The Pork Industry in Your County: Weighing the Economic and Environmental Impacts

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Starting Points
• There is a need to grow the rural economies of Iowa
• Growth needs to be sustainable
  – Environmental
  – Social
  – Economic

Starting Points
• Growth needs to be diverse
  – Agriculture, manufacturing, construction, transportation, public services (financial, education, utilities, etc), retail marketing, tourism, technology, energy, etc.
• Key = PEOPLE
• For people to stay in rural areas there needs to be jobs and quality of life

Pork Industry in Iowa
• More than just production of pigs
  – Processing, feed grain usage, buildings, equipment, supplies, jobs, soil nutrients, tax generation, etc.
• Massive structural change recently
• Rural economies are supported by the pork industry, could grow larger
• Need a clear and progressive vision to grow the industry

Starting Points
• The need to keep more of our young people in rural Iowa is a priority
• Primary usage for rural Iowa land will be agronomic
  – Crop production (corn, soybean, others)
• An integrated crop/livestock industry has great potential to grow Iowa’s rural economies!

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Sustainability Factors
• Economic sustainability requires adequate size, good management and technology utilization
• Key factor for both environmental and social sustainability appears to be the size of the operation and location
• Therefore, growth in the commodity side of pork production must be done via "Low Density" model
“Low Density”

- Match the nutrient needs of the land with the manure production of the farm
- Consider the impact of the farm on the rural infrastructure
- Consider the profit potential to create rural jobs
- Site the farm using objective assessments of environmental risk

2400 Head Finisher Example

- One 2400 finisher on one section of land with an approved MMP
- Nutrient needs of the land match the manure production of the pigs
- Reduce the use of rural roads for manure transport
- Locate only on sites that are objectively identified as environmentally acceptable

2400 Head Finisher Example

- Construction cost ~ $220/pig space or $528,000
- Income can be from farmer owning the pigs, managing the pigs, or by the farmer renting the building
- Rental payment = $38.50/pig space/year if farmer manages pigs
- Rental payment = $34/pig if owner manages the pigs

2400 Head Finisher Example

- In any case, the farmer gets the manure to fertilize their crops
- Value of manure to fertilize the land from N, P and K
- Reduces the demand for imported petroleum based fertilizers
- Transportation over public roads is minimized

2400 Head Finisher Example

- Costs of building and operation:
  - $67,000 to pay off building in 12 years
  - Utility costs = $8600/year
    - Electricity and fuel
  - Insurance = $3000
  - Taxes = $2000
  - Maintenance/ upkeep = $2400
  - Total = $83,000/year

2400 Head Finisher Example

- Cash flow from renting the building:
  - Rents building but does not manage pigs = $81,600 / year
  - Manure value (fertilizer not purchased – application costs) = $23,500
  - Income – cost = $22,100
  - Income ~ 0.5 FTE wage
  - Implications for new farmer development?
2400 Head Finisher Example

- Cash flow from managing building:
- Rents building but does manage pigs = $92,400 / year
- Manure value (fertilizer not purchased – application costs) = $23,500
- Income – cost = $32,900
- Income ~ 0.75 FTE wage
- Implications for new farmer development?

Economic Impact also Includes

- Job creation to manage the farm
  - New beginning farmers
- Feed utilization of the pigs
  - Local grains, local processing
- Veterinary care (local practitioners)
- Utilities (regional suppliers)
- Insurance (local businesses)
- Taxes (local and state)

Economic Impacts on Community

- Generate ~ $122,000 in gross revenue per year (labor, nutrients)
- Estimated economic activity of ~ $270,000 per year (mostly local)
- Tax generation
  - Property taxes to support schools and services, sales taxes
- Turnover of ~ $700,000 in pig sales (regionally)

Where to Locate the Farms?

- Use objective siting models to minimize chance of environmental impact
  - CAM (Community Assessment Model)
    Dr. Steve Hoff, Iowa State University
- Follow state guidelines on MMP to insure water quality
- Visit with potential neighbors

Objective Siting Models

- Predicts the probability of detectable odor from a potential swine production site at locations of interest around the site
- Expressed as hours of detectable odor from March to October
- Facility emissions only, not application emissions
Objective Siting Models

- Detectable odor defined based on ISU research (ABE department)
- Factors considered include:
  - Historical weather patterns (zip code)
  - Other livestock farms in vicinity
  - Distance and direction from locations
  - Number and size of animals
  - Size and orientation of barn

2400 Sow Farm

- Same manure production
- Generates enough pigs to support 8+ 2400 head finishers
- Requires more labor, better labor
- Larger economic impact on the community
- Do not want too many new sow farms (overproduction potential)

Potential Growth Areas

- Attribute based niche markets
  - Based on production system (pasture reared), eating quality (Berkshire, Niman Ranch), health perceptions (no sub therapeutics), diet (organic)
- Bioscience based industries
  - Biological research, development, manufacturing, genetics, internet applications, feed products, research tools, etc

Potential Growth Areas

- Harvesting and further processing
  - Large harvesting industry now, difficult to locate new plants
- Increasing demand for further processed foods
  - Further processing can be done in rural communities (Burke Foods in Nevada)
- These jobs pay above average wages

Questions