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Optimising conventional breeding sow production

The profitability of sow production depends on good biological performance, the production costs, and the profit that can be made. Whilst the attainable profit is very much dependant on the market, the costs are liable to only small variations. The biological performance, particularly the number of piglets sold per sow and year, are decisive as to whether or not sow production can bring a stable and profitable return. This depends not only on good active marketing of the weaners but also in achieving very good performance as opposed to just 'good'.

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Target for profitable weaner production is the sale of 22 piglets per sow and year with litter size of a little more than 11 piglets and a litter member mortality of under 10%. This is only achievable with a production of 2.3 litters per sow and year.

The utilisation of available reserves in the context of the given structural developments achieves enormous importance, especially in sow production. The intense cost-awareness within the feeding sector leads to the demand for large, homogenous and, above all, healthy piglet batches. The better the matching of the pig batches beforehand, and the less farms that members of each batch come from, the better the price at which the batch can be marketed. For the sow producer this means that the expensive buildings should be so planned and built to be, as far as possible, optimally exploited whilst allowing the biological performance potential of the sow herd to be taken full advantage of. The demand for large batches of piglets means a pressure towards larger sow herds and an organisation within the herd that makes it possible to achieve such aims. In the light of these buyer demands, there's no way that can get around the importance of a consequent summary of farrowing performance. Ultimately the work procedures can be bundled, and the small amount of available labour time better steered towards certain performance-relevant work. In this context, performance- relevant work is that of heat control, serving, pregnancy diagnosis as well as monitoring farrowings and the work involved in early treatment of piglets. Not to be underestimated is also the effort in work involved in data collection, the appropriate analysing of this data affords the basis for herd management decisions.

Regular weaning rhythm

Farms that want to exploit their reserves cannot avoid regular weaning. Regular weaning allows the decisions far in advance for a plannable work schedule in the unit. The work is in a way standardised so that it can be carried out more efficiently and faster. The preparation times for the carry out of particular jobs are reduced in overall time as well as in the amount of time per animal. Labour time peaks are, however, created which, especially with longer weaning intervals, mean that specialists can be brought-in for certain jobs. Almost regarded as standard already is, in this sense, the use of a scanner for pregnancy diagnosis. Probable also is an increase in the use of specialists for serving the sows or for piglet care after birth. But the application of outside expertise is also thinkable for cleaning work in the farrowing house by specialist firms with their own trained staff. With the appropriate weaning rhythms, labour peaks can be seen in the plan and this is also important. Free time is then available for apportioning and can be planned for. Regular weaning rhythms does mean that difficulties can result in the keeping-together of sow groups. Especially with shorter nursing periods and longer weaning intervals of two of four weeks, the method is expensive. This is through possible returns to service and/or the application of hormones for the blocking of sows before start of heat or for encouraging farrowing to begin.

Batch farrowing

A special eye should be kept on achieving a narrow time window for farrowing because from this process results not only piglets of the same age but also more effective farrowing monitoring. There's also the possibility of taking full advantage of litter-equalising opportunities. So that farrowings occur as close together as possible, the sows must be served within as short a time frame as possible. The requirement here, especially with large groups of sows, is for inducing the heat on the fourth day after weaning. In this way, the larger groups, where there has been the right choice of serving centre, have absolutely no disadvantage in the context of individual treatment of the sows. On the contrary, there appears to be reciprocal synergetic ef-

fects from the improved stimulation and the more intensive heat, through to a better identification of the heat progress as far as the stockperson is concerned. The group heat is encouraged through the boar, applied as stimulation boar. During this, the boar is run in front of the sows with increasing intensity. Important here is the targeted exploitation of

Factory photo

the key stimulations emitting from the boar. Such signals, which are so important for the progress of the heat period, are the olfactory signals of the boar (= boar odour), the noises made by the boar and also the tactile stimulations such as nose contact and head-to-head actions. In this context individual stimulations can certainly be copied and also intensified, although one must act on the premise that the stimulations have a cumulative effect and complement one another in their effect.

Here, the boar is not stalled directly in front of the sows but instead should have has access to the sows via a boar passage. The advantage of such a system is that timed contact can be apportioned and it allows efficient monitoring of the heat progress. Going by the behaviour of the sow, the stockperson is in a good position to simply decide when the optimum serving time is reached. Through the more intensive start of the heat, the sows also stimulate one another. The serving can be set for a time which guarantees optimum fertilisation success. To make sure the sows have an undisturbed fertilising procedure after service, a serving crate is worthwhile. In this context the crate is a special one for serving which allows good access to the sow. The rear gate is so designed to be easily opened with one hand, to allow comfortable access to the crate but still hold the sow firm. Here, saloon doors have proved themselves.

Hygiene very important

An important requirement for the realisation of optimum performance in weaner production is the health of the herd and also of the individual animal. It is especially important to minimise in particular the infectious factor diseases through increasing the health status of the herd. In this context, a variety of methods are discussed. One possibility is the so-called "multi-site production". This means that production is carried out on various sites. After weaning, the piglets are reared on a site away from the sow herd. The feeding unit is on yet another site. The aim here is not the absolute disease freedom of the herd but instead the achievement of a break in the chain of infection through changes in the nursing period in combination with separate sites and personnel for rearing and feeding. The piglets are brought out of the farrowing premises with as high a level of antibodies as possible and with as low as possible loading of germs and put into clean rearing buildings.

This action is based on the following fundamental fact: The earlier weaning takes place, the healthier the piglets. However, here the decision on age of weaning is definitely limited because not all diseases can be defeated through early weaning. Thus it can be shown that a streptococcus infection is not dependant on the age of the piglet. The weaning of piglets at under 20 days brings no important improvement in health status. The shortening of the nursing time to under 21 days brings about other consequences (reduced litter size, increase returns to service, lengthened weaning to service intervals). This is because the sow uterine rebuilding process first starts with 18 to 21 days. Also, the development of the follicles in the ovaries and the regeneration of the mucous membrane in the uterus is only then at the stage where the fertilised eye cells can find optimum conditions for establishment.

The law-givers have determined in the German Pig Production Statute that the minimum age for weaning is 21 days. Important for the weaning of the piglet is a continuous break in the chain of infection and an optimal environment for the young animal. In this context, of outstanding importance is:

- observation of a consequent hygiene status which can be organised through strict working schedules
- optimal supply of warmth for the young piglet (in lying area ~ 30 °C),
- feeding of piglets with a regime where the feeds are matched smoothly with each other.

The piglet rearing building should be especially built for this job. Plastic flooring offers a comfortable lying zone where the warmth can be higher than in the rest of the area. The walking, eating and activity areas can be more "robustly" built. The feeding method allows the piglets to decide themselves when and how much they will eat so that it is possible to exploit all the growth reserves. The in-house climate is chosen so that the younger animals get the benefit of available heat whilst, despite this, there's still enough airflow arriving for the larger animals. Currently in discussion with respect to separate weaner production is the enormous importance of avoiding losing the added value of piglets so-produced through transport or marketing.

Outlook

The growing size of units mean that two basic types of sow-keeper and piglet producer will exist:

1. where the farmer works alone, or with assistance, in the housing with a herd size of 250 to 300 sows. Such a manager will increasingly give management tasks to others so that certain services are bought-in such as:
   - farming out of the cleaning work
   - animal health control to the farm vet,
   - management and production monitoring, e.g., through an advisory ring
   - control of farm equipment through specialist firms or independent organisations,
   - rodent control through specialised firms.
2. The farmer acts as manager with herd sizes from 600 sows. The farmer works less in the housing more in the business and in the office. He or she becomes thus increasingly a seeker of "weak points" and in this work also pulls-in other specialist help.