- Current Loans – Loan Summary
- New Loans and Purchases
- Roll-over of Monthly Debt into Longer Loan

# Result Screens

## 1) Sensitivity Analyses

- Income above variable costs
- Net return to land

## 2) Cash Flows

- 5 annual cash flows
- 5-year summary

## 3) Income Statements

- 5 annual Income Statements
- 5-year summary Income Statements

- Financial Ratios

- Solvency
- Profitability
- Financial efficiency



# Default Cash Flow Example

- Parameters used in the default example include:
- 250 water acre catfish farm
- Fish selling price: \$0.74/lb
- Feed price: \$300/ton
- Stocking rate: 8,500/acre
- 1.5% mortality per month
- \$1.5 million in assets (Year 0-5)
- Starting Year: 3
- Management ability: 0.8
- \$440,000 on-going or long-term debt
- \$1,000,000 line of credit

# Directions Page

- Green cells can be changed by user
- Blue cells – inputs from other pages
- Black cells – calculated
- To be expanded

# Inputs Page

- 4 main sections
  - Primary, Secondary, Equipment, Electricity
- Input section vs. Default values
  - Easy to reset values back to default
- Upper and lower ranges

# Loan Page

- Current loans
  - These already exist
  - Used to provide interest and principal pmts
  - Can be used for Yr 1 operating loan
- New loans
  - Used when purchasing new equipment
  - Won't work to provide just cash (i.e., operating loan)
- Roll-over loans

# Annualized Enterprise Budget

- Input parameters –from inputs page
- From the Monthly Cash Flows
  - Production and receipts
  - Variable costs
  - Some fixed costs
- Net return to land calculated
- Breakeven cost - \$/lb to cover variable and/or all costs

# Sensitivity Analyses

- Runs off enterprise budget
- Varies price of:
  - Catfish feed
  - Price received by producer
- Provides new Income Above Variable Cost and Net Return to Land
  - Tabular and graphic format

# Feeding and Harvests

- Engine of the production process
- Uses input parameters: FCR, stocking rate, final fish size, mortality, acreage
- Estimates monthly feed quantities required
- Estimates fish production and when harvests occur
- Aggregates monthly “batch” estimates of feed fed and fish produced

# Other Input Sheets

- Equipment
- Electricity and fuel
- Chemicals
- Labor
- Land taxes



# Cash Flow Statements

- Monthly
  - Allocates new borrowing to maintain \$500 cash
  - Short-term borrowing – monthly interest
  - 1 yr or greater loans – P & I paid on 12/31
- Yearly
  - Summary of monthly cash flow
  - Potential inputs for non-regular items
- 5 year cash flow – same as yearly

# Income Statements

- Individual year and 5-year summary
- Based off cash flow statements
  - Depreciation from equipment page is used here
- Potential input of non-regular items
- Financial ratios on 5-yr summary

# “What if...?” Cash Flow Example

- Change:
  - Stocking rate – from 8,500 to 7,500 head/ac
  - Fish price – from \$0.74 to \$0.70/lb
  - Feed price – from \$300 to \$250/ton
  - Additional current loans
    - Increase initial loans by \$400,000

# Current assumptions and limitations in model

- All purchases use 100% debt
- No way to pay down loans with extra cash
- Monthly borrowing should check cash balance before rolling into 3-yr loan
- Operating loans limited to yr 1
- Depreciation is not true tax depreciation
- Assuming 0 salvage value

# Current assumptions and limitations in model

- “Other items” on yearly cash flow and income statement need to tie back to monthly cash flow
- Addition of other financial ratios
  - Green, yellow, red light coding
- Only 1 growing method
  - Multiple batch stocked every spring
- Catfish sales only occur in certain months

# Current assumptions and limitations in model

- No ability to calculate asset values in years 2 to 5

# Questions, Ideas and What else to include?

- Questions?
- What ideas do you have for incorporation into this model?
- Future developments?
- Please contact us and let us know
- Thank you