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Trends in pig production

Altered legislation will make production more difficult and more expensive so new technologies must be cost-effective. Technical developments must enable the balancing of extra costs caused by the production requirements. When this cannot be achieved there will occur a reduction in pig production because economic output will no longer be possible.

Through development of technologies the new demands of the industry are being met relatively rapidly. For instance loose housing of sows in groups offers a good start to legislation-based developments giving more welfare.

The optimistic attitude of farmers regarding building of pig housing during the last EuroTier has altered strongly this year. The main reason is uncertainty caused by government regulations for planning permission for pig buildings in the last years. The key here is the introduction of new production legislation and the increased building permission regulations under the sector environmental protection through the article law in association with the TA air.

In the planning stadium these regulations lead to uncertainty because certain rules have not yet passed into their final phase. For instance the production legislation is currently regulated differently in the separate federal states. A new federation-wide regulation is overdue. Additionally, European laws have led to further uncertainty and distortion of competitiveness. In the meantime, the article law applies in environmental protection through which due to the G2 regulation the UVP tests and the BlmSch mandatory rules lead to higher planning costs for many farms and disqualify many planning locations. The grounds for this are new distance regulations between livestock buildings and others and at the same time new protection value objects.

Legislative tendencies

Feeding pig production laws have been introduced for North Rhine Westphalia, Lower Saxony, Mecklenburg-Vorpommern and Schleswig-Holstein. All other states still produce under the old legislation.

A recent law in relation to sow keeping in Westphalia regulates this sector. For future planning it must be assumed that more room and more comfort will have to be allowed for in this sector.

A decisive difference will apply to housing of large groups in that in such cases space per animal can be reduced because of the larger traffic areas. The animals must be offered more activity/interest boosting possibilities. The form of flooring differentiates between traffic and lying areas and through this offers the animals more comfort. In such cases the industry has now developed good possibilities wherein ecological housing flooring has been constructed with certain function areas separated from one another



Fig. 1: Chemical waste air purifier by BKMT

within large pens.

Group housing is a favourite with sows and will become more important. This development is helped through herds becoming larger because larger herds make this form of housing necessary whereas with smaller herds individual penning should be continued through housing and welfare grounds.

The article law with its three-stage regulation for pig farms will in the future require more UVP tests. This means more costs for housing planning and permission. The authorities should also be working towards standardised UVP tests. What was possible earlier will no longer be so because additional fauna and flora will now be tested too regarding housing site layout.

Through the new renewal of the TA air and its applicability for livestock housing ammonia and dust emissions are now to be considered as well as odours. The aim here is to avoid pollution of locations already affected and to apply new techniques for long-term reduction of pollution. Playing a big part here with pig housing will be the air filter. Should the filter achieve the required efficiency and be applied as a standard requirement this will mean some very high costs for the sector and could negatively affect profitability.

The technical requirements on filters are a further decisive question. Biofilters which, up until now, have mainly reduced odour are substantially cheaper than washers which can reduce odour, ammonia and dust.

Tendencies in housing

Because of rationalisation actions, economics and political requirements, larger housing units are being planned for feeding pigs and sow enterprises with consequently better

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Fig. 2: The liquid feeder computer 778 by Fancom controls automatically complex mixing rooms of large farms

cost spreading. Large groups for both types of enterprise means reduced building costs with less equipment and simpler feeding systems possible.

Legal requirements also favour such systems. In buildings the trend is towards prefabricated systems with complete or detail solutions. Also specialised building materials, e.g. plastic elements, have become established for cost and hygiene reasons. Poor building returns currently mean that cheaper solutions are also possible with conventional building.

The development of open buildings is under intense discussion to the background of new legislation with the aim of being able to reduce energy costs in pig production.

This new housing with its technical improvements offer a good opportunity for the construction of welfare based open housing.

Because of the new legislation the open house is no longer to be recommended for the future.

Technology development in pig production

In conventional equipment development one sees a specialisation in housing material and,

especially in sow production towards fulfilling higher labour-management requirements.

Hygiene requirements are mainly applied in feed preparation. And these are to a large extent fulfilled in that one uses acid in the preparation or other methods for bacteria reduction in containers or feed.

Because of welfare requirements floor design has now more importance. A large num-

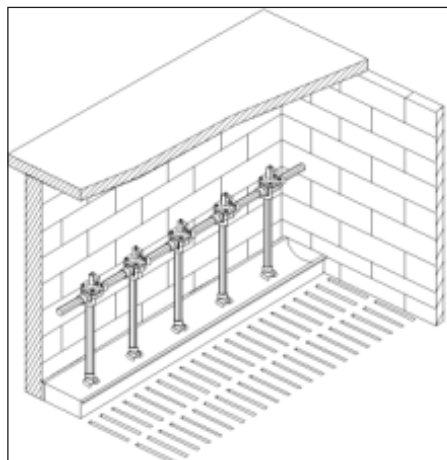


Fig. 3: Dribble liquid feeding by HOWEMA for sows kept in groups

ber of technical developments are planned. The use of plastics in combination with concrete improves hygiene and comfort. Differences between the resting and animal movement areas can be clearly differentiated and taken account of during the planning.

In this development it must not be forgotten that the concrete flooring must offer sure footedness and is very good for keeping the trotters in form through its wearing action.

Feeding technology

The introduction of large groups in feeding pig as well as sow production gives new challenges to feeding technology. Future feeding program design will include the challenge of making allowances for welfare and animal behaviour. Through integrating know-how from experience into the program it will then be possible to graphically display animals according to their feeding behaviour and activities. Integrating this information in the future through self-learning programs merges the stockperson's observations with specially applied genetic information and means housing conditions can be optimised for production and animal welfare.

Sensor technology, already widely used in liquid feeding systems, will also establish itself in dry feeding systems. Further measurement points, e.g. the recording of the outer temperatures or of animal images with video cameras, will help improve production.

A further requirement wanted from feeding programs will be the recording of additional data for documentation within certain schemes. This requirement mainly stems from the QS system. An important necessity here is that the data which is in great part already offered over the program is then processed in a uniform QS form.

The use of veterinary medicaments must be documented and all details made available, just as with the fulfilling of the traffic law legislation.