Response to a Genuine Challenge Part 2

My further response.

Individual sow performance has to be the result of herd function, not the other way around. Management structure is therefore imperative and when it isn't possible to implement this due to limitations in infrastructure the challenges are clear.

The accommodation limit for gilt development is common in UK production and this factor alone makes it very difficult for the UK industry to even get the fundamental management structure for successful and consistent cash-flow cost effective production, off the ground.

Taking the development of the gilts from 40kg to 180 days; the average daily live-weight gain of a developing replacement gilt should be around 650 grams this means that if they grow at 550g/day to 40kg they will be around 90 days (12 to13 weeks). If they grow at average 750g/day from 40kg they will be 107kg at 180 days. This is an approximation of an average DLwtGn of 650g. This is a statistical assumption to help understand the detail of possibility on the farm.

The within herd production of replacement gilts is running at a 30% selection rate at a rate of 2.34 L/S/Y assuming a selection rate of 4 gilts/litter the herd will be selecting off a specific number of sows to get a target number of available gilts. This is almost 20% of the breeding herd population which is certainly going to be putting a percentage of pigs through the feeding herd that will not be performing as well as the slaughter generation. Within herd replacement production is in my opinion a key factor in management control but itself needs careful controls. Even if the selection rate per litter is higher there is a comparable number of performance-inferior males plus female rejects, going through the system, increasing production costs.

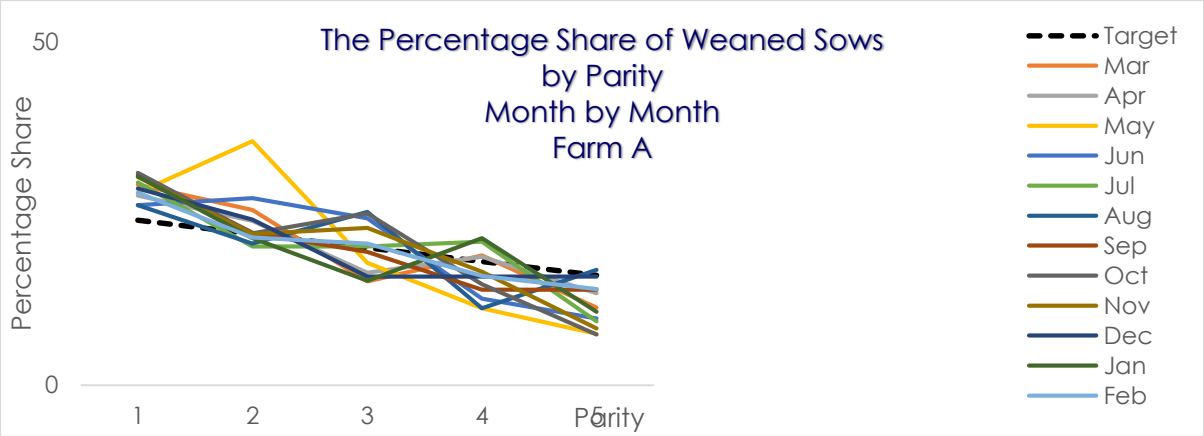
Every few weeks a number of gilts are selected to enter the breeding herd as replacements, they have a three-week age span. The social, hierarchal, upheaval produces synchronized oestrus in the group with the help of a vasectomized boar. This has an impact on selecting weekly groups of replacements per service group as it creates two-week drought periods and gilts being served on fourth 'recorded' oestrus. It would be pertinent to suggest that we are beginning to see the genesis of the uneven performance by parity and the need to get the best from the sows that survived the gilt development/introduction phase of the management strategy by extending the parity distribution. It would not be unreasonable to analyse the actual drop-outs and survivors, were it possible, to see at which point they entered production relative to the then, current stage their original selected group. There is a 10% failure of the selected group which equates to about 5 weeks of selection from the group.

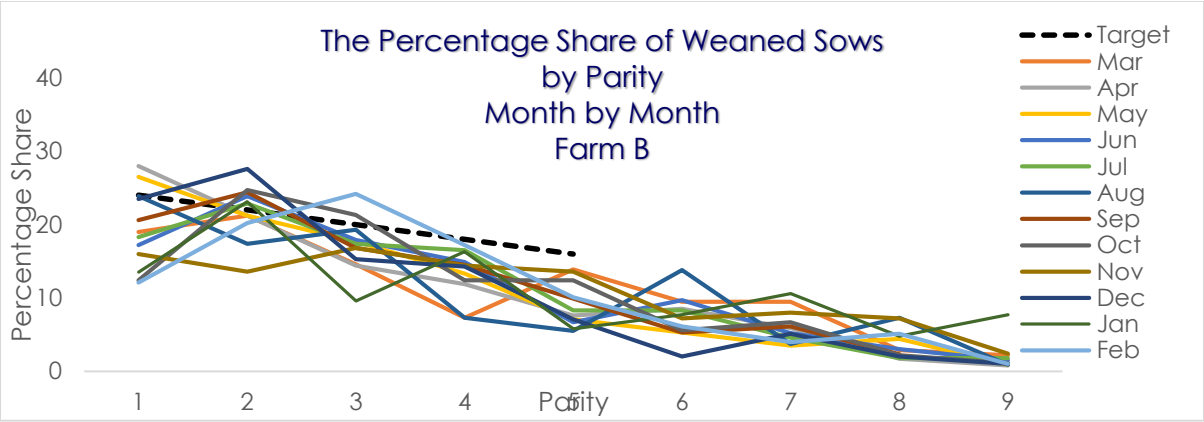
I am assuming that the dropout levels in tagged gilts unserved and served are unusually high. If this is the case, then it is reasonable to suggest that the service accommodation containing novice gilts and served gilts through to 28 day's gestation, is programmed to fail in producing what a sound management strategy should produce in around 25% of the herd, that is consistent breeding replacement at a rate of at least 60%, a farrowing rate in excess of 90% and a litters per sow per year close to 2.5, depending on the production index. This is confirmed in the above response. The building project for next year is already a year behind schedule in terms of financial return and management control.

As I said at the start of the first part of my response, the management performance, in the circumstances, is exceptional and to be respected. Production has been increased by 25% in 6 years. The whole of the UK industry, on average, if it is to compete globally on output, could and should be able to achieve this in less time, with what we know today about production controls. The fact that progress is so painfully slow puts the achievement of this business into context.

I have written recently on the subject of Freedom Farrowing. I have suggested that the farrowing crate remains integral to UK pig production and that the real issue is Freedom Lactation. This business is clearly practicing this and is a strong position in terms of ethical

infrastructure at this stage of the production cycle, although my suggestion is for multi-suckling as an alternative. I do not know the dimensions of the available pens or the actual layout but if it were possible to open the front end into an extended dunging area and simultaneously join two or three together, as an experiment it may be possible to multi-suckle a greater number of sows in the current space (depending on the dimension) and freeing up 'relief' space for recently served groups of replacement gilts to prevent the dynamic management from reducing the expectation as it currently is. When production is at the levels it is in terms of born alive on this unit, then then employment of fostering is a worthwhile practise although I would try to limit it to outgoing designated culls. I would also consider euthanasia of marginal pigs at birth because I believe that any survival analysis carried out would draw this conclusion. Fostering is an internal bio-security risk that, apart from assuring a relatively small percentage of survival, increases the percentage reduction in overall herd performance in terms of total production cost by compromising feeding herd performance. Foster sows should never be stolen from the next service group. The next service group is sacrosanct to successful pig production. It should be planned for immediately after pregnancy check, if not before. The herd function of the business is predicated upon the individual service group and each group should be the same in number and after a couple of years, at the latest, even in parity distribution. This stability is best illustrated in the graphics below.





In these graphics two farms of the same size population and production system are reported over a 12-month period showing the parity distribution by parity of completed (weaned) production cycles. Farm A is producing 26.79 and farm B 22.93 pigs weaned/sow/year. The difference in parity between their average completed production cycles per sow and the average age at weaning is, farm A 0.69 and farm B 1.59. Based on multiplying what they each wean per litter the difference in pigs (cost) lost to non-productivity is, farm A -7.59 and farm B 17.49.

These graphics do not represent the farm in this response.

The aim of this stability is to reduce production cost and it achieves this through ensuring successful gilt development/introduction, conception and lactation outcome. This leads to a balanced optimum parity distribution not just in the herd but in each individual service group.

Hierarchal social compromise is minimized by the fact that each service group culls designated failures and culls at weaning, receives weaned parity 1 sows at weaning and culls if necessary at pregnancy check. If 'freedom lactation' is practiced then, depending on herd size, it is possible to group either P1 on their own or combine P1 and P2 and then combine either 2/3, 3/4 or 3,4 & 5. The performance effect on the feeding herd, is in my opinion, also an advantage in practicing this strategy of production control through improved weaning/litter weights, better piglet transition and (possibly) improved health. The feeding herd is the largest cash-flow cost to the business.

Extending the parity profile beyond parity 5 is, in relation to current UK performance, taking sows into an area that requires risk management. In the case of the example addressed herein, that risk management is being done well but, as it is clear to see, it is acting as a compensatory management strategy. In terms of available accommodation this unit, if in time gilt management was supported by with more accommodation and management still wanted to take sows to higher parities it would need to expand considerably.

Retaining the sow producing more piglets than the gilt is simplistic, it must be qualified. The gilt has only produced its first litter, is there any gilt that on average produces more than a third, fourth, fifth, even sixth, seventh or eighth parity sow. Probably not, the comparison is not directly relevant. To get a sow you have to start with a gilt and as I stated above, successful cash-flow cost efficient pig production is about herd function not the individual animal. It is management control of the herd function that makes the sow. Once you get into comparing the individual performance on the sow against the gilt on born alive per litter you have to calculate non-productivity into the output. In a large sample of sows completing 10 parities across several farms the average born alive per litter for parity 10 was 4.5 when all the services/returns were taken into account. Within this result there were several sows that would have done the gilts in the same herd litter for litter but not as a part of the herd function. The cost in this exercise of a pig born alive to parity 10 sows in that sample was £75 to the gilt it was nearer £35 or less than half. This was with the introduction cost spread over 5 parities, included as a lump in the cost of her first litter it was still considerably less than the parity 10 sow. Working this principle backwards brings us to the optimum parity limitation being 5. For me the gilt derived pig share of the feeding herd argument doesn't hold. From parity 6 onward the variability in piglet birthweight and viability escalates introducing sub-optimal pigs into the system.