

# Natural Farrowing System™:

*Production Costs &  
an Economic Model*

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# Overview

- Production Costs for producing a 50 lb pig & 375 lb bred gilt using the Natural Farrowing System
  - Fixed
  - Variable
  - Total cost
- Economic Model
  - Farrow to Finish using 3 hoop buildings with the Natural Farrowing System
  - Iowa's potential for Value Added Sustainable Pig Production

# Production Costs with the Natural Farrowing System™

- Fixed \$ 1.73 /50 lb pig
  - Variable \$12.29 /50 lb pig
- Total Costs + Labor \$14.02/50 lb pig**

# Fixed Expenses for 50 lb Pig

■ Building Costs	\$12,000
■ # of pigs produced / year	1200 pigs
■ 7 Year Depreciation	\$1.43/pig
■ Building costs (\$12,000) ÷ 7 ÷ 1200 pigs	
■ Interest @ 6%	
■ \$6000 x 6% = \$360 interest /yr	
■ \$360 ÷ 1200 pigs	\$0.30/pig
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<b>Total Fixed Expense</b>	<b>\$1.73 / pig</b>

# Building Costs

- 30' x 84' Hoop + Waterer + 2 Self-Feeders

\$9,000

- 24 Nesting Boxes™ @ \$125 each

\$3,000

\$12,000

- Total Cost / farrowing space \$500

# Number of Pigs Produced

## ■ Per Farrowing Group

- Farrowing & Nursery Hoop that will produce 200 head of 50 lb pigs every 9 weeks (24 gilts x 8.33 pigs/litter)

## ■ Per Year

- 6 Farrowing Groups/ yr or 1200 head of 50 lb pigs/ yr

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<b>Total Fixed Expense</b>	<b>\$1.73 / pig</b>

# Variable Expenses per 50 lb Pig

■ Pig Feed Cost	\$3.40
■ AI Expense (2 inseminations x \$6.33)	\$1.52
■ Fuel and Electricity	\$1.50
■ Bedding Costs	\$1.00
■ Veterinary Vaccination	\$1.25
■ Operating Interest	\$0.62
■ Consulting & Patent System User Fee	<u>\$3.00</u>
<b>Total (+ labor)</b>	<b>\$12.29/pig</b>

# Production Costs with the Natural Farrowing System™

- Fixed \$ 1.73 /50 lb pig
  - Variable \$12.29 /50 lb pig
- Total Costs + Labor \$14.02/50 lb pig**

# Economic Model: Natural Farrowing System™ & Nesting Box™

- Family Farm
  - Model of farrow to finish pig production in 3 hoop barns for a family farm
  - Back up data for economic model
- State of Iowa
  - State potential for Value Added Sustainable Pig Production
  - Using 2400 existing pig hoop structures

# Family Farm Farrow to Finish using the Natural Farrowing System™

- Starting Costs
  - Capital and Operating Loans
- Production Cycles
  - Farrow every 9 weeks
  - Farrow to finish cycle every 26 weeks
  - 2 cycles per hoop
- Yearly Farm Income

# Starting Costs for Farrow to Finish in 3 Hoops

## ■ Capital Needed:

■ 3 (30'x 84' Hoop Structures)	\$27,000
■ 24 Nesting Boxes	<u>\$3,000</u>
<b>Total + Labor</b>	<b>\$30,000</b>

## ■ Operating Line Needed:

■ 90 gilts @ \$150 / head	\$13,500
■ Feed, vaccine, semen, misc.	<u>\$20,000</u>
<b>Total</b>	<b>\$33,500</b>

# Farrow to Finish Model: 6 Production Cycles / Year

- Farrow 24 gilts (avg 8.33 weaned/ litter) every 9 wks
- Finish market hogs in same hoop, for 26 week cycle
- 6 cycles / year = (2 cycles / hoop / year ) x 3 hoops
  - 170 market hogs @ 260 lb every 9 wks
  - 30 gilt hogs @ 260 lb every 9 wks
  - Total 200 head every 9 wks x 6 cycles /yr  
**= 1200 head / year to market**



# Back Up Data for Economic Models

## ■ Economic Model Feeder Pig Sale Price

■ Avg feeder pig purchase price <sup>2</sup>	\$38.00
■ Natural pig premium <sup>1</sup>	<u>+ \$2.00</u>
	<b>\$40.00</b>

## ■ Economic Model for Profit per Head

■ Avg feeder pig cost over 3 yrs <sup>2</sup>	\$38.00
■ Feeder pig cost in Natural System <sup>1</sup>	<u>- \$14.02</u>
■ Saved on pig raised vs pig purchased	<b>\$23.98</b>
■ Avg net profit on market hog <sup>2</sup>	+\$13.46
■ Avg labor on market hog <sup>2</sup>	+ \$2.82
■ Increased efficiency from pigs not moved <sup>1</sup>	<u>+ \$1.74</u>
<b>Profit / head + labor</b>	<b>\$42.00</b>

# Back Up Data for Economic Model

## ■ Market Hog Sale Price in Natural System

■ Market Hog Sale Price Avg over 3 yrs <sup>2</sup>	\$45.00
■ Natural Pig Premium <sup>1</sup>	<u>+ \$3.00</u>
<b>Total</b>	<b>\$48.00</b>

## ■ References

- 1. Costs and results from '03 – '04 Hoefling Farm Demonstration Site, Marcus, IA, using the Natural Farrowing System™ “patent pending” and featuring the Nesting Box™. Patent and trademarks developed and owned by Robert Bryant, DVM, Aurelia, IA.
- 2. ISU Hoop Research: 3 years of 6 finishing trials in hoops (AS Leaflet R1960)

# Iowa's Potential for Value Added Sustainable Pig Production

- If Iowa farm families used the Natural Farrowing System™<sup>1</sup> in 2400 existing hoop structures<sup>2</sup>
  - They could produce 400 market hogs / year / hoop<sup>3</sup>  
= 960,000 market hogs /year
- 960,000 head of market hogs x \$124.80/hd<sup>4</sup>  
= \$119,808,000
- Farm Families could produce over 119 million dollars of Value Added Sustainable Pig Production / year in existing hoop structures already in Iowa

# Iowa's Potential for Value Added Sustainable Pig Production

## ■ References

- 1. Patent and Trademarks developed and owned by Robert Bryant, DVM, Aurelia, IA
- 2. Publication, Iowa Hoop Structures used for Swine (ASL – R1780).
- 3. Hoefling Farm Demonstration Site Data, Marcus, IA ('03 – '04)
- 4. ISU Hoop Research (AS Leaflet R1960) and Bryant Economic Model for Natural Pig Production

# Conclusion

- Natural Farrowing System™ and Nesting Box™ is an economic breakthrough for family farms farrowing pigs in hoop structures
- Yearly farm family income potential for farrow to finish, in 3 hoop structures, is \$42,840 return to labor and existing facilities
- Iowa farm families using this system could produce over 119 million in value added sustainable pig production