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Investment, Returns and Marketing Practices in Iowa Contract Hog Production

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Abstract
Contract hog production involves an agreement between two or more parties. The agreement divides responsibilities for supplying resources such as capital, labor and management. While contracting is not a new concept to US agriculture, hog contracting represents a growing segment of the national hog production industry. The farm crisis of the 1980's created an environment advantageous to expansion of contract production. For individuals faced with poor livestock returns, debt problems and equity erosion, contracting provided a method for overcoming the financial difficulties and remaining in operation (Christian et al). This paper will focus on the costs and returns Iowa growers encounter when involved in contract hog production. Also examined will be the marketing practices of contractors in the state.

Disciplines
Agribusiness | Agricultural and Resource Economics | Behavioral Economics

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Contract hog production involves an agreement between two or more parties. The agreement divides responsibilities for supplying resources such as capital, labor and management. While contracting is not a new concept to US agriculture, hog contracting represents a growing segment of the national hog production industry. The farm crisis of the 1980's created an environment advantageous to expansion of contract production. For individuals faced with poor livestock returns, debt problems and equity erosion, contracting provided a method for overcoming the financial difficulties and remaining in operation (Christian et al).

This paper will focus on the costs and returns Iowa growers encounter when involved in contract hog production. Also examined will be the marketing practices of contractors in the state.

Information for the report was obtained from a national survey conducted in early 1989. The survey was conducted at the University of Missouri, encompassing medium and large producers (marketing at least 500 hogs/pigs per year) in all 50 states. A breakdown of the states by region is shown in Appendix A.

"Growers", also known as contractees, are individuals who enter into agreements to care for contractor-owned hogs in their facilities and are compensated for their labor, facilities or inputs they provide to production. "Contractors" refers to individuals or business entities that place their breeding stock or pigs in growers' facilities for the production of hogs. In some areas of the report, an added distinction is made between size of contractors: "large contractors" that produce more than 50,000 hogs and "small contractors" producing lesser amounts. Independents refers to hog producers who are not involved in contract production (Rhodes et al). Further definitions are shown in Appendix B.

Growers typically provide for the care of animals in their own facilities using feed furnished by the contractor who also provides and owns the animals. Growers are compensated in various methods, usually by payments on a per head basis. The contract payment provides for downward price protection for the grower, but moderates the ability to take advantage of big gains during strong market conditions and limits

This paper is based on the Iowa results of a national survey in 1989 conducted by V. James Rhodes and financed by the University of Missouri Department of Agricultural Economics, the National Pork Producers Council, and Pork 89. Financing for analysis of the Iowa results was provided in part by the Iowa Pork Producers Association.
the grower's management control (Christian et al). In the short term, the grower transfers market price risk to the contractor. However, while these market price risks are transferred, it must be realized that the longer term financial risks of facilities ownership are tempered by the contract terms and length.

Cost of the Contract

About one-fourth of the Iowa growers indicated they were required to build or modify facilities as part of the conditions for obtaining the contract. This is slightly less than the national figure of about 34 percent.

Figure 1 shows the level of grower investment by type of contractor. Individuals contracting for farmers and feed-related entities tended to invest $5,000 or less while most growers for large contractors and other agri-businesses had investments of $5,000 or more. Of those who worked with large contractors, 40 percent had investment levels of $50,000 or more.

Only five percent of Iowa growers reported investing between $5,000 and $49,999 in new facilities and less than one percent invested in excess of $50,000. This was similar to the remainder of the North Central region. Investment levels on average for the North Central area were considerably less than investments required in the East Coast region. The East Coast region reported 27 percent of growers investing between $5,000 and $49,999 and 22 percent investing in excess of $50,000 to meet conditions in the contract (Figure 2). The differences in these numbers is likely attributable to the size of producers in each region: Iowa had more "smaller" growers and contractors while the East Coast had more "ultra-large" operations. Additionally, it should be noted that recent reports indicate that investment levels needed in Iowa to obtain a contract are increasing. As the industry matures, growers and contractors are finding what works and doesn't work. Facility, feeder, etc., specifications are increasing, leading to higher investments. This will increase the need for second level financing for individuals lacking equity. Increased investment levels will make it harder for those with limited capital to enter the industry.

The share of respective production costs (breeding stock, feed, etc.) picked up by Iowa contractors closely mirrored national trends. Contractors tend to supply breeding livestock, feed and medications. Iowa contractors provided over 90 percent of the costs of breeding stock, feeds, and medications for feeder pig and
farrow-to-finish operations. Iowa contractors also covered in excess of 90 percent of the feed (98%) and medication (96%) costs in finishing operation contracts. Growers provided the majority of the funds for facilities and the labor (Figure 3). For example, feeder pig producers provided 97 percent of the facility cost and 88 percent of the labor cost.

FIGURE 1. Iowa Grower's Investment to Obtain Contract (Contractor's Est.)

FIGURE 2. Grower's Reported Investment to Acquire Contract (by Region)
Contractors or pig owners supply the flexible resources while the grower provides resources which are less flexible. Capital invested in breeding stock, feed, and medication can be converted to other uses. Facilities and labor are not as easily converted to other uses. Many facilities are single enterprise use facilities and alternative uses for labor is quite limited in many rural communities. Growers are absorbing risks associated with relatively fixed resources while pig owners are absorbing risks of the more mobile capital.

**FIGURE 3. Share of Costs Covered by Contractors (Iowa)**

![Cost Share Diagram]

**Returns**

Nationally, most growers received some level of a set fee for contracting: 88 percent of finishers, 77 percent of farrow-to-feeder producers, and 99 percent of farrow-to-finish growers. Additionally, it is common for growers to receive bonuses for efficiency and management ability (Rhodes 1990-1). On the national level, 52 percent of feeder pig growers and farrow-to-finish producers received premiums for such items as pigs saved; pigs weaned per litter; pigs marketed per sow weaned per year; average weight over 40 pounds; sow death loss and percent of crates filled (Pork '90). Growers operating pig finishing units
comprised the lion's share (81 percent) of Iowa contract operations (Table 1). This compared to 62 percent for the nation. In contrast, 30 percent of the U.S. contract producers produced feeder pigs. In Iowa, this was 14%. The heavy focus of Iowa contractual activity was in feeder pig finishing. There are likely two reasons for this alarming difference in trends. First, Iowa has many producer-to-producer contractual arrangements which involve the grower as a finisher. However, this is likely not much different in other states as well. Secondly, some of the larger contractors prefer to produce feeder pigs in a warmer climate and transport them to Iowa for finishing. This would gain the advantage of cheap Iowa corn. It also points out the issue which some are arguing that Iowa will become the feeder pig finishing capital of the world. It does present an issue for Iowa in that an exodus of feeder pig production would take with it the labor intensive portion of hog production.

Table 2 describes some of the fee arrangements used by Iowa contractors. Payment at market and at arrival on the farm were reported almost equally at 42 and 45 percent of feeder pig finishing responses. Many of these producers also received some type of premium such as for feed conversion and/or death loss (Table 4). For example, of those receiving a payment at market, 77 percent received some type of incentive payment. Iowa contracts tended to rely on feed efficiency and death loss incentive combinations (51 percent). For the U.S. there was an increased reliance on feed efficiency or death loss.

Nineteen percent of respondents reported they received payment on a head per day basis. Of these producers, fewer (62%) received incentives than did growers receiving payments at market and/or on arrival. The mean payment at market was $4.21 per head and $4.50 per head on arrival. The mean daily fee payment was $.07. While the average value of each payment appears low, many growers received payments under more than one method. Additionally, some growers received payments based on profit-sharing or a remainder of profits and losses after the contractor was compensated.

Grower Returns

Iowa growers did not rely as heavily on contract income as a source of family income as growers did nationally. On average, 29 percent of the Iowa grower's family income was derived from contract income; it
ranged from 0 to 100 percent. Nationally, growers reported that 33 percent of family income was derived from contracting.

**TABLE 1. Distribution of Growers by Enterprise**

<table>
<thead>
<tr>
<th>Enterprise</th>
<th>Iowa</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pig Finishing</td>
<td>81%</td>
<td>62%</td>
</tr>
<tr>
<td>Feeder Pig Production</td>
<td>14%</td>
<td>30%</td>
</tr>
<tr>
<td>Farrow-to-Finish</td>
<td>4%</td>
<td>7%</td>
</tr>
<tr>
<td>Breeding Stock</td>
<td>1%</td>
<td>1%</td>
</tr>
</tbody>
</table>

**TABLE 2. Fees Paid to Iowa Growers for Finishing Hogs**

<table>
<thead>
<tr>
<th>Type of Payment</th>
<th>Percent of Respondents Reporting Type of Payment</th>
<th>Percent Receiving Incentive or Disincentive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment at market</td>
<td>42%</td>
<td>77%</td>
</tr>
<tr>
<td>Payment on arrival</td>
<td>45%</td>
<td>81%</td>
</tr>
<tr>
<td>Daily fee payment</td>
<td>19%</td>
<td>62%</td>
</tr>
<tr>
<td>(payment per day)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of Payment</th>
<th>Mean</th>
<th>Most Common</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment at market</td>
<td>$4.21</td>
<td>$4</td>
<td>$2.50-10</td>
</tr>
<tr>
<td>Payment on arrival</td>
<td>$4.50</td>
<td>$4</td>
<td>$2-6</td>
</tr>
<tr>
<td>Daily fee payment</td>
<td>$0.07</td>
<td>$0.07</td>
<td>$0.05-0.07</td>
</tr>
<tr>
<td>(payment per day)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TABLE 3. Alternative Payments Received by Iowa Growers**

<table>
<thead>
<tr>
<th>Type of Payment</th>
<th>Percent of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent of Respondents</td>
<td>Iowa</td>
</tr>
<tr>
<td>Set fee per pound</td>
<td>5.6%</td>
</tr>
<tr>
<td>Profit sharing</td>
<td>3.9%</td>
</tr>
<tr>
<td>Fee per month on buildings</td>
<td>0.5%</td>
</tr>
<tr>
<td>Unspecified amount per head</td>
<td>0.4%</td>
</tr>
</tbody>
</table>
TABLE 4. Finishing Premiums Paid to Iowa Growers

<table>
<thead>
<tr>
<th>Incentive Payment Based on</th>
<th>Iowa</th>
<th>U.S.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed conversion</td>
<td>21%</td>
<td>30%</td>
</tr>
<tr>
<td>Feed conversion and death loss</td>
<td>51%</td>
<td>37%</td>
</tr>
<tr>
<td>Death loss</td>
<td>28%</td>
<td>32%</td>
</tr>
</tbody>
</table>

'Percentages are based on those producers that indicated the type of incentive received. Sixty-three percent of the respondents did not indicate the type of incentive received.

Of the Iowa growers, 96 percent indicated that the contract income was sufficient to maintain their facilities. However, only 40 percent felt their income would be sufficient to replace the facilities. Iowa producers were slightly more optimistic than the rest of the North Central region, which reported 91 percent and 30 percent with the ability to maintain and replace their facilities, respectively (Figure 4). If this is the case, it raises an issue with a grower's potential to pay for facilities and acquire the equity necessary to be an independent operator. Growers currently do not feel they are receiving an income high enough to allow them to become independent producers.

Iowa growers reported an average contract length of 16 months which was in line with the national average. This, however, is considerably less than the time required to generate sufficient cash flow to pay back facility loans, as well as to depreciate major facility modifications. This fact could lead to uncertainty for the growers as to the ability to maintain agreements long enough to cover the investments needed in obtaining the contract. Development of a number of contractors in an area would increase the odds of a contract being available. Competition between and survival of contractors is needed for development of an economic segment of the industry.
Marketing

Iowa's contractors were much more likely to shop around for market outlets than were those in other regions of the country. Sixty-seven percent reported shopping around for every sale while only 47 percent of the North Central region contractors shopped around. This compared to a mere seven percent of the East Coast contractors.

The bulk of the East Coast marketings were made by going to the same outlet and receiving the going price (53 percent) and by standing agreement and premium price (36 percent). By comparison, only 9 percent of Iowa contractors used standing agreements and premium price, and 24 percent used the same outlet consistently at the going price (Figure 5).

The ability of Iowa contractors to shop around and rely less on standing agreements may be due to the well-defined and currently competitive packer industry in the state. Iowa and adjacent states have the greatest slaughter capacity and the largest plants in the nation (Hayenga and McDaniel). Iowa currently has surplus packing capacity, but as adjustment proceeds the high cost plants will be forced out of the industry. The level of competitiveness and the ability to shop around for markets may be impacted as plants close.
Summary

The result of this survey indicated that Iowa mirrors the country in many aspects of contract production. Still, there are several features which set Iowa apart: more small contractors and fewer ultra-large operations, somewhat lower investments required to obtain a contract agreement, and the fact that contractors are more likely to shop around for market outlets.

Of concern is that only 40 percent of the Iowa growers indicated they felt they received an income high enough to replace facilities. If this is true, the potential to move into independent ownership is low. This can have dramatic impacts on the hog industry structure.

The tendency to shop around for a market when the hogs are ready for sale indicates the presence of a competitive hog market in Iowa. However, this procedure can slow the movement toward high quality hogs and volume marketing benefits that can be achieved through coordinated industry efforts such as selling groups, etc. These coordinated efforts would specify a more uniform hog than is currently produced and establish production standards for use if a producer is to be part of the group. Returns can be enhanced
through these efforts. In some respects a market that lacks competition could speed the movement toward group selling and incentives for quality pork.

Most contracts offer some level of fixed payments and incentive payments. There are a number of contract alternatives available in some areas. This offers the flexibility to work out the contractual arrangement that would best fit the grower's ability to absorb or the need to shift risks to the contractor. To assure this flexibility a large number of contractors will be needed to maintain the necessary competition.

The heavy share of hog contractual activity in Iowa was in finishing feeder pigs. Of the producers in contractual arrangements, 81 percent were finishing feeder pigs. This compared to 62 percent for the United States. Contractual feeder pig production was relatively light in Iowa; 14 percent of the producers as compared to 30 percent nationally. This represents the labor intensive portion of pig production. The Iowa feeder pig production phase of the industry needs close evaluation to determine its competitive position. With the current relationship, Iowa feeder pig production operations will need to be quite large to fill the demand for feeder pigs and/or the feeder pigs will be produced in other regions and transported to Iowa for finishing.

Grower investment necessary to obtain a contract was low in Iowa relative to other areas of the country. This can provide advantages as well as problems. First, the ease of entry for someone with limited capital is greater with lower capital demands. However, low investment may slow the pace in making necessary adjustments and adapting technology necessary to remain competitive in the industry.

References


Appendix A

Hog Contracting Survey Regions


East North Central (ENC) -- Illinois, Indiana, Michigan, Ohio, Wisconsin

West North Central (WNC) -- Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota

South Atlantic (SA) -- Delaware, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia

South Central (SC) -- Alabama, Arkansas, Kentucky, Louisiana, Mississippi, Oklahoma, Tennessee, Texas

West (W) -- Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, New Mexico, Nevada, Oregon, Utah, Washington, Wyoming

* No responses from this state.

Appendix B

Definitions

Single unit: reported no contracting nor any production outside a single (home-base) operation.

Multi-unit: operates 2 or more separate units but does not do any contracting.

Farm contractor: supplements own output by contracting with 1 or more other producers for farrowing and/or for finishing. Some farm contractors may have extra units of their own production besides their contact units. Any farm contract operation of more than 50,000 head is defined as a contractor rather than a farm contractor.

Contractor: an agribusiness that focuses on contracting (but may have its own production units) and is generally larger and more complex than a farm contractor. "Small contractors" refers to operations producing under 50,000 market hogs annually, "large contractors" those producing over 50,000 head per year.

Contractee (grower): produces pigs or finishes pigs owned by a contractor or farm contractor. May operate more than one unit.

Sow corporation: operations owned jointly by a few finishers to produce pigs that may be for their own finishing or other operators.