

Farming in the "new" German states has to be modernized

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The reunification of East and West Germany is bound to have a dramatic effect on the existing pig farms in the former Democratic Republic. Most of these farms have to be refurbished and some have to be closed down to meet the Clean Air Act.

Up to the time of the German reunification, pig production in the former "East Germany" was a precisely coordinated, graduated industrial production system with the goal of producing a predetermined quantity of animals for slaughter each year. The producers' prices were fixed, regardless of the quality produced, and guaranteed by the state.

A large number of the production centres were constructed from the late sixties onwards. They are of a standardized design and prefabricated on an industrial scale. The installations hardly differ from what one can see in the rest of the world. Individual production units have a common structure. You may find in successive order:

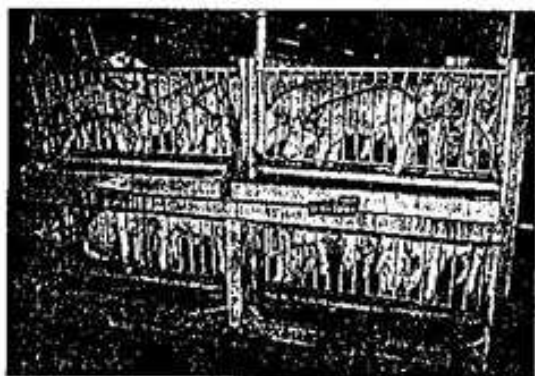
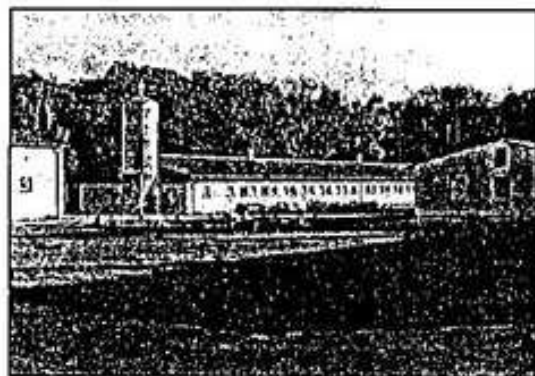
- an insemination and waiting house
- a farrowing house
- a rearing house
- a gilt or boar rearing house and
- a fattening house.

These houses are arranged comb-like with a central alley which connects the houses. The long piggery axes present here were generally predestined for feed distribution by lorries.

State changes

In the last 20 years, the state authorities have frequently prescribed changes in pig management technologies:

- Conversion of all heating installations from oil to brown coal
- Prohibition of litterless keeping
- Saving of electricity by



Many farms have to modernize to be able to compete with the rest of the German and West European producers. To complete this process the farmers need financial support from Western companies.

installing natural ventilation systems with mono-shaft. This of course had a considerable influence on the productivity, quality and efficiency of production.

Reduced production due to environment protection

At present, former East Germany's greatest capital for the future is the existing piggery capacity. This capacity can still be kept in large, self-contained production units. A positive rationalization can be expected here too. However, nearly all production units exceed the maximum limits of permit-free capacities. The limits here are 250 productive sows, 700 fatteners or approximately 75 sows and 485 fatteners.

Therefore, almost all producers have to obtain production permits under the federal law on environmental protection

against obnoxious substances (Clean Air Act). Farms were often established near residential or commercial areas in the past. Those farms which do not meet the minimum distance from these areas will certainly have to make cuts in production capacity of 25 to 35 percent. In addition it is estimated that 15 to 25 percent of the total capacity have out-of-date installations and will no longer be suitable for refurbishment and will also be lost.

Manure storage capacity

Nearly all of the states' production units have insufficient storage capacities for liquid and solid manure. The CAA requires a minimum storage capacity for a period of six months. In the case of liquid manure all the storage containers have to be covered. The alternative - treatment of the liquid manure in appropriate

plants - can be dismissed at the present time as no economically viable process for this has yet been developed anywhere in the world.

Ventilation systems have to be changed

Ventilation systems must be constructed in accordance with the most up-to-date methods. This means that waste air exits have to be 1.50 m above the ridge of the roof, and air speed should be at least 7 m/s.

The transition period for these minimum requirements will expire on 1st January, 1993. This would mean the end of the road for all the installations in the new German states, since the production units are simply unable to afford such investments. Therefore, immediate administrative aid from the experts in the "old" German states (i.e. the former West

Germany) and unbureaucratic, provisional handling of the permit proceedings appear to be urgently needed. In a state of legal uncertainty no meaningful investments are possible which would ensure provisional continued existence. An extension of the deadlines for adherence to the Act must be gained.

Breeding measures

The existing livestock material is slightly superior to western breeds as regards qualitative performance features. However there is still a shortfall of approximately 6 percent in the lean meat share, and carcass lengths are insufficient. This weak point can be eliminated within a short period by selective breeding measures in the boar and sow lines in conjunction with improved management conditions. Graduated production - which is bound to collapse as a result of the failure of many units - will have to be re-organized.

Keeping processes

In the long run, pig farming in the new states will have to be adjusted to Western standards in order to be able to produce in an economically efficient manner. The goal is work productivity of 15 and less hours per productive sow and year in piglet production and less than 1 hour per fatterer produced.

The use of electronic data processing for feeding, farm management and organization scheduling will be a vital necessity for profitable pig production in the future. A uniform solution (comparability) should be aimed at here. This calls for unimaginable amounts of investment since financing is required not only for refurbishment measures, but also for clearing up considerably (in the past) polluted areas.

All energy must first be channelled into preserving as much production capacity as possible, as, it is feared, the construction of new facilities of any size will be systematically prevented by a large number of different pressure groups. □



Nearly all production units exceed the maximum limits of permit-free capacities.

Production characteristics

Piglet production

Piglet production in the five new German States is characterized by the following:

- Working time input of 75 - 90 hours per sow and year due to the form of keeping (type or old facilities with high social burdens, litter in part, insufficient technology inputs);
- Animal performances of 18.1 piglets reared per sow and year and 35 kg selling weight up to now;
- Excessively long suckling times of 42 days;
- Highly excessive manpower input per unit of up to 5 workers per 100 productive sows;
- Excessive energy input for air conditioning due to inadequately completed buildings (k values in the exterior walls of up to 1.2, insufficient heating and ventilation installations);
- Uncontrolled feed rations not coordinated on an animal physiology basis (here improvements from 1990 onwards);
- Despite the prevailing size of the units, shortage of stationary feeding installations;

- Unreliable gravity-type manure handling or towed shovel dunging process with a high maintenance input;
- Functional dimensions of piggery facilities do not always comply with the regulations governing pig management;
- Unsatisfactory utilization of space on the grounds of the given housing axes (30 to 40 % loss of capacity in comparison with the possible layout planning).

The break-even point in most production units currently lies at a minimum of DM 105.-- to DM 110.-- for a 20 kg piglet. In view of the prevailing price levels this does not allow any profit and the collapse of production is simply a matter of time.

Production of fatteners

The production of fatteners is characterized by:

- Excessive working time input per fattened pig produced from 8.2 to 11.5 manhours (type or old facilities with high social burdens, partly with litter, insufficient or poorly functioning mechanization);

- Animal performances of 550 - 650 g daily increase in weight with feed efficiencies of up to 5 kg feed input for 1 kg increase in live weight at up to 135 kg final fattening weight (since 1990 reduction to 105 kg live weight);
 - Insufficient lean meat share rising from 49 to 52 percent;
 - Animal loss rate too high (up to 5 percent);
 - Inefficient feeding and manure handling processes and
 - Structural and technical conditions of the production units suffer from the same problem complex as piglet production (physics of building construction, air conditioning, utilization of space).
- Even in the best units the break-even point lies at nearly 3.00 DM per kg live weight. This means that no profit is possible in this production branch either. However a rather short-term remedy could be achieved here by relatively simple measures such as improving the feeding and air conditioning and a transition to the profit zone could be reached. □