

## Batch Farrowing Place

### How many sows should I breed this batch?

The farrowing places per batch makes it easy to determine what the minimum number of females (sows and gilts) that will be required to be mated. Note the word is minimum to satisfy the farrowing rate %.

Farrowing places	10	Sows	
Farrowing rate %	87	%	
Number to breed	12	Females	Calculation: Roundup(Farrowing places / Farrowing rate %)

The major difference between this simple calculation and majority of pig recording systems is the fact that the number of sows required has to be rounded up to a whole sow. Majority of pig recording systems work on averages, but nature does not. A farrowing place is either full or empty, it cannot be filled on "average".

This provides a minimum number of females to breed; the concept does not consider at this stage if you over-breed against this farrowing rate % - it only makes it more likely that the farrowing place will be filled.

With this simple spreadsheet we can look at some realities of pig farming.

If we look at a variety of farrowing rate % with different batch farrowing places.

#### Effect of different farrowing rates on minimum bred females required per batch

Farrowing places	Rate of change	Batch Farrowing Places						
		10	20	30	40	50	60	
	10	90	12	23	34	45	56	67
	88	88	12	23	35	46	57	69
	86	86	12	24	35	47	59	70
	84	84	12	24	36	48	60	72
	82	82	13	25	37	49	61	74
	80	80	13	25	38	50	63	75
	78	78	13	26	39	52	65	77
	76	76	14	27	40	53	66	79
	74	74	14	28	41	55	68	82
	72	72	14	28	42	56	70	84
	70	70	15	29	43	58	72	86

The most important realisation is that the farrowing rate can change quite substantially, especially in family farms, without any change in the batch minimum females needed to be bred. The farrowing rate as a specific number only becomes more significant with very large farms.

This concept can be examined the other way round. Given a set number of bred sows what has to be the minimum farrowing rate to ensure that all the farrowing places are filled.

**Minium farrowing rate required for different number of females bed per batch**

		Batch Farrowing Place					
		10		20		30	
Rate of change	10	Females	FR %	Females	FR %	Females	FR %
		11	91	22	91	33	91
		12	84	23	87	34	89
		13	77	24	84	35	86
		14	72	25	80	36	84
		15	67	26	77	37	82

Rate of change **1** sow

Thus: on a typical family farm of 10 farrowing per batch – if this was a weekly batch this is equivalent to around a 250 sow unit. The farm should mate at least 12 a batch (week) as minimum. Expecting the farrowing rate to never be below 91% is very unlikely, therefore only mating 11 or less, is going to end up with an empty farrowing place.

On this farm the farrowing rate (on average) will be 87% - the midpoint between 91 and 84. It cannot change. If the farrowing rate falls below 84% - in the summer for example, the farm needs to mate a minimum of 13 a batch (week).

With a larger batch the farrowing rate has more impact over the absolute number of minimum sows required. Thus for a family farm practicing 3 week batching – the same 250 sow unit, now farrows 30 sows a batch. This can allow for some cost control of sow numbers as slightly fewer sows are required if you can maintain your farrowing rate. Note with 84% the number is still 36 (12\*3) and this would still be the optimal minimum number of sows to breed per batch.

This aspect is very important to grasp as much is written regarding improving the farrowing rate and the efforts required to do this. But will this have any impact on your farm – you need to look at this carefully as most of the pig industry aiming to farm above 90% farrowing rates is just not practical. The sow is not what matters - it is filling the farrowing place and selling pork!

The farrowing rate is only important to help the farm fill the farrowing places. It is not a payment point – nobody thanks you for a 95% farrowing rate but insufficient pigs sold.