Profitable PASTURED PIG Enterprises

Celize Christy
Practical Farmers of Iowa

Rhyne Cureton
Southern SAWG
Session Agenda

• On-Farm Pig Research
• Production, Marketing, and Farm Economics
• New Beginning Farmer Conversation
• Small Group Discussion
• Large Group Report Back
• Conclusion
Equipping farmers to build resilient farms and communities

Member-led, non-profit organization with 4,000 members
Farmer to Farmer Info Sharing
Swine Work

• Most of our pig producing farmers are curious about:
  • Alternative feeds
  • Preventative health in pastured-based systems
  • Multi-species production
  • Meat Marketing
  • Transitioning & expanding production
  • Feeder pig sourcing
2019 COOPERATORS’ PROGRAM

Learn about this longstanding Practical Farmers program, and the research projects conducted during the 2019 season.

2019 On-Farm Research Project Locations

# of Farmer-Cooperators Participating: 50
Trials in 2019 that concluded or are ongoing: 72
On-Farm Swine Research Projects

• Tom Frantzen
  • *Replacing Corn with Hybrid Rye in Feeder Pig Rations*

• John Arbuckle
  • *Fatty Acid Comparisons of Grain and Forage-fed Pork*
Tom’s story: Why hybrid rye?

• Primary purposes
  • Diversify organic crop rotations with a winter annual
  • Suppress giant ragweed

• Conducted the feeding trial to explore the value of the grain as pig feed

• Followed rye with multi-species cover crop mix, added grazing bonus
Replacing Corn with Hybrid Rye in Feeder Pig Rations

Objective

- Evaluate feed efficiency, daily gain, and feed cost per pound of gain when organic feeder pigs are fed a standard corn/soy ration compared with a hybrid rye ration.

<table>
<thead>
<tr>
<th>Standard Ration</th>
<th>Hybrid Rye Ration</th>
<th>Hybrid Rye Ration</th>
<th>Standard Ration</th>
<th>Standard Ration</th>
<th>Hybrid Rye Ration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeding Turn 1</td>
<td>Feeding Turn 2</td>
<td>Feeding Turn 3</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Rations

Corn / Soy
- Corn: 80%
- Soy: 17%
- Pre-Mix: 3%

Corn / Rye / Soy
- Corn: 39%
- Rye: 39%
- Soy: 18%
- Pre-Mix: 3%
- Soy Oil: 1%
Weights and gain

• Feeding Turn 1
  • Lower ADGs due to pigs suffering from ileitis

• Feeding Turn 2
  • Lab test results detected 2018 corn and hybrid rye with mycotoxins

• Feeding Turn 3
  • Toxin binder was implemented in both c/s and c/r/s feeds
Weights and gain

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Succession 1</th>
<th></th>
<th>Succession 2</th>
<th></th>
<th>Succession 3</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C/S</td>
<td>C/R/S</td>
<td>C/S</td>
<td>C/R/S</td>
<td>C/S</td>
<td>C/R/S</td>
</tr>
<tr>
<td>No. pigs</td>
<td>10</td>
<td>10</td>
<td>15</td>
<td>16</td>
<td>15</td>
<td>16</td>
</tr>
<tr>
<td>Days of production</td>
<td>124</td>
<td></td>
<td>126</td>
<td></td>
<td>104</td>
<td></td>
</tr>
<tr>
<td>Average live harvest weight (lb/pig)</td>
<td>254</td>
<td>261</td>
<td>286</td>
<td>270</td>
<td>269</td>
<td>258</td>
</tr>
<tr>
<td>Average daily gain (lb/hd/day)</td>
<td>1.35</td>
<td>1.62</td>
<td>1.52</td>
<td>1.24</td>
<td>1.66</td>
<td>1.68</td>
</tr>
<tr>
<td>Feed per lb of gain</td>
<td>3.84</td>
<td>3.88</td>
<td>3.39</td>
<td>3.59</td>
<td>3.61</td>
<td>3.78</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>C/S</th>
<th>C/R/S</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13</td>
<td>14</td>
</tr>
<tr>
<td></td>
<td>118</td>
<td></td>
</tr>
<tr>
<td></td>
<td>270</td>
<td>263</td>
</tr>
<tr>
<td></td>
<td>1.51</td>
<td>1.51</td>
</tr>
<tr>
<td></td>
<td>3.61</td>
<td>3.75</td>
</tr>
</tbody>
</table>
Feed Costs

Feed costs for the three rounds in 2018-2020

<table>
<thead>
<tr>
<th>Treatment</th>
<th>Succession 1</th>
<th>Succession 2</th>
<th>Succession 3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>C/S</td>
<td>C/R/S</td>
<td>C/S</td>
</tr>
<tr>
<td>Total Feed Cost</td>
<td>$1,228.4</td>
<td>$1,233.1</td>
<td>$1,610.2</td>
</tr>
<tr>
<td>Feed cost ($/pig)</td>
<td>$122.84</td>
<td>$123.31</td>
<td>$107.35</td>
</tr>
<tr>
<td>Feed cost per pound of gain ($/lb per pig)</td>
<td>$0.48</td>
<td>$0.47</td>
<td>$0.38</td>
</tr>
</tbody>
</table>

Mean

<table>
<thead>
<tr>
<th></th>
<th>C/S</th>
<th>C/R/S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Feed Cost</td>
<td>$1,495.6</td>
<td>$1,443.9</td>
</tr>
<tr>
<td>Feed Cost ($/pig)</td>
<td>$113.35</td>
<td>$105.65</td>
</tr>
<tr>
<td>Feed Cost per pound of gain ($/lb per pig)</td>
<td>$0.42</td>
<td>$0.40</td>
</tr>
</tbody>
</table>
Handling mycotoxins when feeding small grains

- Mycotoxins are toxins produced by fungi when water and air come in contact on or in grain or feedstuffs. For pigs be aware of:
  - Aflatoxins
  - Ochratoxin
  - Ergot (rye)
  - Trichothecenes (aka DON/Vomitoxins)
  - Resorcylic acid lactones

- Detection Limits
Handling mycotoxins when feeding small grains

• How do mycotoxins affect pigs?
  • Lower feed intake and growth rates
  • Damage gut health
  • Decrease immunity
  • Impact sow reproductive performance

• How to avoid
  • Testing feed regularly for toxicity levels!
  • Proper dry down and storage of feeds (max 14-15% moisture)

• Potential Solutions
  • Grain dilution
  • Use binding agent in feed
  • Binder approved for organic
Fatty Acid Comparisons of Grain and Forage-fed Pork

- **Objective**
  - Compare fatty acid profiles of grain- and forage-fed pastured-raised pork.

<table>
<thead>
<tr>
<th>Pasture-raised on full grain</th>
<th>Pasture-raised on 50% reduced grain</th>
<th>100% forage, no grain</th>
</tr>
</thead>
</table>

3 groups of 8 pigs; fed from 8 weeks old to 250 lbs
Fatty Acids

- As the amount of grain fed increased across all three experimental groups so did the omega-6:3 fatty acid ratios.

- Less grain and more forage in pig diets produce pork with lower desired omega 6:3 fatty acid ratios.

<table>
<thead>
<tr>
<th></th>
<th>Grain Free</th>
<th>50% Grain</th>
<th>100% Grain</th>
<th>Store Bought</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio (omega-6:3)</td>
<td>5.15</td>
<td>9.88</td>
<td>13.84</td>
<td>29.4</td>
</tr>
</tbody>
</table>
Weights and gains

<table>
<thead>
<tr>
<th></th>
<th>GRAIN-FREE</th>
<th>50% REDUCED GRAIN</th>
<th>100% GRAIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of pigs</td>
<td>9</td>
<td>8</td>
<td>4</td>
</tr>
<tr>
<td>Days of production</td>
<td>237</td>
<td>202</td>
<td>234</td>
</tr>
<tr>
<td>Average daily gain (lb pig/day)</td>
<td>0.90</td>
<td>0.94</td>
<td>1.16</td>
</tr>
<tr>
<td>Average live harvest weight (lb/pig)</td>
<td>212.22</td>
<td>189.25</td>
<td>270.75</td>
</tr>
</tbody>
</table>
# Feed Costs

<table>
<thead>
<tr>
<th>TABLE 3. Feed costs for the three groups in 2017.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Grain consumption (lb grain/pig)</strong></td>
</tr>
<tr>
<td>Grain cost ($/pig)</td>
</tr>
<tr>
<td>Pasture seed cost ($/pig)</td>
</tr>
<tr>
<td>Salt cost ($/pig)</td>
</tr>
<tr>
<td>Supplement feed cost ($/pig)</td>
</tr>
<tr>
<td><strong>Total feed cost ($/pig)</strong></td>
</tr>
<tr>
<td>Feed cost per pound of gain ($/lb)*</td>
</tr>
<tr>
<td><strong>Total cost of production ($/pig)</strong></td>
</tr>
</tbody>
</table>

*Calculated by dividing Total Feed Cost by Average Live Harvest Weight (found in Table 2)*
What is John doing now?

• A couple things John encourages farmers to do:
  • **Listen to your heart.** There is always a “better” way, but if you have other things to do with your life don't worry about it
  • **Spend an hour a week learning** about your P/L statements, cash flow, etc. with an accountant. Financial literacy
  • **Rest. Have fun.** We farmers have a good work ethic, but we need to develop our rest/fun ethic as well.
Friday, March 13th

Profitable Production Flow for the Organic and Pastured-Based Pork Producer

Jude Becker, Becker Lane Organic
Dayna Burtness, Nettle Valley Farms
Ethan Book, Crooked Gap Farm
Let’s keep chatting!

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Profitable PASTURED PIG Enterprises

Celize Christy
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Rhyne Cureton
Southern SAWG
"Pork" Rhyne

Born in Monroe, NC
Student @ NCAT (Spring 2020)

Pigs n’ Pork Experience
• National Pork Board
• NC Pork Council
• Farming

Agricultural Educator
• EATBETA (Uganda & Tanzania)
• Carolina Creative Works

Environmentalism
• Environmental Defense Fund
• Rachel Carson

Boards & Committees
• National Young Farmers Coalition
• Southern S.A.W.G.
• EATBETA International
• Piedmont Triad Regional Food Council
• NC Choices
Evaluating Market Opportunity

Does the market generate enough profit to cover labor to attend?

Does the market generate enough profit to cover overall production labor and input expenses?

Does the market generate enough profit to cover labor, inputs, AND farm operating expenses?

Does the market generate enough profit to cover labor, inputs, F.O.E., AND health insurance/care?

Does the market generate enough profit to cover labor, inputs, F.O.E., healthcare, AND retirement?

<table>
<thead>
<tr>
<th>Farmer's Market</th>
<th>Hours</th>
<th>Labor Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing</td>
<td>1</td>
<td>$15</td>
</tr>
<tr>
<td>Travel-To</td>
<td>1</td>
<td>$15</td>
</tr>
<tr>
<td>Setting Up</td>
<td>0.5</td>
<td>$7.50</td>
</tr>
<tr>
<td>Selling</td>
<td>4</td>
<td>$60</td>
</tr>
<tr>
<td>Breakdown</td>
<td>0.5</td>
<td>$7.50</td>
</tr>
<tr>
<td>Travel-Back</td>
<td>1</td>
<td>$15</td>
</tr>
<tr>
<td>Unpacking</td>
<td>1</td>
<td>$15</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>9hrs</td>
<td><strong>$135</strong></td>
</tr>
</tbody>
</table>
Intentional Records & Budgeting

Good Records Help...
• Prevent wasted time on an enterprise or product
• Identify profitability sooner
  • Prioritize high selling products vs low interest products
• Tracks spending
• Prevents non-compliances and decertification (Organic)

Record keeping should include...
• Productivity (farrowing, growth rates, body condition scores, carcass weights)
• Sales (of every category of product sold)
  • Track metrics for specific products like sage sausage, blueberry sausage, etc, not simply “sausage”
• LABOR
Factors to consider within a pork enterprise include...

• Feed
• LABOR!!!!
• Transportation
• Farm Equipment Expenses
• Processing
• Marketing & Sales
• Genetics
• Seed
• Other Fixed & Misc. Costs

Understanding Costs of Production
Understanding Economies of Scale & Production

Are you producing/selling enough?

Producing to scale

• Producing out of demand, before passion
  • No point in selling a product no one is asking for...
  • Understand your limitations before you start

“Go BIG or get OUT”

• Homesteading vs “Intensive” Production
• If you don’t want to scale-up then you may not meet your expectations of profitability

Limiting Factors for Individual Scale

• Lack of Land capacity
• Lack of Labor capacity
• Lack of Resources (capital, equipment, etc)
• Lack of Market Access - ex. market saturation
When You Can’t Do It All... Cooperate!

Working together covers an individual farm’s lack of...

- Markets
- Labor
- Land
- Resources
- “pseudo-scaling”

Living up to “the standard” of production

- Land practices
- Feed formulation
- Carcass size
- Proper Records

The value of consistency

- Builds Character -> More Awareness -> Trust & Repeat Customers -> Profitability

Examples within pig farming: Natural Hog Growers Association, Hickory Nut Gap, Colfax Creek Farm, Niman Ranch, Primal Pastures, Polyface Farms, etc

Doesn’t have to be an official “co-op”

Help the farmer beside you!
Doing It All Is Stressful!

- Vertical Integration vs What You Doin’
  - “Master of None”
  - Knowing what you’re good at... and what you’re not...
- No time for social media?
  - Pay a teenager or marketing student in college who could use the work experience
- No time to manage your budget?
  - Better make time for it! You need to know more about your operational finances than anyone else
- Not a people person?
  - Pay someone part time who loves talking to people
- What annoys you is someone else’s passion, give them your misery so that they can turn it to joy
- Trusting isn’t easy
Conversation with Nolan Warwick

Wooly Pig Pastures

Jim Falls, WI
Cooperative Exercise

1. Form groups based on state or region

2. Briefly introduce yourself and describe your operation (pork and all) and discuss TWO major challenges you face in market access, scaling, and/or finances

3. Discuss areas of opportunity

4. Discuss quality standards and cooperative guidelines

5. Needs for the cooperative to be effective

6. Take NOTES

7. This is a time for Fellowship, Intentional learning, being Open Minded, and Honesty
CONTACT & CONSULTING

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