

Pastured Pork

A Study on the Effects of a Pasture on a Pigs Growth



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Introduction to Pastured Pork

Pigs were meant for the pasture, where they can utilize their instincts to the best of their abilities. Foraging, rooting, nesting, and wallowing are behaviours that pigs are born with.

Conventional pork operations tend to not allow pigs to explore their instincts. Confinement can lead to various problems such as frustration, fighting, tail biting and abnormal behaviours such as head weaving, bar biting and chewing on an empty mouth. Such behaviour is how a pig copes with being confined their whole lives. With a nice plot of land for a pig to graze on, there will be enough soil and grass to keep them busy. The only thing they have to cope with on a pasture is the fresh air, grass and soil.

Of course, pasturing pigs comes with it's own set of obstacles. The sun can offer warmth, but also a sunburn! High winds and rain can make a pasture seem unbearable at times, and even a pasture rich in nutrients can be rich in parasites. When thinking about getting a pasture project up and running, it's best that one should go over every possible aspect of it to ensure that the animal will lead a productive, healthy life. Many problems that can occur can also be easily prevented with a solid, well researched plan. There are never any guarentees that it will all work out perfectly, but you can at least guarantee that there will be less to worry about!

When preparing to pasture, you must provide the basic necessities. Housing plays a large role as it can influence the pig's behaviour, health and weight gain. The weather can create health problems, so it is best to have a dry place protected from the elements for the pigs to have access to. And it's best to give enough space per pig, and to not overcrowd. Of course, these are just the basics. There are many other things to look into such as feed rations, the extra labour, what the pasture consists of, and regular rotation.

A-frames, hoop houses, and barns with free-run access are some of the many ways of allowing pigs to get up and out. There are many things to consider when choosing which one is best, as they all have their own advantages and disadvantages. For Murray and I, we took to putting one together from scratch, so we had to wait and see what pros and cons were to come about.

Purpose of Project

We would like to see what impact the pasture will have on a pig's growth, meat quality and feeding requirements.

Materials and Methods

The Pasture Pen

The pasture pen is 18.5 x 19 ft. Two 6" x 6" square skids are connected with two more 6" x 6" square beams which forms the base for the pen. The skids and beams are made of hemlock which is naturally rot resistant. The walls were both used plastic and metal penning. We built a platform in a corner with a tent trailer roof above it to provide adequate shade and shelter. The water trough was made out of a cleaned out peroxide barrel, cut in half and attached to a wooden base to prevent tipping. A single feeder was attached to the side of the pen. A cable was hooked on to allow the pen to be moved ahead with the tractor.

A month and a half after the pigs were put out on pasture, the cold, autumn weather brought cold rain with it. The two solid walls and roof in their sleep area weren't good enough to keep out rain, so it was flooded and the pigs were forced out. We braved the cold weather and added another wall, and attached boards in trouble areas where rain was getting in. This did a very good job for the remainder of the trial.

Selecting the Pigs

It was decided that 7 pigs would be able to live in the pasture pen. To ensure that the pigs would be finished before the onset of cold weather, they were chosen based on their weight. Their average weight going out on pasture was 56 kg. An indoor pig was also tagged to compare weight later on in the study.

Moving the Pen

By hooking the back of the tractor up to the cable attached to the pen, we were able to pull the the pen ahead to allow the pigs to access fresh, green pasture. This would take place daily, usually at noon. The water trough was not attached so it gave us a chance to empty it out as well. The pigs had to be controlled and guided forward so that they wouldn't get caught on the corner braces, or the back of the pen.

Feed

The feed consisted of corn, wheat, barley, and a supplement which contains proteins, minerals and vitamins. Bags were weighed out at 25 kg per bag in order to measure their intake. We started out by giving them a few scoops of feed, 3 times a day,

and slowly adding more. After a week it seemed that there wasn't a way of telling if they were all getting enough to eat. We attached a self feeder to provide feed all the time.

Pasture

The pasture consists of clover, alfalfa, timothy, and other herbs and vegetation that comes naturally. The pigs were always grazing lush forage for easier intake and nutrient availability.

Finishing weight

To measure the pigs weight in the pasture, we attached a scale to the bucket of the tractor and lowered it into the pen. They were so curious about it that some actually jumped right on! The indoor pig^{was} also weighed.

Results and Discussion

The trial period began on July 22nd and ended September 19th for a total of 58 days out on pasture.

Finishing Weight

Average weight of pastured pigs : 101.8 kg (a growth of 45.8kg)
weight of indoor pig : 112 kg (a growth of 56kg)

Weight(kg) of all pastured pigs are 90, 95, 95, 104, 108, 109 and 112.

Feeding Requirements

Average of 185.7 kg of feed consumed per pig.

The outdoor pigs took in 4kg of feed for 1kg of gain. The indoor pigs take in 2.9 kg of feed for every 1 kg of gain.

It seems they were able to reach a satisfactory finished weight by consuming 1.1kg more for every 1kg of gain. The smallest pig weighed 22kg less than our heaviest) Perhaps some utilized the pasture better than others, and thus relied less on the feed, while some took to liking the feed a bit more than the pasture.

I was almost positive that the pasture would contribute to their weight gain, and help them consume less feed. These results almost make me think that the pasture helped them lose weight! I'm sure there are many reasons why they required more feed. These pigs appeared to be much more active than their indoor counterparts. They would spend most of the day rooting around and playing. It wasn't often that you'd see them lying around most of the day, as I see in the barn.

Quality of Meat

When the meat was being cut, the butcher told us that he was not able to see any difference in meat quality when compared to the indoor pigs.

When cooked, the pasture meat appeared darker than the indoor meat. When I tasted it, it tasted just as great as the indoor pigs. Although there isn't much of a difference in taste, the real draw is that it is raised on the pasture. People are willing to go out and buy a product that may not even taste that great, so long as it's better for your health. In this case, the meat retains its great taste, and is higher in nutrients to boot!

Pros and Cons of the Project

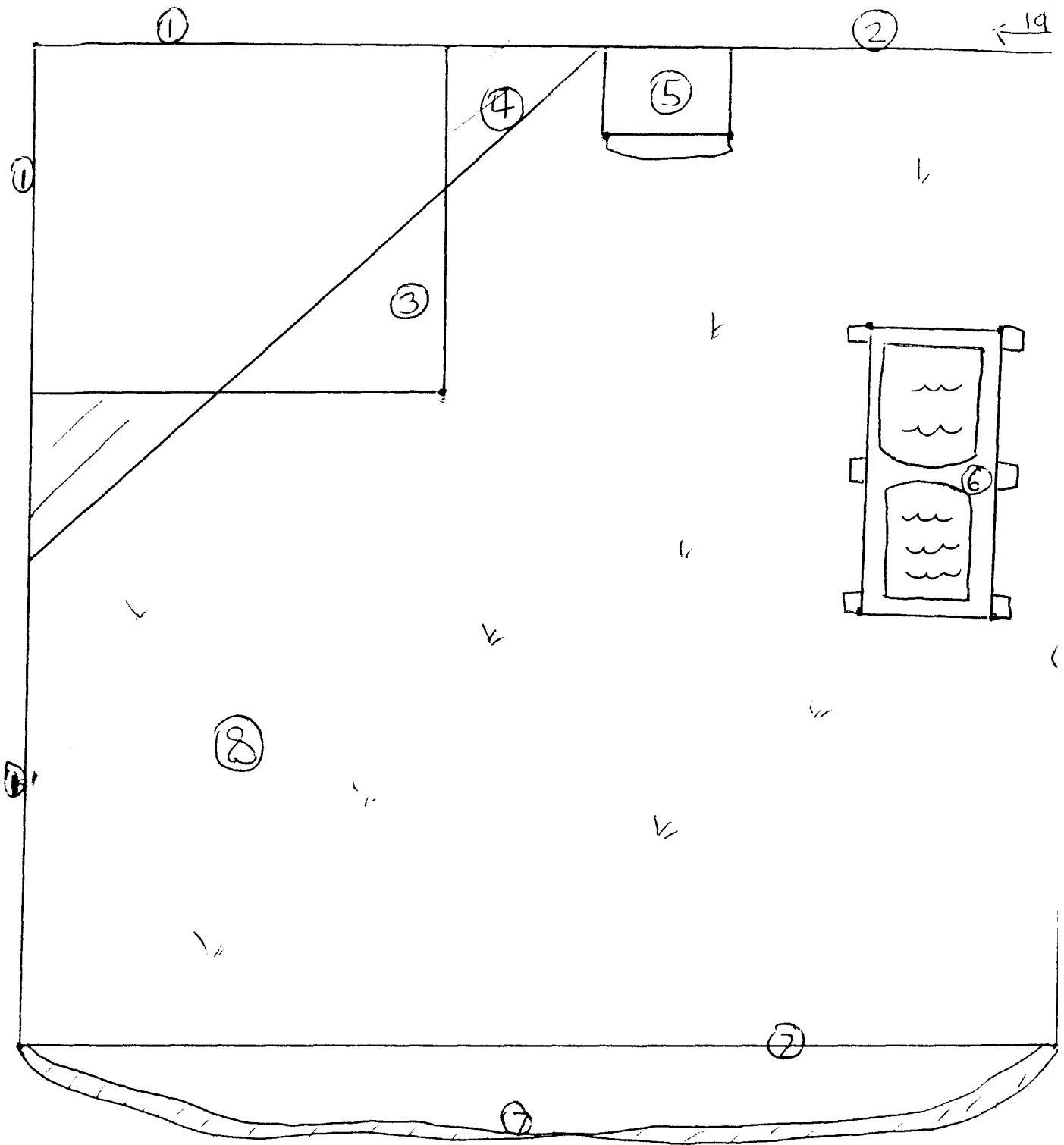
Pros

- *Access to fresh, lush pasture daily*
- *Fresh air*
- *No health problems*
- *Little stress*
- *Less odour problems due to moving pen*
- *Much more human contact than indoor pigs*
- *Marketing at a higher price*
- *No need for spreading manure*

Cons

- *Sunburns*
- *Housing wasn't adequate enough (rain got in)*
- *Extra labour (watering, feeding and pulling pen, loading pigs onto trailer)*
- *As they grew, they were able to throw the water trough around*
- *Pigs would spill feed*
- *Top of feeder not secure enough, rain leaked in*
- *Tore up pasture*
- *Require more feed than indoor pigs*

1 cm. = 1 ft.



- ① Plastic, solid penning
- ② Metal fence penning
- ③ Fibreglass roof
- ④ wooden platform

- ⑤ feeder
- ⑥ Dual water trough
- ⑦ cable
- ⑧ pasture!

the source should be labeled + discussed in materials + methods

New Ideas

With the results in order, and a season completed, I am able to gather all the proper information to make some (hopefully) good decisions as to what would be the best way to do this next time.

Seeing as how feed was lost with our single self-feeder, it would be a good idea to install a larger, deeper one, that is better suited for a large pig. The one used in this study was meant for a pig between 20 and 60 pounds. Feeders used in the finishing barn are equipped with four troughs and two water drinkers. With water being run through the hose into the two waterers, and enough space to put in a couple days worth of feed, labour can be cut down significantly!

Having the pigs out on pasture at a smaller weight could help. They wouldn't have already spent half of their lives in the barn and would therefore allow their bodies to utilize the pasture to a higher degree. Maybe that could even change the meats flavour and texture! I thought about bringing a pregnant sow outside a couple of weeks before she gives birth because it eliminates additional stress and the piglets would benefit from pasture right from day one. A less stressed sow is a healthy sow, and in turn the piglets can turn out healthy too.

By adding more space for the pigs by opening up a side of the pen we can provide more pasture. An electric fence would be placed in the new area, and moved regularly for access to fresh pasture. We would not have to bring out the tractor as often. It is possible that the pasture wont get rooted up as much.

The addition of a large roof that would cover the entire pen would cut down on sunburn issues, and when it rains, the pen could still remain dry.

Conclusion

The pastured pigs rate of gain was almost identical to their indoor counterparts. They did, however, require more feed outside. Some of the reasons this has happened could be related to the feeder, and their regular exercises of rooting and playing. The texture and taste was very similar to pork raised indoors, but the meat colour appeared darker, which leads me to believe that there is more nutritional value in it. Studies have been conducted and conclude that animals raised outside on a lush pasture have more vitamins, minerals in higher proportions when compared to animals that don't receive fresh pasture. This not only benefits the pig, but it also benefits the person eating it.

References

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2004, pgs. 119-131***

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