

A commitment to quality and a willingness to try new things, particularly when it comes to feeding pigs, are the hallmarks of the Mere Hall estate situated just outside Lincoln and owned by the family farming company, Patrick Dean Ltd.

"A proper Lincolnshire arable farm," is how manager David Broughton describes the 2000-acre estate, which is home to 640 sows and grows cereals, sugar beet, potatoes and vining peas. Unless it goes for milling or malting, all the grain, together with the straw, is used for the pig enterprise. Muck and slurry go back on the land, although the constraints of being in a nitrogen sensitive zone mean the farm is fully geared to store everything for 10 months.

The sows are kept on two sites five miles apart and run as two separate units. One has 340 Cotswold sows and the other, a high health unit since restocking nine years ago, houses 300 JSR Health-bred sows. All progeny, a total of over 14,500 a year, are reared and sold at 90 kg through two local abattoirs on a 14 mm contract that David describes as "fairly liberal".

The commitment to quality is shown by the estate's membership of the MAFF Pig Assurance Scheme (PAS), part of the British Quality Assured Pig Initiative (BQAPI). As David explains:

"The scheme allows the end product to be traced right back to the farm and covers just about everything we do - animal welfare, health (particularly use of drugs), buildings, general management, transport and feeding."

The scheme puts feed quality under close scrutiny, but this is another area in which David has always had very high standards.

Tested

"We make all our own feed, including baby pig feed, and I have always insisted on quality raw materials. Under the scheme we have to test all our finished feed regularly for salmonella, and so far we have never had a problem," he says.

Because one man is responsible for making and delivering all the different diets, the system has to be kept relatively simple. However, the operation at Mere Hall is rather more sophisticated than many farms which home mix because, at one time, it used to manufacture feed for sale commercially.

This means the mill can handle a number of raw materials and has the equipment to pellet everything from piglet feeds to dry sow rations. Rations are formulated with the aid of Dr Malcolm Tate, independent nutritionist and feed supplement supplier, and it was he who

The fear with using new season's barley in pig feed is an upsurge in scours and mortality. But an estate farm bit the bullet and tried new technology on the advice of its nutritionist. The result?

Enzymes put on the £s and kill hazards of new crop barley

put David's willingness to try new things to the test two harvests ago. Many producers will remember the summer of 1993; there was a huge difference in price of £35-£40 per tonne between old and new crop cereals and pig prices were down. According to David, cereal prices affect Mere Hall's pig units significantly, even though they are self-sufficient.

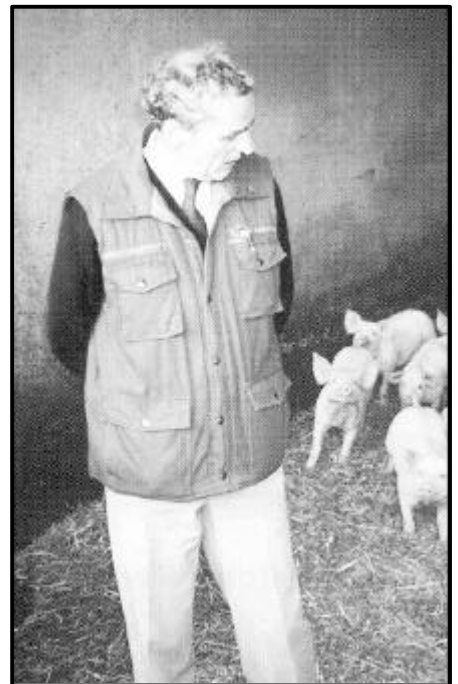
Realistic

"In '93, the old crop wheat we were using was our own, but for costing purposes we always put home-grown inputs to the pigs at realistic prices. With such appalling pig prices and feed making up 75 per cent of our total costs, we wanted to sell the wheat and use our new crop barley straight away.

"We didn't like using barley straight off the combine because, unless it was allowed to mellow, we found that scours and mortality increased. There is also a big difference in energy value between barley and wheat. Malcolm was aware of my dilemma and he suggested using Finnfeeds' Porzyme sf with the barley."

SAC trial

Dr Tate had kept up to date with developments in feed enzyme technology, but it wasn't until he saw the results of a trial on Porzyme conducted by the Scottish Agricultural College at Aberdeen that he was prepared to put his neck on the block. "The SAC trial was good and the results were appropriate to David's situation. Even so it was a radical change of thinking and took a bit of coming to terms with mentally. You have to be cautious when suggesting



David Broughton, manager of the Mere Hall estate.

"There was nothing to be lost and everything to be gained," he says.

something so new to clients, but I thought it was worth giving it a go," explains Dr Tate.

David agrees. "There was nothing to be lost and everything to be gained. We would have probably had to use the new crop barley in finisher rations at least," he says. "What we did was to change the grower, finisher, suckling sow and dry sow rations. The grower ration, which

had contained 10 per cent barley and 38 per cent wheat, was switched to 10 per cent wheat and 38 per cent barley plus

enzyme. In the other rations all the wheat was swapped for new crop barley plus enzyme.

This brought the barley inclusion rate in the suckling sow and dry sow rations up from 15 per cent and 17.5 per cent to 43 per cent and 47.5 per cent respectively, and in the finisher ration from 6 per cent to 43 per cent."

The savings were substantial. Net of the enzyme cost,

David worked them out to be £6 per tonne for the grower and two sow rations and £9.50 per tonne for the finisher ration, giving a total saving of £4,400 for the six weeks.

'Saving money in itself was not the main motivation behind the change'

"There was no drop in performance either. Growth rates stayed the same, as did FCR. I can't be exact about that, like many farms we now have less labour. We simply can't afford to do all the weighing we used to and the pigs are now picked by eye. However, the stockmen are good judges and the final results bore out our opinions."

Porzyme was used again in the 1994 harvest, despite there being less of a difference between the old crop cereal and new crop barley price. According to David there were still net savings of £2 per tonne on the grower and sow rations and £3.75 per tonne on the finisher, a total of £1,700. Again, performance remained the

Creep feeds

With the confidence gained from the success of using feed enzymes in 1993, the farm is now moving towards year-round use. Since May 1994, creep feeds have been supplemented with another of Finnfeeds' Porzyme range. Dr Tate had again studied the research before making any recommendations.

"The Finnfeeds research suggested that cooked cereals could be replaced with raw wheat and a feed enzyme. We were looking to reduce the amount of cooked cereals in both starter and second stage piglet diets to control costs. For example, cooked wheat is £50 to £60 per tonne more than raw, home produced wheat and micronised maize over £80 per tonne more," he says.

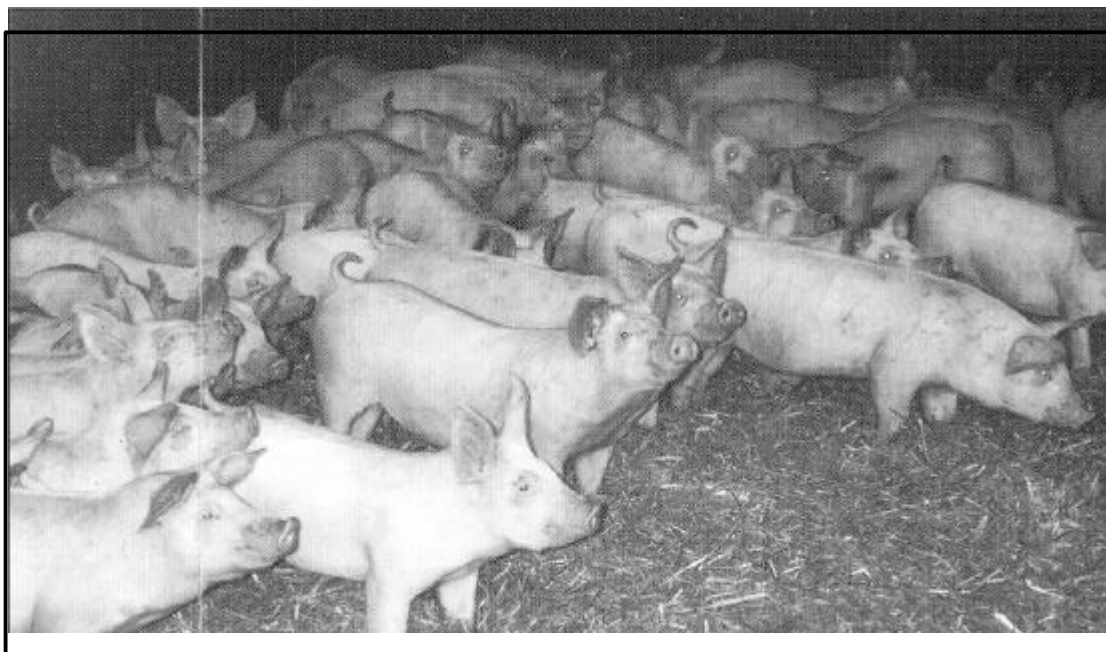
By substituting a proportion of the cooked cereals in the diets, savings of £30 per tonne of finished feed were made. But saving money in itself was not the main motivation behind the change, according to David.

"We estimate the saving on the cereal part of the ration to be worth about £6,000 per year, but this has been offset by the increase in milk powder prices. We are big believers in using milk in creep feeds. "Ideally I would like to maintain the same milk levels that we were using 10 years ago but prices have gone up and up. We have to keep the cost of our other ingredients down to afford the milk," he says.

Growing well

"However, I wouldn't want to compromise the whole growth of the pig by doing something wrong in the early days - it's just not worth it. But the enzyme worked fine, there was no change in performance or health and the pigs are growing well," he continues. With more and more wheat being grown instead of barley,

and home grown peas being added into the pig rations, David is now keeping a watchful eye on developments in feed enzyme technology. "I've certainly been convinced over the last two years that feed enzymes are beneficial. If a new product came along for wheat or soya I would definitely try it," he concludes.



The farm changed the grower, finisher, suckling sow and dry sow rations – increasing dramatically the inclusion of new season barley, along with the enzyme. There was no sign of the scours that usually comes with new season barley.

So, what were the results? According to David the experiment was worth while. "It was very successful - we had no digestive upsets from using the new crop at all. I even got comments from the staff and the vet that there was less colitis about. In fact, when we changed back to wheat after six weeks the colitis levels increased.

same and the positive effects on colitis levels were spotted. According to Dr Tate this is not an isolated occurrence. "I originally advised three or four customers to try Porzyme, I now have about 15, and several have said that using new crop barley plus the enzyme clears up colitis," he says.