

Comparison of Pig Flow and Labor Needs in Two Organic Pork Production Systems

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Introduction

Organic pork production is a relatively small but growing market. It represents a market that is showing rapid growth. Relatively little is known about resource needs for organic pork production. Moreover, organic pork production has seasonal production problems where it is more difficult to keep pigs alive during winter farrowing. There are pressures for seasonal production of organic pork and only farrowing pigs when it is easiest to save the pigs. However, this system creates an uneven labor need problem as well as flow of fresh organic pork.

This report evaluates pig flow and labor needs for two organic pork production systems. One system is a seasonal organic pork production system, whereas the other system is a continuous organic pork production system. The continuous farrowing system has six groups of females with each farrowed two times per year. Farrowing occurs each month. The seasonal system has spring and summer farrowing only. Farrowing occurs in April, June/July, and September. One group is farrowed in April and again in September/October. The other group is farrowed in June/July. The April and September farrowings are sows retained from the June/July gilt farrowings of the prior year. The seasonal system has two groups of 80 females, whereas the continuous system has six groups of 27 females each.

This report describes the flow of pigs through the two systems, the breeding herd that is required for each system, and how the two systems work. Pig marketing and labor distributions also are provided for each system.

Production Flow

The seasonal system (summer farrowing only) is a system with four farrowings annually with three groups of 80 females. Two groups are gilts that farrow in June and July. The third is sows that farrow in April and in September/early October. Figure 1 demonstrates the movement of hogs within the seasonal system. The system is designed to farrow two groups of gilts, one farrowing in June and the second farrowing in July. After weaning, 50% of the gilts are retained to establish a group of sows to be farrowed two more times, the April and the September/October time periods of the following year. The gilt groups are from feeders retained from the previous years June and July farrowings. Finishing is in hoop buildings.

The gilts from the previous June and July farrowings are gestated and bred in the hoops after the finishing hogs from that group are sold. Sows are gestated in 12 by 20 ft. portable sheds. All sows are sold after the third litter. Farrowing occurs in individual sheds on hay acreage or on acreage with recently harvested small grains. Market hogs are sold at 250 lbs. The continuous system has six groups of 25–30 (average of 27) females farrowing twice per year. Farrowing occurs every month. Figure 2 demonstrates the pig flow of the continuous system. This system creates a relatively even pig flow and labor distribution because the sows are farrowed every month. During the winter, farrowing occurs in individual insulated huts on an impermeable pad such as asphalt or concrete so that snow removal is made easier and mud problems are reduced. Finishing and breeding occurs in hoops, whereas gestation occurs in 12 by 20 ft. portable sheds. Market hogs are sold at 250 lbs.

Market Hog Flow

A major problem with the seasonal production system is the flow of market hogs. There is not a continuous flow of hogs to market to provide a uniform supply of fresh pork. Figure 3 provides information on the number of finishing hogs sold by month for the seasonal and continuous systems. This figure clearly shows that for the seasonal system there is a shortage of organic pork production from May through August and a relatively large supply in January and December. There are not any organic pigs marketed in June and July. This system underscores the problems with the seasonal system in providing the processors as well as consumers a more uniform quantity of fresh organic pork products. The processor does not have a constant flow of slaughter hogs and thus there is not a consistent supply of fresh pork for consumers. The continuous system has a relatively constant pig flow, which would provide a more even flow of fresh pork.

Labor Need Distribution

The distribution of labor needs is also an important consideration in livestock production. The seasonal production system uses 10 hours of labor per litter on average per litter, whereas the continuous system uses 12 hours per litter during the summer and 14 hours per litter during the winter. However, the labor distribution is considerably different during the year because the bulk of the seasonal farrowing hours is spent during the summer. Continuous organic pork production can provide a more even distribution of labor needs. Figure 4 provides the distribution of labor needs per day by each month for the two systems. Although the labor required is greater for the continuous system, this could be an advantage if the

producer's labor pool is underutilized. Additionally, the labor needs are more uniformly distributed throughout the year. Labor needs ranged from 5.1 to 12.7 hours per day in the seasonal system, whereas the continuous system has 10.5 hours per day during the summer and 12.2 during the winter. This provides the potential for added revenue for producers by more fully using their existing labor. It is important to use as much of the available labor as possible because it is not a storable resource. The seasonal system exhibits a more variable labor need. The seasonal system would be beneficial if it were possible to coordinate it with offsetting labor needs during the low labor need time period (November through February).

Summary and Implications

The amount of labor and the labor distribution associated with producing organic pork in a seasonal or continuous production system is an important issue. Labor for the continuous system was slightly more than one-half hour per pig greater for the seasonal production system. Labor represented the largest cost difference between the two systems with an increase of \$5.42/pig for the continuous system compared with the seasonal system. This increase in cost may be both an advantage and a disadvantage

depending upon whether the labor in the operation is being fully used. Labor is more evenly distributed throughout the year for the continuous system. The range in labor needs is 10–12 hours/day for the continuous system. For the seasonal system, the range is from 5–13 hours/day; a more variable labor need. If there are alternative uses for the labor in the seasonal production system the uneven labor distribution would not be a critical issue.

The flow of pigs to market is much more even for the continuous system ranging from approximately 155 to 181 pigs per month; a difference of 14%. For the seasonal system, it ranges from 0 to 420 pigs per month; a much larger difference. For the seasonal system there were two months when no hogs were marketed; two other months produced about 50 pigs with the seasonal system. Moreover, 40% of the fresh pork is available in December and January. The continuous system provides a more consistent supply of fresh pork throughout the year. For the seasonal system, there will be a tendency to overproduce with the summer farrowing groups and underproduce during the winter farrowing season. Premiums can be a mechanism to provide for a more even flow of fresh organic pork. These premiums would need to reflect seasonal production cost differences.

Figure 1. Pig flow for seasonal (summer farrow) organic pork production system.

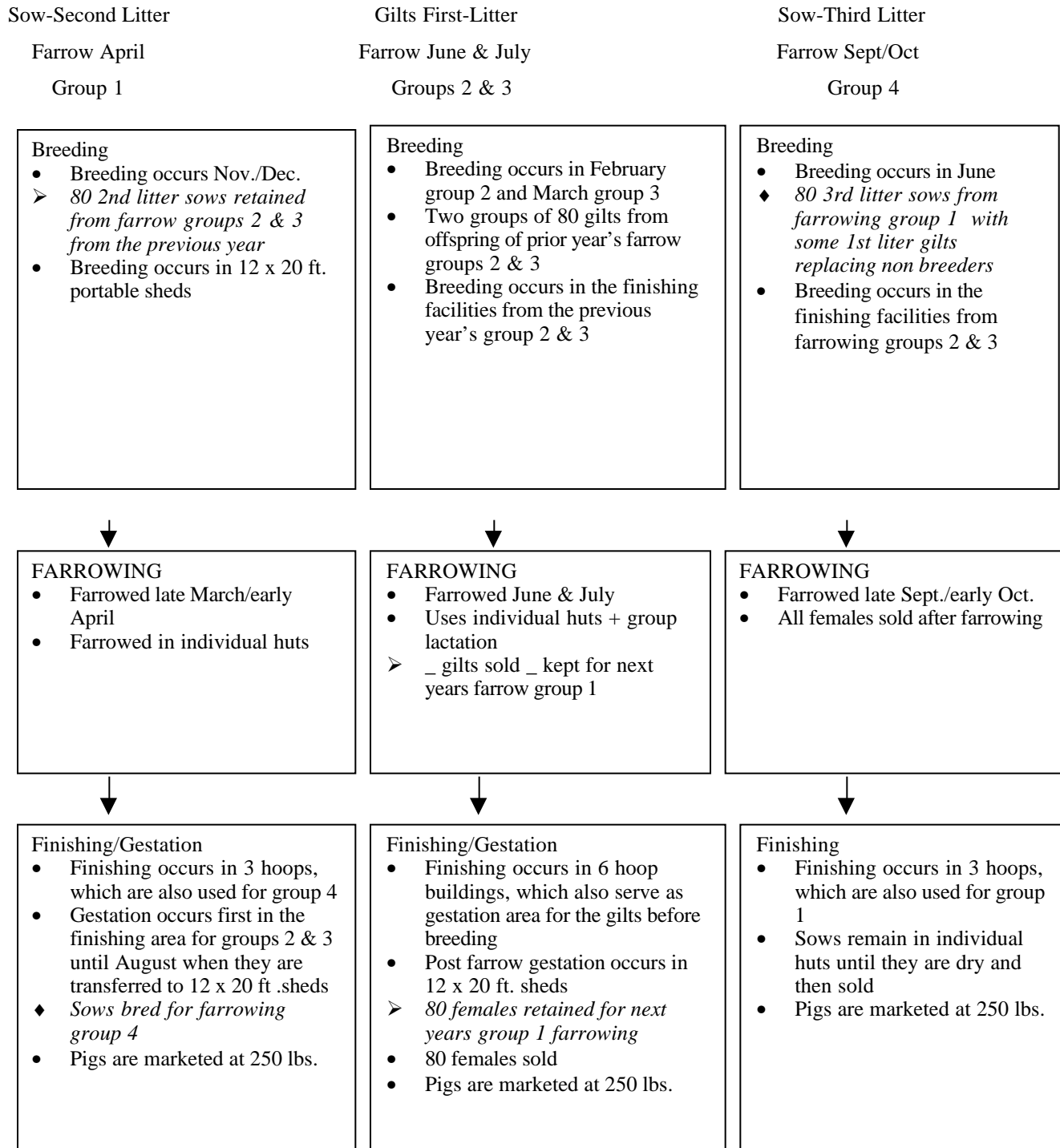


Figure 2. Pig flow for continuous organic pork production system.

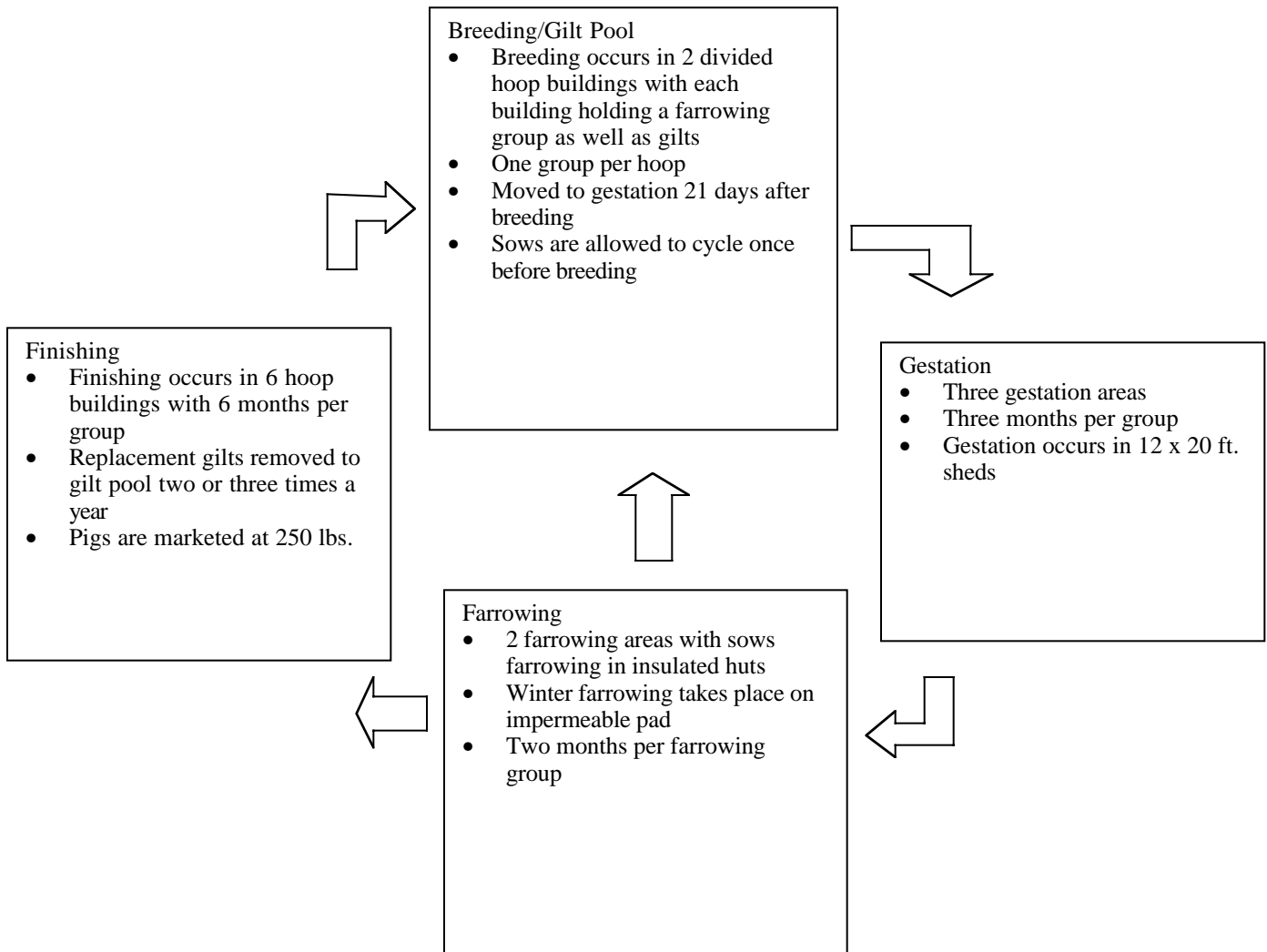


Figure 3. Number of organic hogs sold in continuous system and seasonal summer only farrow production system by month

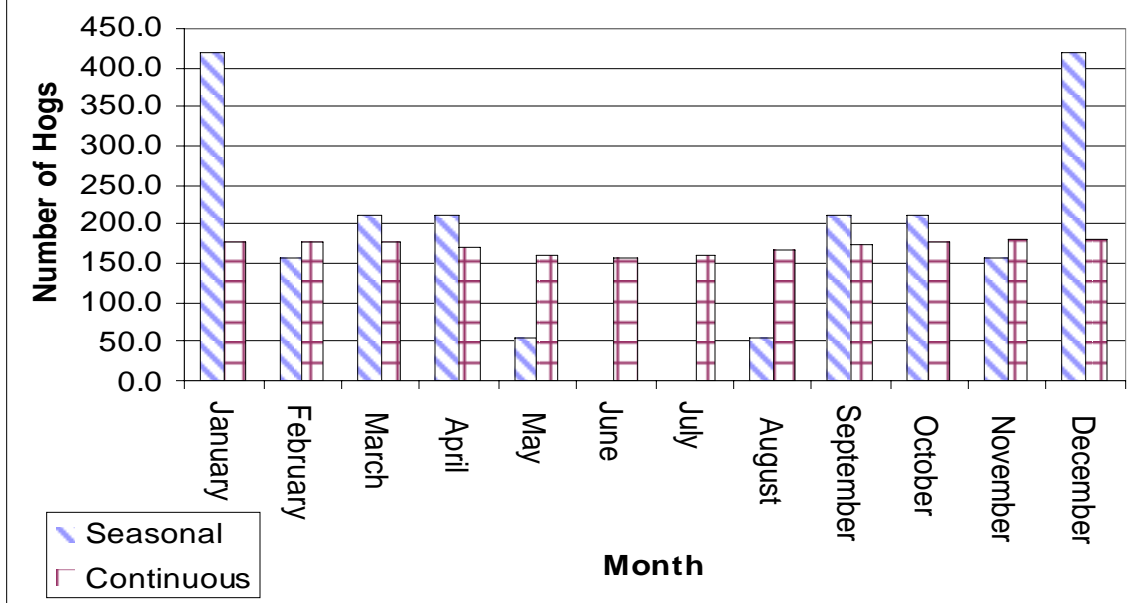


Figure 4. Labor hours per day for continuous farrowing and seasonal summer farrowing organic pork production

