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Trends in Pig Husbandry

The developments in the husbandry techniques for pigs result from additional requirements. Industry reacts with detail improvements and the acceptance of new husbandry techniques. In some cases, the use of electronics even allows cost-effective solutions to be presented. The development of feeding systems enables new techniques to be realized while increasing the production output. Feed hygiene is improved by using additional additives. Extended documentation solutions and networking upgrade consumer protection while exerting a positive influence on production.

In recent years, some clearly formulated and some rather unclear requirements of the Housing Decree have influenced the development of pig husbandry. As a result of the higher production costs due to these demands, technical development has recently focused in particular on these expenses. This particularly applies to electronics with regard to the farmers' duty to record documentation in the area of quality assurance and the Pig Housing Hygiene Decree. The housing techniques changed due to different state decrees and as a result of large group housing for sows, for which mainly new feeding systems were developed. The required structuring of the pens has largely been realized by means of variably utilizable slatted floors. An important criterion in fattening pig housing is the required space per animal. Only large pen development allows the different space requirements for large and small pens stipulated by the housing decrees to be met efficiently.

In addition to increasing production expenses due to requirements, the market development of the past two years led to the additional problem of a relatively poor income situation in pig farming. Due to the economic situation, more cost awareness in new construction investments has been recorded. This means that pig fattening places must be built for less than € 350 per place in order to allow production to remain profitable. Farms reach this goal by profiting from economies of scale due to larger units, the situation in the construction sector, the favourable capital market conditions, and the cost-aware, progressive use of technology. Locational problems result in growth steps not only in the form of extensions at the same location, but also because locations which were used in the past are taken over (i.e. rented). In general, however, improvements are realized in the latter case, and new technologies and housing techniques are employed.

Housing Techniques

The development of the large group for fattening pig husbandry and piglet rearing has established itself. The required pen structure characterized by resting- and traffic areas having a different percentage of slatted floor can be realized far more easily here because the animals are given more possibilities of structuring the pen. The use of occupational material and the realization of the required cooling possibilities for animal support are also facilitated. The new development of a large pen for up to 300 animals, which was presented at the last EuroTier, continues this trend. This technique has meanwhile established itself in practice. It is characterized by the entire space being divided into two functions: the resting- and traffic area as well as the feed area. In order to get from one area to the other, the pigs must pass a station where they are weighed either manually or optically. In addition to manual weighing, the optical solution enables the pig type to be

Fig. 1: The hand terminal MilanMPX by Mannebeck has a barcode scanner and full Palm functionality and is housed air and water-tight

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Fig. 2: The rationed piglet feeding unit VitalFeed by Laake allows often feeding of smallest amounts with or without adding water

identified.

The economic advantage of these techniques is that weighing and type identification enable the pigs to be better adapted to the masks for sale. Furthermore, automatic sorting is possible, which in addition to the economic advantage for sale also provides a favourable solution for pig sorting under the aspect of labour management. Optical identification also enables this technique to be applied in large group housing for sows, which has the advantage that the animals can be sorted after identification and marked for different feeding techniques.

The trend towards piglet rearing in the closed system on fattening farms instead of isolated piglet rearing at new locations also increases the trend towards liquid feeding of piglets. The reason for this trend is the dual use of existing feeding systems, greater performance due to liquid feed dispensing, and a continuous system without changeover problems. Industry is supporting this trend through detail improvements for facilities which are already in use and simultaneous new developments.

Environmental Protection Requirements

For the granting of permits for pig housing facilities, the application of the Technical Regulations Concerning Air Pollution as the basis for permit procedures has almost become standard. Due to the required shortening of slurry storage in the stall, this leads to small construction depths of slurry channels. As a result, slurry systems are being developed which feature pipe drains and rinsing tubes along with narrower channels. The covering of outdoor storage containers is demanded more and more often. According to the Technical Regulations Concerning Air Pollution, swimming covers out of straw are permitted, but, however, they are no longer always approved. Tent roofs, which can be carried by a central support based on the bottom of the container, are standard. For the erection of the central support, an additional static evaluation of the bottom is required.

With regard to the reduction of odour, ammonia, and dust, the use of filters allows polluted locations to be secured and additional extensions to be carried out. In pig fattening, this is difficult to realize due to the costs. In sow housing, the cost situation is different, and therefore such measures can be justified more easily. The recording and documentation of filters is another cost factor which must be taken into account.

Feeding Systems

As mentioned above, the development of feeding systems focuses on the necessity to feed large groups in sow- as well as fattening pig husbandry. The feeding systems exert a great influence on the housing technique. Animal identification solutions or stalling-up in individual groups lead to different systems for sow housing. As another variant, the ad-libitum feeding technique is applied.

In liquid feeding systems, disinfectant additives or active disinfectants, such as acids, improve the hygiene situation. Reduced pipe cross sections and extruded interior pipe walls which prevent deposits within the pipes favour the development of the branch line. Container shapes and agitators continue to be improved.

Due to networking possibilities, feed programs allow documentation to be simplified and processes to be combined with other control systems. First, the ventilation- and feeding systems from different companies are connected to each other. The development of hand-held computers enables checks and alterations to be simplified under the aspect of labour management. Possibilities of more precise liquid additive metering in feeding systems, for example, are being developed and extend the possibility of application.

Fig. 3: With the MS Dry Dos by Schippers medicine in powder form can be added easily and very exactly to the dry feed

Meanwhile, the improvement of metering systems allows the addition of additives (pharmaceuticals) to be documented, and feedback makes their application safer. The correct use of metering systems in feed dispensers prevents speading within the farm.