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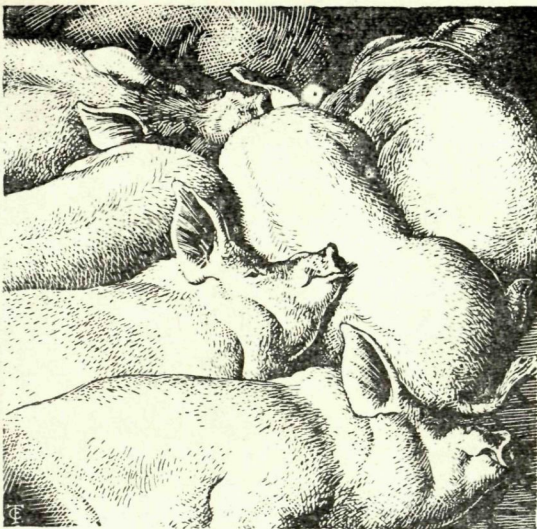
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REDUCE THAT PIG MORTALITY

Some Common Causes of Death in Young Pigs

By P. M. A. HARWOOD, Veterinary Surgeon.

AS distinct from the mortality caused by the recognised “killer” diseases, many deaths which occur in pig herds are due to factors such as faults in feeding and management, the importance of which are often not fully realised by pig owners. Quite frequently, closer attention to what may appear to be minor points will result in a greater percentage of the litters being reared to marketable weights—with a corresponding increase in the profit margin.

Deaths occur at all ages, but the majority of losses are in young pigs. Many occur even before the piglets have separate existences—through abortions or still-births. Losses prior to weaning are heavy and, at the weaner and slip stages, acute worm infestation may take heavy toll.

ABORTIONS AND STILL-BIRTHS

Several factors can be responsible for abortions and still-births and it is often difficult to reach a definite diagnosis. Disease, nutritional deficiencies, heredity, over-fatness and injuries can all play their parts, and this outline of some of the major causes of losses may point the way to a reduction in the mortality rate.

Leptospirosis.—A bacterial infection which is possibly the most important cause of death or weakness in piglets in this State. Two similar micro-organisms are found, one causing a severe mortality, the other seldom being fatal. No clinical evidence of infection is found excepting a slight rise in temperature.

Another important aspect of this condition is the fact that pigs can transmit the micro-organism to cattle, causing the

disease “redwater.” Pig urine draining into water supplies may lead to widespread infection of cattle.

Brucellosis.—A bacterial infection closely allied to that causing contagious abortion in cattle. The micro-organism responsible for brucellosis in pigs has not yet been found in Western Australia, but where sows are aborting for no obvious cause, blood samples should be submitted for analysis.

Other Bacterial Infections.—Several other bacteria cause abortion in sows. Abortions are usually accompanied by signs of illness, and any condition causing fever in a pregnant sow may give rise to abortion.

Mineral Deficiencies.—In many wheat-belt districts, pigs are fed largely on wheat which does not supply sufficient calcium (lime) for the needs of the pregnant sows. Lack of lime is a common cause of abortions or still-births, and calcium-rich supplements such as ground limestone or bonemeal should be included in the ration.

Deficiencies of other minerals such as copper, iron, manganese, cobalt, etc., may affect the development of piglets during



Fig. 1.—Healthy litters are born and reared when the parents are carefully selected and when the sows are fed and managed correctly throughout the gestation period

pregnancy. Even where the deficiency is not severe enough to cause abortion or still-births, the sow's milk supply may be affected so that the piglets, although born alive, die from lack of nourishment.

Vitamin Deficiencies.—The most important vitamin is Vitamin A. This vitamin occurs in natural green feed and coloured root crops (carrots and swedes). Unless at least $\frac{1}{2}$ lb. of good quality green feed can be fed daily, the sow's ration should be supplemented with shark liver oil. Dry grazing will not provide adequate quantities of Vitamin A.

Protein Deficiency.—This relates in particular to proteins of animal origin, such as are found in meatmeal, fishmeal, skim milk, whey, etc. Proteins of this type contain an essential factor for the promotion of growth that is not present in protein of vegetable origin. Severe protein deficiency results in abortion and still-births. Lesser deficiencies give weakly, poorly-developed pigs and lowered milk supply.

Injury.—Severe bruising or over-exertion may result in abortion or still-born pigs.

Lazy Sows.—Fat, inactive sows bearing large litters often have abnormally long periods of labour. Piglets are born dead due to suffocation during slow birth. Fat-

ness is a most undesirable feature in breeding sows, and old sows are often bad mothers.

Hereditary Factors.—Where related boars and sows are mated, so-called "lethal factors," which are accentuated by close inbreeding, may result in still-birth in litters. The pigs may be obviously deformed and abnormal, or they may fail to develop. Except when breeding stud pigs, a totally unrelated boar is the best to use.

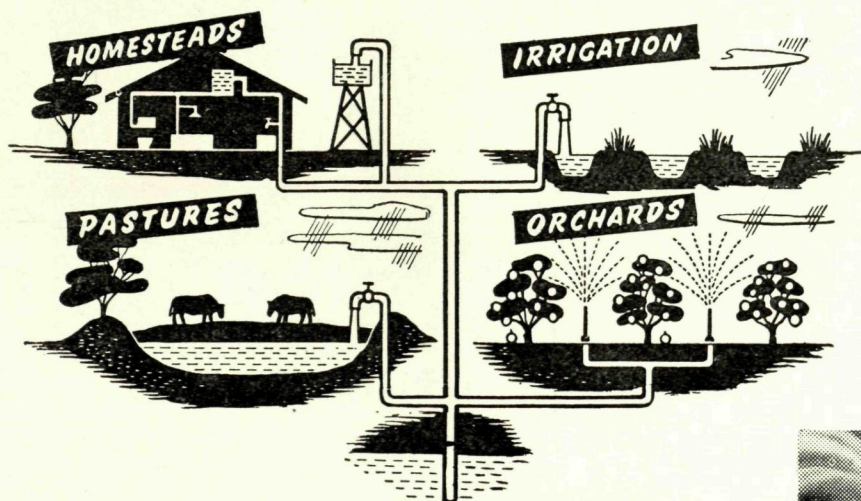
DEATHS IN VERY YOUNG PIGS

Crushing.—The most frequent cause of death in very young pigs is due to crushing or smothering by the sow. Although these losses may be minimised by the use of properly-constructed farrowing pens, farrowing rails and hover boards, it is felt that overfatness on the part of the sow is the chief contributory cause. Sows should never be allowed to become too fat and should be allowed ample exercise during pregnancy. It should be born in mind that old lazy sows are more likely to lay on their piglets than young active sows.

Deaths from this cause are usually limited to within two days of farrowing, and the dead pigs are obviously crushed by the weight of the sow.

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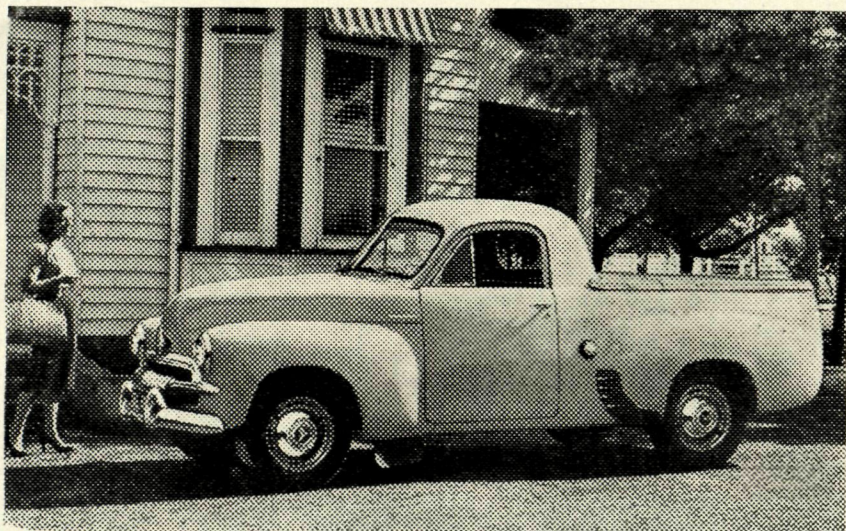
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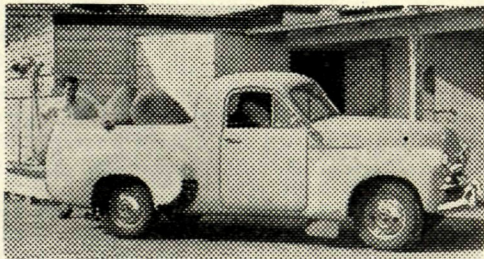


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Savaging.—Some sows will savage their litters and often eat the piglets. It has been suggested that a protein deficiency is responsible, and all pregnant sows should receive adequate protein supplements to their rations. Sows appear to acquire the habit of savaging their pigs, and such sows are not worth keeping.

Vitamin and Protein Deficiencies.—Deficiencies of Vitamin A, minerals or protein in the sow's ration often give rise to a condition whereby the pigs are apparently normal at birth, but due to lack of vitality, do not suckle and consequently "fade away" in the course of two or three days. The condition can be rectified by adding to the vitamin requirements with shark liver oil and seeing that the ration contains adequate quantities of green feed, minerals and meatmeal.

Piglet Anaemia.—This condition usually becomes apparent when pigs are kept in concrete-floored sties and are unable to obtain access to soil and green feed. The young pigs appear normal at birth but after two or three weeks they lose condition, develop a white scour and die within a few days. When the body cavity is opened it usually contains fluid, the liver is pale and enlarged and the organs are bloodless.

Anaemia may be caused by a deficiency of iron and copper in the diet. Grazing and access to soil by the sows will often

prevent the disease. Young pigs should always have soil available in the sties as they can usually obtain adequate supplies of copper and iron from this source.

Milk Fever.—"Milk Fever" or hypocalcaemia is rather uncommon in sows. It is not a true fever as the temperature usually drops below normal. The sow becomes comatose or unconscious and often dies if the condition is not relieved. Injections of calcium borogluconate (1 to 2 oz.) under the skin usually bring about a rapid recovery.

A condition resembling milk fever, except that the sow has a high temperature is sometimes seen in sows. It responds to injections of streptomycin.

Both these ailments of sows cause failure of the milk supply and the young pigs die from lack of nutrition.

DEATHS IN WEANERS, SLIPS AND STORES

Acute Worm Infestation.—The common pig roundworm passes a complex cycle within the pig's body before it reaches the bowels. During part of the migration it penetrates the liver, causing damage to this organ. Where a massive infestation is picked up, the damage caused to the liver may cause sudden death. In such cases the liver is black and "rotten" in appearance, and the body cavity contains blood-stained fluid. There are few or no worms in the bowel.

The second stage of migration takes place when the young worms enter the lungs. This stage is frequently recognised by pig-owners when young pigs exhibit the "thumps" or "pants." When large numbers of worms are involved, rapidly fatal pneumonia occurs.

Treatment with sodium fluoride is ineffective for either of these conditions, as the drug is only active in mature worms

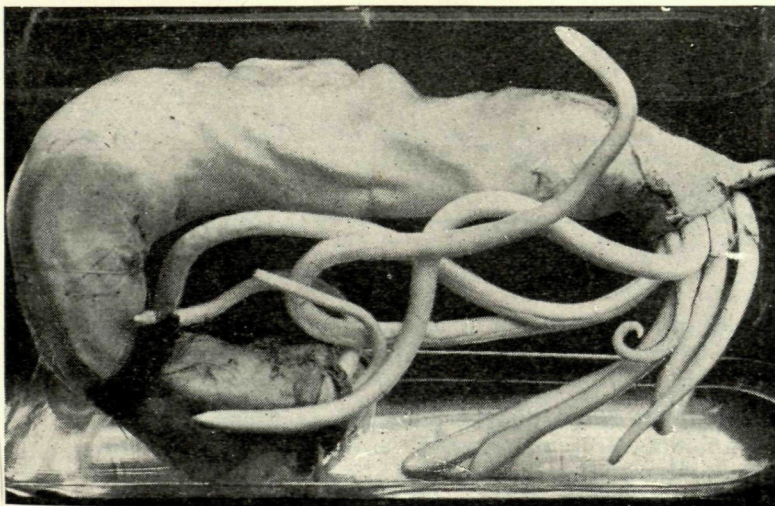


Fig. 2.—Portion of the small intestine of a pig that was heavily infested with large roundworm.

in the bowel. Precautions should therefore be taken to ensure that young pigs do not run on worm infested land.

Acute Pneumonia.—Infectious pneumonia is often responsible for sudden death in pigs from weaner to store baconer ages. The symptoms are disinclination to move, staggering gait, and panting. Death soon follows. Treatment with sulphamezathine or penicillin injections is often effective.

Chronic Worm Infestation.—Heavy infestation of roundworms sometimes causes sudden death by obstructing the bile duct or even causing rupture of the bowel.

The pig dies very suddenly. Where the bile duct has been obstructed, the carcass is jaundiced and the liver is a coppery green. Where the bowel is ruptured, worms will be seen lying in the body cavity, which will contain evil-smelling fluid.

Roundworms in the bowel may be very satisfactorily treated with sodium fluoride.

Poisoning.—Poisoning may be caused by eating poisonous plants, or by eating chemical poisons that have been left where pigs have access to them. In swill-fed pigs, poisoning by common salt is sometimes seen.

Death is usually sudden, and may be preceded by intense scouring and vomiting.

Phosphorus is commonly a cause of death in pigs, as it is often accessible to them in the form of rat baits.

In cases of poisoning the stomach and bowels are intensely reddened, and may even contain free blood.

Pigs of all ages may be affected, but poisoning is most often seen in young pigs.

Heart Disease.—Pigs sometimes develop a heart disease after bacterial infections such as erysipelas. They appear to be quite normal and make good growth after recovering from the disease, only to drop dead after exertion. On opening the heart cavity, cauliflower-like growths may be seen on the surfaces of the heart valves.

CONCLUSION

Many cases of sudden death occur on pig farms without being properly explained. Rapid detection of the cause of death may prevent further losses. It has been attempted to describe here the causes of mortality other than those by diseases normally recognised by pig-breeders and adequately dealt with in other articles.

Where a bacterial agent is suspected, attempt to submit the whole carcass to the Animal Health and Nutrition Laboratory for examination before decomposition has commenced.

Where poisoning is suspected, submit the stomach and bowel contents, plus a piece of liver, kidney, thigh muscle and a bone for examination.

Where the help of the laboratory cannot be sought, always perform a post-mortem and attempt to determine the cause of death.

By no means all causes of death are due to infectious agents, but rapid diagnosis may help to prevent further losses.

FARMERS

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