

## Opportunities in Coordinated Hog Production

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Hogs have traditionally been raised on independent farms in which most of the needed services were provided by that farm. Resources included ownership of all hogs and facilities, land, labor, management, and risk taking. In addition, the type of production facilities and specific management practices such as the nutrition, genetics, health, handling, and marketing programs were independent decisions.

New technology has added to the complexity of hog production at the same time that larger production units are driving costs lower. This means that it is more difficult for traditional farms to keep up with the required information flows, to implement new technology, and to obtain sufficient size to gain full economies of scale. Coupled with these dilemmas is the advent of technology, including large sow units, enhanced genetics, segregated early weaning, all-in all-out production, and multiple-site rearing.

As a result of these changes, the industry has been thrust into a period of dramatic change in which small farms are rapidly leaving the industry, causing sharp reductions in the total number of hog farms in the country as shown in Figure 1. As small farms decline, they are replaced by much larger and more technologically complex units which are becoming increasingly important in the scope of total production. As an example, farms with an inventory of 1 to 99 animals represent 61% of the total operations in the country, but only 3% of the total inventory. On the other hand, farms that have 2,000 or more animals are only 3% of the total farms, but 51% of the total inventory (Figure 2).

One of the natural responses of traditional producers to these changes is to search for ways to gain the full range of advantages in information collection, technology access and implementation, and size accumulation. Coordinated hog production is one of the alternatives.

### Goals of Coordinated Production Systems

In coordinated hog production, multiple entities form a coalition or alliance to develop a “better” system of production, which may reduce costs, improve pork quality, improve market access, help obtain scale economies, share risk, obtain more information, or obtain better access to technology.

The overall goal of coordination is to structure a system from producer to consumer which creates the greatest pork value relative to costs. Key factors in coordination include the system design, financing, risk and reward sharing, and how the system is coordinated among its participants.

Some of the goals of increased coordination are listed in Table 1. Moving from independent production to more structured, formalized agreements with other participants may allow the producer to gain various advantages in production, marketing, and management. Table 1 is structured such that each goal is followed by a section explaining the basic motivation behind why that goal is desirable, and a section listing key questions for the producer to consider when assessing each respective goal.

As an example, the first goal listed in the table is to access technology. Through coordinated arrangements that provide access to technology, producers may be able to improve efficiency, thereby lowering production costs and quite possibly increasing the overall consistency and quality of their production. Technologies that might be obtained through increased coordination include superior genetics, specialized phased feeding programs, or the ability to move towards multi-site production.

A closer examination of Table 1 will reveal that the goals themselves are highly interrelated and pursuing one often incorporates facets of others in the list. Pursuing access to capital, for example, allows size or technology gains to be made. These interactions should be considered when trying to set up goal priorities for a specific operation.

### **Classifying Current Coordinated Systems**

Table 2 provides some examples of how the current industry is structuring pork systems to attempt to achieve the goals of improved coordination, and to match each individual's resources and skills with others in the system. The first type is independent production, including independent input suppliers and packers. In this traditional system, coordination occurs from signals provided by spot cash markets as well as futures markets. Hog ownership is transferred from one party to the next based upon price signals and independent decisions. In essence, many producers and packers compete in an open marketplace, each making their own decisions of how best to maximize their profits.

The other extreme of the coordination spectrum is total vertical integration, as shown in the last row of the table. In total vertical integration, one firm owns (or at least controls) the system from production through processing. Transfer of hog ownership from producer to processor is not needed since there is only one profit center. All decisions are made internally by the management pool of the organization.

The most dramatic changes in the pork industry are likely not occurring at either end of the coordination spectrum, but rather in all the interesting combinations of coordinated production in between. Here are all types of combinations from simple marketing alliances, to jointly owned production units, to feed-company-directed coordinated production systems. Producer alliances are generally groups of independent producers working together to buy inputs, to market collectively, or to acquire or share information. Generally the alliance does not produce hogs, but rather each individual member continues their independent production. These types of networks have had considerable publicity and interest over the past three years. Family farm cooperatives or corporations by contrast do produce hogs in jointly owned facilities. Commonly a group of producers (or investors) buy shares in production units that may include sow units, gilt multiplication, or cooperative nurseries.

The next four types of coordination listed in Table 2 are generally owned by producers (or investors), but are coordinated by a key facilitator such as vet clinics, feed companies, regional cooperatives, and genetics companies. Vet clinics such as one in Pipestone, Minnesota, have developed systems of production in which they define the building design, genetics, health, and management practices. Investments are then made by individual producers in large sow units, with pigs moving to their own farms for nursery and finishing phases. Pigs may also move to contract nurseries or

contract finishing. Most feed companies have programs that will be described in more detail in the next section.

The final three types of coordinated systems – feed company owned, mega producers, and total vertical integrators – generally build their own sow units or have outside investors build contract sow units. Then they tend to use contract nurseries and contract finishing. There certainly are exceptions, such as Premium Standard Farms, that primarily own all of their own buildings and equipment.

### **Feed Company Programs**

As the pork industry has been evolving, feed company programs and services to the producer have also changed. Recently, however, these programs have taken on more specific characteristics that help producers expand, modernize, and generally make their operations more competitive. These programs reflect concerted efforts by feed companies to be a strong part of the evolving industry by helping their customer base expand and evolve. Typically these programs tie product purchasing to consulting/planning services and highly competitive financing alternatives. General overviews of three different programs are outlined in Table 3, reflecting different approaches taken in this sector.

The variability of feed company programs demonstrates the overall complexity and number of alternatives available in coordinated pork production. Even this limited summary reflects ways producers can achieve a number of the goals listed in Table 1.

Feed companies also coordinate contracting programs. These contracting arrangements typically focus on one of three stages of production (farrowing, feeding, or finishing) with the feed company supplying the hogs, feed, and support services, and the producer providing the facilities, labor, and management. Payment to the producer is commonly determined by a set base, with efficiency bonuses tied to the specific stage of production. Other coordinated arrangements also incorporate planning and support programs, financing alternatives, and/or contracting options.

### **Summary**

The rapidly changing pork industry is providing new opportunities in coordinated production. Producers should examine the goals of coordinated systems to see if they match the objectives of their operations. Much of the current activity in the industry is attempting to find better ways to link all stages of pork production to provide the highest quality pork relative to costs. Many programs and alternatives exist for producers to consider.

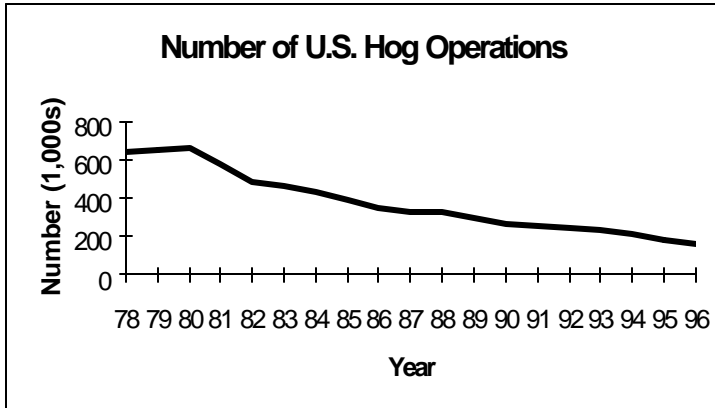


Figure 1.

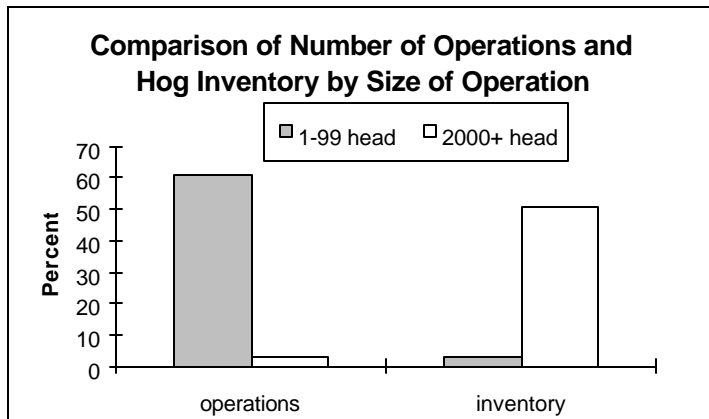


Figure 2.

Table 1. Goals of increased coordination for producers.

Goal	Why	Some Key Questions
Access technology	Reduce costs, increase revenues Improve efficiency Improve consistency	Which technologies offer greatest returns? Which technologies are most appropriate in my situation? Which companies offer the most appropriate technologies?
Access markets	Pool production to gain volume and consistency premiums Gain additional marketing tools, expertise	What are the price advantages? On what are the price advantages based? Is there a quota? What are the consequences if the quota is not met?
Access information	Make use of partner's expertise and services Become part of a larger information base	What consulting services does the partner provide? To what extent are the consulting and information services priced into other partner products?
Access capital	Locate capital that otherwise may not be available Expand and/or modernize facilities Pursue higher return on equity	To what extent must debt financing be relied upon? Have the financing terms improved relative to not pursuing contracting or other coordinated arrangement?
Share risk	Protect against low prices Add stability to cash flows, income, and product flows Receive potentially improved financing terms	How is risk divided? Are upside profits shared as well as downside risk? Are the other links in the production chain dependable? Though upside profits may become restricted, to what extent is that offset by improved capital and financing terms?
Increase size - gain economies of scale	Obtain discounts and premiums through larger scale purchasing and marketing Lower per unit costs of production	At what levels will discounts and premiums be granted? By how much can I increase throughput?
Specialize	Focus on one area of production Manage that area of production intensely to add volume and gain efficiency	How much independence am I willing to yield? What other operations must be given up? Which stage of production is most appropriate to specialize in based on my interests and situation?
Increase response time to new opportunities	Stay more competitive as markets adjust to consumer demand More alert to new markets	How responsive is the partner to changing demand and developing markets? In what ways does that awareness benefit me?
Position operation to achieve long term goals, profitability, viability, and growth	Develop a progressive rather than defensive approach to shifts in the structure of the pork industry	What will the industry look like in 5 years? 10 years? Is it wiser to exit, remain independent, or position my operation as part of a coordinated system?

Table 2. Forms of coordination, how coordinated, and hog ownership.\*

Type	A Few Examples	How Coordinated	Hog Ownership
Independent producer, input suppliers and packers	Traditional industry	Market signals in spot markets	Producers
Producer Alliances	Buying networks Marketing networks Information networks	Network manager, with producer board	Producers
Family Farm Cooperatives or Corporations	Sow units Gilt multiplication Coop nurseries	Individual manager, with producer board	Producers in coop or corp.
Vet Clinic Directed	Pipestone System Minn-Iowa Vet Clinics	Vet Clinic with producer board	Producers
Feed Company Directed	Nutrena, Wayne, Purina, Kent, Moorman's	Feed company	Producers
Regional Cooperative Directed	Farmland, Land O'Lakes, Michigan Livestock Exchange, Countrymark-Growmark	By regional management, with input from producers	Producers
Genetics Company Directed	Dekalb Swine Breeders PIC	Genetics company with producers	Various relationships
Feed Company Owned	Cargill, Continental, Purina	Feed company, with producer input	Feed company
Mega Producer-Packer Aligned	Murphy Family Farms Carroll's Foods Tyson's Foods	Corporate managers with packers	Mega-Producers
Total Vertical Integration	Seaboard Coast Premium Standard Farms Circle 4-Utah	Corporate managers - single firm control	Integrator

\* These are meant to serve only as examples. There are many firms with various programs. Please check with individual firms for specific programs.

Table 3. Services of coordinated feed company programs.\*

Company 1	Company 2	Company 3
Cash flow projections	Project design and financial support	Genetic improvement assistance
Low interest feed financing	Facilities and equipment support	Business plan development to assist obtaining financing from traditional sources
Interest free breeding herd expansion loan	Genetics consulting	Marketing services and alliances
Loan to convert to or expand bulk feeding	Nutrition and herd health programs	Record keeping services
Expansion loan guarantee program	Marketing services	Nutrition programs
Engineering consulting services	Production and financing data analysis	Animal flow services

\* Certain qualifications must be met to be eligible for most programs.