# Batch finishing place Finishing space requirements

In any batch programme the aim is all-in/all-out. To achieve this across the whole of the pigs growing period is a key component to modern pig farming. In an ideal world the pig flow should start with the finishing herd and the space available and then work backwards through the flow to the gilt pool. However, in practice this proves to be difficult.

Part of the problem is seasonality associated with pig growth - they grow slower in the summer than in the winter, thus the space required is not constant throughout the year.

Then we have the "problem" of variation within the group. Many systems will produce targets for pig growth, what they are predicting is the average pig - not the last pig to leave the farm from a batch. On many farms the time from the first bacon pig to leave the batch to the last takes 6 weeks. On some farms it is much longer.

Then how much time do we allow for cleaning the finishing (and other) buildings.

We have issues with mortality and disease outbreaks, swine influenza can significantly slow down the growth potentials.

For this and other reasons, the batch farrowing place can be seen as a more predictable starting point in predicting finishing output and requirements. Note floor space is unobstructed floor space - the space available for the pigs (eating, sleeping, exercise and dunging). It does not include, walls, feeder space or passageways.

# Comments from examination of the table on the next page:

"Space" can be considered in two forms:

The number of batches or rooms required to achieve all-in/all-out

The unobstructed floor space required in each of these rooms/batches.

The number of batches required is depend on the batch time and the age of the pigs at each respective weight. As the batch time (weeks) increases, less actual batches are required and increases in performance can be accommodated without the need for new buildings.

When the farm considers changing the number of farrowing places, this has an impact on the whole farm - all the way to the slaughterhouse - it impacts the size of the truck taking the pigs to slaughter!

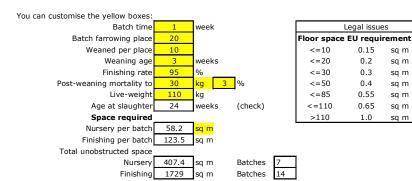
Improving weaning numbers has moved the industry forward tremendously. But with all progress, there is a cost-increasing the numbers weaned also means that the farm needs to provides more room in each of the batches - to accommodate the extra pigs (and their weight). Note this also applies to the provision of feeders space, waters, ventilation rates etc., not just to the floor space! Increasing the numbers weaned by one pig a litter, in our default model, increases the finishing space per weekly batch by  $12 \text{ m}^2$  per batch.

Changing the weaning age makes a significant impact on the number of batches required, the relative cost of farrowing housing and the extra feed required for young nursery pigs vs the cost of the nursery or even wean to finish building needs to be to taken into consideration - and this does not include the additional advantages of 4 week weaning vs 3 week weaning. Note in the EU 3 week weaning is illegal and not a consideration anyway.

Note the impact of crossing the average live-weight of 110 kg upper limit (set by legislation). The space required per pig increases dramatically from  $0.65 \,\mathrm{m}^2$  to  $1.0 \,\mathrm{m}^2$ . This is covered by EU 91/630 legislation.

# Finishing pigs space requirement

If we start with our standard farm's output calculator:



This allows us to simply build an entire farm, which will be illustrated in another paper.

It allows again some What if? Questions to be asked:

### What if I changed my batch time?

	,,	·						_
_	Rate	of change 5 kg	100	105	110	115	120	kg
	1 week	Batches required in finishing	13	13	14	14	15	Batches
Batch		Total space required in finishing	1606	1606	1729	2660	2850	sq m
Time	2 weeks	Batches required in finishing	7	7	7	7	8	Batches
in Weeks		Total space required in finishing	1606	1606	1729	2660	2850	sq m
	3 weeks	Batches required in finishing	5	5	5	5	5	Batches
		Total space required in finishing	1606	1606	1729	2660	2850	sq m
	4 weeks	Batches required in finishing	4	4	4	4	4	Batches
		Total space required in finishing	1606	1606	1729	2660	2850	sq m

#### What if I changed the number of batch farrowing places?

Rate of change 5 10 15 20 25 204 306 509 Total space required in nurser 407 Total space required in finishing 865 1297 1729 2161

### What if I changed my numbers weaned?

1	9 9.	5 10	10.5	11	
quired in finishing 1	.4 14	14	14	14	Batches
equired in finishing 15	56 164	3 1729	1815	1902	sq m
					-

## What if I changed my weaning age?

Batches required in nursery Total space required in nursery Batches required in finishing Total space required in finishing

3	4	5	weeks
7	6	5	Batches
407	349	291	sq m
14	14	14	Batches
1729	1729	1729	sq m

30

611

2594

places

sq m

sq m

sq m

sq m

sq m

sa m

sq m

sq m

sq m

### What if I changed my live-weight?

ate of change	1	kg		
В	atches	required i	n finishing	
Tota	space	e required i	n finishing	L

	108	109	110	111	112	
g	13	14	14	14	14	Batche
g	1606	1729	1729	2660	2660	sq m

### What if I changed a number of targets?

	Current
Batch time	1
Batch farrowing place	20
Weaned per place	10
Weaning age	3
Nursery pig move	30
Live-weight	110
Batches nursery	7
Total space required in nursery	407
Batches finishing	14
Total space required in finishing	1729

Proposed				
1	weeks			
25				
10.5	pigs			
3	weeks			
30	kg			
111	kg			
7	Batches			
535	sq m			
14	Batches			
3491	sq m			