

## Scheduling Pig Flow

IPIC NPP510 2007

Authors  
Peter J. Lammers  
David R. Stender  
Mark S. Honeyman

Scheduling pigs in groups or batches of the same age (and hopefully the same weight) is desirable because all-in-all-out can be practiced to stop disease spread, pigs can be fed optimally to meet their needs, labor and management can be streamlined, facilities can be kept full (not half empty or overcrowded) and marketings can be planned. Groups of market pigs are primarily set by the breeding dates of sow groups that farrow them. Several factors determine the schedule of pig flow.

### Factors determining pig flow schedule:

- ◆ Reproductive cycle: Gestation length 114 days +/- 3-4 days, Estrus cycle 21 days +/- 2 days.
- ◆ Weaning age\*: from 10 to 70 days, for niche production usually >35 days.
- ◆ Wean-to-breed interval: about 3-6 days or more (shorter time the longer lactation, longer time when sows are very thin).
- ◆ Farrowing rate\*: the percentage of sows that farrow compared to those sows available for breeding (analogous to ultimate conception rate).
- ◆ Breeding span\*: the number of days that a group of sows is allowed to be mated.
- ◆ Number of pigs weaned per litter\*: varies widely from 1-15 pigs; a good goal is 8-10 pigs.
- ◆ Clean up days\*: time allowed to clean facilities and let them sit empty.
- ◆ Growth rate\*: pigs go to market at approximately 180 days of age.
- ◆ Facility capacities\*: number of farrowing spaces per group, number of farrowing rooms, nursery and finishing pig capacities (groups and number of

groups that can accommodated at one time).

\*Factors noted with an asterisk are at least somewhat controlled by the producer. Many of these factors may also be specified by niche market requirements. All these factors contribute to the Interval Between Farrowing or IBF.

### Example Systems

There are three basic systems followed by pork producers. These of course are often adapted to match the operation.

#### 1) One Litter

This approach farrows only gilts once per year. The sows are sold after weaning their first litter or after they are dried up. They are not farrowed a second time. Replacement gilts are saved and bred to farrow at the same time the next year. It is typically used with pasture or outdoor production. This system has the advantage of simplicity and keeping groups of pigs separated seasonally, but has the disadvantages of farrowing gilts: smaller litters, lower immunity, non-synchronized estrus, and cost of developing gilts. This system is most profitable when there is a good market for the weaned sows.

#### 2) Two Litter

This system farrows a group of sows twice per year about six months apart, traditionally spring and fall, but other seasons will work. With planning the farrowings can be spaced six months apart and occur at the same time each year, if desired. This system allows the sows to be rebred and to produce many litters (2/year).

### 3) Multiple Groups

Two or three sow groups can be kept on one farm to produce four or six batches of pigs per year. One farrowing facility could handle 3 sow groups/6 farrowings per year with typical 40+ day weaning age (Table 1). More farrowing facilities would be needed for farms with four or more sow groups.

#### Example schedule

An example of a pig schedule is shown in Table 1. It is based on a 10-11 day breeding/farrowing period and a 43-44 day weaning age for the oldest pigs and a 33-34 day weaning age of the youngest pigs. After weaning, the sows are allowed to cycle once (21 days or 3 weeks) before they are rebred. The schedule can be used for 1, 2, or 3 groups through the same farrowing/lactation facility. There are at least three days between weaning date and the next farrowing. A software program that generates breeding/farrowing schedules is available from the Iowa Pork Industry Center. Contact your ISU Extension swine field specialist for more information.

#### Other Strategies

It is important to have full farrowing groups to keep pig flow and income steady. One common problem of small producers is breeding failures resulting in less than full farrowing groups. Here is a simple approach to keep farrowing groups full that uses extra gilts to keep the groups full.

Make replacement gilt selection from market pigs the same day that you wean pigs from the sows. Choose plenty of gilts, more than you will need. Expose the gilts to a boar every day. Tag and record every gilt that comes into standing heat/estrus. Send the gilts that do not cycle in 10 days to market. In the next cycle, breed the gilts with the sows that were weaned 21 days earlier. Make sure to sort off plenty of gilts

to ensure a full farrowing group, even if farrowing rate is low. Pregnancy check and sell extra gilts (even if pregnant) as heavy market pigs. If you want 20 sows to farrow, try to have 20 to 22 pregnant at the pregnancy check.

Another strategy in sow management and pig flow is to “self-feed” during the long lactation. The dark breed sows may come out of lactation too fat. Use gestation and the skipped heat cycles to bring sows back into condition. Limit their feed during this period, but keep them satisfied by feeding high forage diets (ground hay for example). A sow that is moderately thin (having a 2+ condition score) at farrowing will be hungry during lactation and will eat more feed when she needs it.

**Table 1. Example pig schedule.**

	Group 1	Group 2	Group 3
3wk after wean date	6-Oct	22-Nov	29-Jan
Start breeding	10-Oct	26-Nov	2-Feb
End breeding	20-Oct	6-Dec	12-Feb
<b>Farrow date</b>	<b>1-Feb</b>	<b>20-Mar</b>	<b>27-May</b>
End farrow	11-Feb	30-Mar	6-Jun
Wean @ 43 day lact	16-Mar	2-May	9-Jul
Skip 3 wk start heat checking	6-Apr	23-May	30-Jul
Start breeding	10-Apr	27-May	3-Aug
End breeding	20-Apr	6-Jun	13-Aug
<b>Farrow date</b>	<b>2-Aug</b>	<b>18-Sep</b>	<b>25-Nov</b>
End farrow	12-Aug	28-Sep	5-Dec
Wean @ 44 day lact	15-Sep	1-Nov	8-Jan
Skip 3 wk start heat checking	6-Oct	22-Nov	29-Jan
Repeat dates next yr			

#### Additional Resource

U.S. Pork Information Gateway

<http://pork.porkgateway.org/web/guest/home>