

Lean Production in the Pork Industry (Helping Pig Farmers Increase Efficiency)

Farmers are great examples of ENTREPRENEURS – working within the agrifood industry to produce food/energy/environmental benefits in the most efficient way possible.

Whilst traditionally farmers have remained on their family farm, it is now more common for those working within the agrifood industry to work away from home, as new technology enables food to be produced underground (salad leaves), in standalone units (mushrooms) and on top of buildings (bee hives).

Farms, like all businesses, must be well managed to have a future, by maximising revenue and minimising costs. Ensuring that production processes are efficient will help increase the chances of success, but what does that look like on a pig farm?

There are approximately 10,000 pig farms within the UK, producing over 600,000 pigs each year, the majority of which are sold within the domestic market. However, we also import over 400,000 pigs each year from both EU and non-EU countries, indicating that there is an opportunity for growth within the domestic market, which would also reduce food miles and increase food security.

The pork industry is worth over £4 billion, the majority of which is processed meat, i.e. sausages and mince rather than the more expensive cuts such as pork loin.

As you watch the videos within the 'Implementing Kaizen in Pork Production' presentation, you may hear some new terms that you have not heard before:

- **Weaners** Piglets are weaned at approximately 4 weeks old, by which time they will have tripled their birth weight.
- **Sows:** Mature female pigs are pregnant for 3 months, 3 weeks and 3 days.
- **Boar:** Mature male pigs.
- **AI:** Artificial insemination, placing semen into the uterus of a female to cause pregnancy.
- **Soil health:** The quality of the soil, the greater diversity of organic matter and microbial activity, then the better the soil and ability to support plant growth.
- **Floor feeding:** placing feed directly onto the ground rather than into troughs.
- **Farrowing:** When a sow gives birth to a litter of piglets.

Now you've learnt more about pig farming, you will appreciate that there are different approaches and that no two pig farms are the same. Can you answer the following questions:

1. In order to raise healthy pigs, what do farmers need to provide?

2. List the arguments for and against indoor pig units – consider the needs of different stakeholders and the reality of setting up a new indoor unit.

For

Against

3. Why do you think food assurance schemes such as the [Red Tractor](https://redtractorassurance.org.uk/standard-categories/pigs/) (<https://redtractorassurance.org.uk/standard-categories/pigs/>) are important for...
- a. Consumers
 - b. Producers
4. When beginning to implement Lean Production, Neil Feddon (<https://youtu.be/1IZ1Ppo8U-Q>) recommends a 'waste walk' take place. How and why does he recommend this happens?
5. In pairs, think about the last time you made a cake, take a 'waste walk' and consider whether you could have been more efficient? How would you have increased efficiency in the following areas:
- Transport – Did you move the mixer unnecessarily? Were your utensils where they were needed?
 - Inventory/stock – Were all of the ingredients in store worth storing? Were some of them out of date and taking up space?
 - Motion – Did you move unnecessarily and could your route have been better planned? If your ingredients were all kept together, would that be quicker?
 - Waiting – Was time wasted whilst you were waiting, maybe for the oven to warm up, and could you have done something else while you waited?
 - Overprocessing – Could the recipe/process be simplified? Could you use a cake mix rather than individual ingredients to speed up your cake making?
 - Overproduction – Do you have enough cake tins for all of your cakes, or do you need to buy more or slow down your cake making until some have been eaten?
 - Defects – Are you using the most efficient machinery, and are you using poor-quality ingredients which means that some of your cakes are poor quality?
 - Skills – Are you making the most of your cake-making skills? Could you be more creative?
6. Mark Feddon then recommends focusing on the quickest, easiest and most beneficial opportunities to reduce waste. Why do you think this is?