

Rooting for change

Exploring ways to keep our pigs outdoors at Tablehurst Farm to benefit both the health of the pigs and the health of the soil

By Peter Brown

Pigs can have a place on most farms, on one scale or other. If we follow the principles of a biodynamic farm then we will only keep as many pigs as we can feed from the farm itself. A market garden might keep a couple to use waste vegetables and maybe help cultivate the soil; a predominantly dairy farm will likely not have need of them, unless they make cheese in which case the pigs become indispensable in being able to utilise the whey produced. Again, perhaps it is a predominantly arable farm with plenty of grain and there is a local market for good pork, this will make pigs very attractive as it will help maintain the fertility of the farm as well as giving added value to the grain produced. Whichever it is, the question is how best to keep pigs?

INSIDE OR OUT AND WHAT ARE THE PROBLEMS?

Pigs are happiest when they can dig in soil, and in woodland they are particularly happy but unless there are very few of them they can cause a lot of damage there. The fact is they can do a lot of damage wherever they are outside, by rooting out vegetation, creating mud and thus erosion, making holes and pushing through conventional fences. On the other hand there are few situations where the pigs are happy inside as they need the possibility to properly dig and explore and use their sense of smell. From my experience what works best is if they are sharing a deep litter yard with cattle. This is because there is not the strong smell associated with pig buildings and they love rooting in old hay and silage, fresh cow pats and the bedding; they are never bored! To make it work though, it is necessary to have a small penned off area with a small opening or gateway which the pigs can access but which the cattle cannot, so that the pigs can be fed without disturbance. It is advisable not to have small weaners in with lactating cows, as compared to youngstock or dry animals, as I have experienced a number of situations where they have learned to drink milk direct from the cows! The cows did not mind but the calves did.

These are pigs out for only a few weeks and already the ground is getting compacted.



Photos © Peter Brown

Pigs, of course, do belong outside and that is where they should spend most of their lives. This is usually done by keeping the pigs in pens made up of two strands of electric fencing. Over the years at Tablehurst I have tried many field layouts. In the early years we kept the pigs out all year and in the middle of a wet winter the soil soon changed to a kind of soup; the kind where it is easy to lose a boot while feeding them! The pigs were not particularly bothered so long as they had a nice dry and warm pig arc with bedding to retreat into. But for the soil itself and for the farmer feeding the pigs it was not so good! This problem has a lot to do with soil type and can be different on sand, or some gravels, where one can easily keep the pigs out all year.

At Tablehurst we bring our pigs inside in late autumn and put them out in a new field each spring. My experience is that for the first weeks of the pigs going out they are wonderfully happy digging up most of the grass and rooting in the soil. Later, if wet this becomes mud and if dry the soil is inclined to become trodden and bare and baked hard. The exception is the large holes the pigs dig near their drinkers, creating wallows. So, although the pigs have it better than most, there are clearly problems, particularly for the soil, as it sits bare for a number of months. These problems can be summed up as follows:

- 1** The pigs are out for only 8 or 9 months of the year and are brought inside for the rest of the time. This is due to our heavy soil and our wish not to overly damage it.
- 2** The pig field has to be moved every year so as not to put too much manure on the soil and to prevent a build up of intestinal worms.

3 The moving is a lot of work and entails removing and knocking in posts for fences and drinkers, taking down and then erecting wire electric fencing, moving pig arcs onto trailers and taking them to a new field, taking away and laying out again water and whey pipes and drinkers.

4 The field suffers quite a bit of compaction over the year and often particularly trying to remove pig arcs in muddy wet conditions at the end of the year with the JCB.

5 The field has large areas of bare, hard baked soil over some months. This is neither good for the soil or the pigs.

6 There are large wallow holes at the drinkers, which need filling in with a digger at the end of the season before the field can be cultivated, and larger or smaller wet muddy areas which make this cultivating difficult.

7 The manure is not evenly spread over the field as the pigs have their toilet areas so the growth is patchy in the following couple of years.

8 Crows can be a problem eating the food from the pens which receive ad-lib food.

9 All the pigs have to be brought into the barns at the end of the season which is a big, time-consuming job and then repeated in the spring when they are taken to the new field.

10 The whey system has to be re-installed when they come in.



A pig arc with floor and runners but too long on the same place!

I 1 The pigs use a considerable amount of straw in the yards, of which we do not have enough and is therefore being bought in.

I 2 Some buildings, like the lean-to along our main barn, cannot be used for their original purpose, which was the storage of our farm machinery and vehicles.

GOALS AND SOLUTIONS

So the question is can the system be improved? I would like to share some new ideas, which excite me, but I must clarify that they are only ideas at this point, with which we are at present experimenting. So what are the goals we would like to achieve in the pig keeping system?

For the pigs:

- That the pigs receive as much fresh green feed every day as possible.
- That the pigs have the possibility to be outside all year, that they can root in the soil and they also have a snug, warm bed.

For the soil:-

- That the soil is dug over nicely but is not eroded or damaged by poaching, being left bare over long periods, having large holes dug in it.
- That the pig manure is spread evenly over the field.
- That the field is left in excellent condition for following crops.

For the farm:-

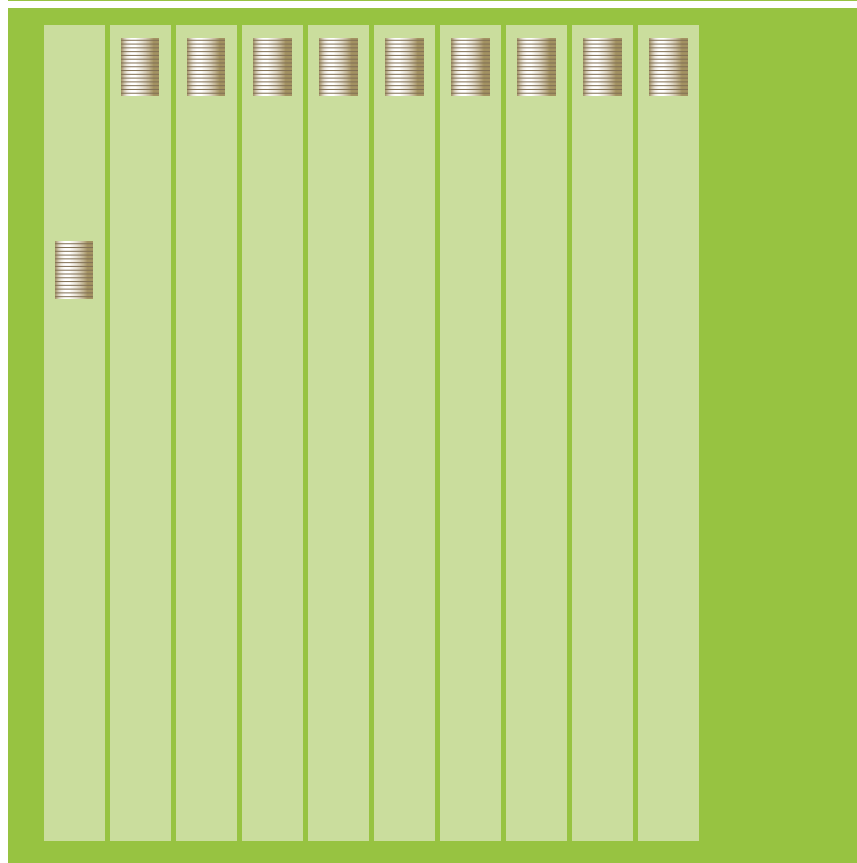
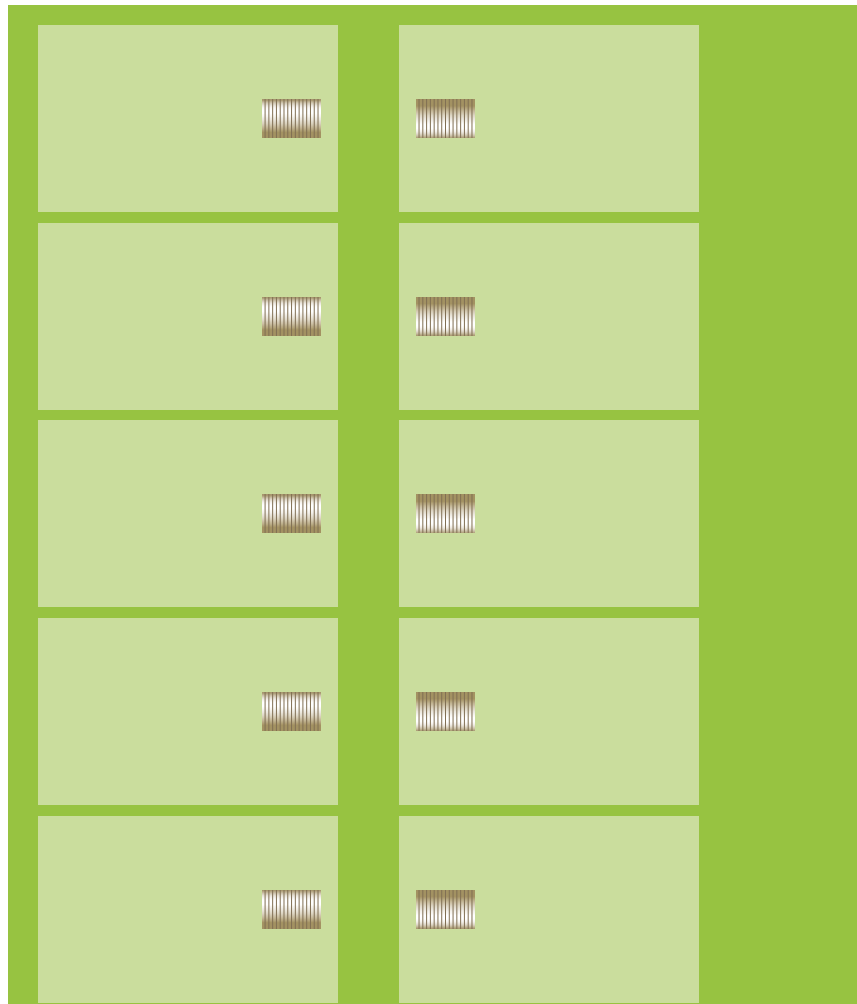
- That it is not way more time consuming for the farmer.
- That it doesn't cost too much either in capital or for running.

My ideas come from my experience with movable chicken housing in the nineteen eighties in South Africa and more recently what I have seen of Alan Savoury's techniques of grazing cattle and mob grazing. How could it work?

Instead of having the field divided into rectangles, using electric wire, with a pig house in each and a central feeding passage the new layout has all the houses lined up at one end of the field, each in its own strip which goes down the length of the field (*see both diagrams*).

The idea is that the pigs and their houses move down the field so that they get fresh food every day and are never long on any bit of soil. Each strip might only be ten metres wide and there is a short electric fence in front and behind each house. These short fences are easily moved every day to give the pigs a small fresh strip of ground, maybe a meter. How much you give will depend on the width of the strip, the number and size of the pigs and what is growing in the field. I have only ever kept the pigs on grass or stubble but this method opens up the potential to graze/feed them on a number of specific crops or mixtures. This would give them a lot more nutrition than just grass, especially in the winter. One could sow a mixture with kale or fodderbeet or turnips or a mixed green manure crop with up to 15 different plants in it and a lot of bulk. This will benefit the field tremendously, as well as the pigs.

Because the pigs will be moving down the strip, at say





Small pigs having just been given a new strip of grass. First they graze it and then they root it. Larger pigs root it much deeper and better.

a meter a day, they will not be very long on any part of the field. This means that the soil will be well dug over but not poached or compacted and the manure will be nicely spread. It does, of course, mean that the pig house will also have to be moved every few days and at least once a week. This is the biggest problem in the plan so how can we do this?

There are two housing possibilities with advantages and disadvantages and different costs. The one is using a special trailer which incorporates a pig house, feeders and water. This costs more but makes the management very easy. The house is very easy to move being on wheels, food and water do not need to be brought to the field every day, the pigs can be shut in easily at any time, be it to take them to a new field or transfer them to a lorry or livestock trailer. They can also lie under the trailer giving them cool shade in the summer and insuring all the ground is dug over well.

The second possibility is using the conventional pig arc. Most farms which have pigs will have arcs, but they will have no floor and so are not suitable for being moved often. By having a floor the house becomes warmer and drier for the pigs but most importantly it will use much less bedding as it will move with the house. We have made a floor on a 2.4m wide arc by putting six 6"x2" beams the length of the arc under a plywood floor. This means that it can be pulled like a sledge, so long as you don't try to go around corners. So how do we pull it? Well we do not want to drive on the field with tractors so the best is a wire cable and some sort of winch. Again we are experimenting to find the best and cheapest solution.

■ One is to have a very simple winch for each house which can be made out of the robust wooden spools which are used for electric cables. One can attach a pole to it with a spike or pole through the centre into the ground. The wire cable can then be wound onto it by walking round in a circle, a bit like a donkey round a mill.

■ An alternative is to have a strong electric winch, which can be moved to each strip in turn (*as is the case at Tablehurst*). There are a number of different ways to do this and the best way will have to be found by trial and error.

Clearly the whole field system is dependent on finding a quick and easy system for moving the houses in order to make it viable. I am not able to go into details here in this article either of the trailer or the pulling systems but please do contact me if necessary.

FEED AND WATER

Pigs should ideally eat food produced on the farm, which would otherwise go to waste. Potatoes are a good example. When we used to grow a number of acres at Tablehurst Farm we used to sometimes grade out quite a high proportion due to wireworm. These we would cook and feed to the pigs and it saved a lot of grain. We also feed whey ad-lib to our pigs, which they love and enables us to get by with feeding quite a simple ration of beans or peas, barley or wheat, oats and rye and some dried kelp seaweed.

Lastly how does one get food and water to the pigs? Clearly if one is using the trailer method one can have a couple of months food stored on each trailer, which means the daily feeding is easy as nothing has to be carried to the field. With the pig arcs the food must be taken daily to the field. We fill bags with 15Kg food and carry them on an ATV with a trailer, which we drive around the perimeter of the field. For the water and whey we use pvc pipes which lay on the ground and can be moved easily. The drinkers we are using use a nipple which the pigs push putting letting the water flow into a part bowl from where they drink it. We are now using a concrete slab which the drinkers are on and which can be pulled or lifted with a front loader. This is fine in summer but it can freeze up in winter. We are therefore looking at metal wallows which the pigs love in summer and which hold a fair bit of water so that if there is frost for a few days in winter it is not a problem. If the fields have slopes one should think of using shorter wallows say 4 or 6 ft so that the water does not overflow so easily.