

FIELD STUDIES ON THE INCIDENCE OF WHITE SPOTS IN SLAUGHTERS

A.C.J.M. WERTENBROEK
ANIMAL HEALTH SERVICE IN NORTH-BRABANT
MOLENWIJKSEWEG 48, 5282 SC BOXTEL THE NETHERLANDS

Ref.no. 476.

In Deurne and Aarle-Rixtel exist an integrated group of pigbreeders, pigfeeders and this group had a cooperation with the cooperative slaughterhouse of the Vee- en Vleescentrale of the North Brabantse Christelijke Boerenbond te Boxtel (Netherlands). In this integration get the sow and her piglets a number in the ear, by the contactperson of the integration.

He carried out the administrative work for the pig breeders and pig feeders such as filling in the litter card and weighing and distributing of the piglets. At the conveyor belt of the slaughterhouse, the front on the back of the liver had been inspected for white spots. The code of the infection of the liver and the ear number were spoken into a taperecorder. The inspection were carried out immediately after the liver had been removed from the abdominal cavity, before the inspector had inspected the liver. The infection is converted to a code number 0 t/m 10. Code 0 is given when there were no white spots visible on the front or on the back of the liver.

Code 10 was given if the entire surface of the liver had turned white as result of massive infection by roundworm larvae. The data were collected on a punch card.

Next a trial of deworming of fattening pigs on 10 farms of the pig feeders there was made investigations of the circumstances of the fattening proces in the whole integration. Management factors such as cleaning of the pens, are also replacing of the pigs, the use of the all in all out system as the system of continuous start of fattening pigs, fattening on straw of pens on slatted floors. Pigfeeders with a great number of fattening pigs had a better degree of liverinfection than the small ones. (see table 1).

Table 1. Number of slaughters by pigfeeders.

Mean number of slaughters on the farm	Number of farms	Number of slaughters	Degree of infection	Classes of the codes in %
100	36	4096	3,3	36 38 15 11
100-200	33	9966	2,9	44 34 13 9
200-300	31	11121	3,0	42 36 14 8
300	38	23887	2,5	47 34 11 8
	136	49070	2,9	45 35 12 8

Slaughters from pigfeeders where the pens were cleaned on high pressure had a lower degree of liverinfection than slaughters fattened in not cleaned pens.

Slaughters replaced during the fattening period had a higher degree of liver infection. Pig feeders using the all in all out system had not a better result than the pig feeders with a system of continuous start of fattening pigs, measured on the degree of liver infection. There was a significant influence of the season. Deworming with broad spectrum anthelmintics was registered as a clearly influencing the degree of infection in comparison of not deworming or deworming with piperazine. On 10 working farms in the field with a high percentage of reject livers are be carried out extra investigations with 3 anthelmintics: dichlorvos, levamisole and mebendazole and one placebo. The result was a better mean growth rate a day by use of the anthelmintics respectively of 33, 59 and 27 gram a day in comparison with the growth results of the pigs that have had a placebo. For the pig feeders this difference in growth means a reduction of the growth period of 6 days resp. 11 and 5 days for the same final weight of 110 kg and an initial weight of 24 kg.

Administering the anthelmintics after the second week of starting the growth period results in an average reduction in growth per day of 19,5 gram.

The anthelmintics used considerable reduce the degree of liver infection resp. 1,80, 1,94 and 1,56 compared

with the pigs which were not dewormed and therefore had a placebo. The anthelmintics administered at the beginning of fattening period in the first week, appeared the result in the greatest reduction in the degree of liver infection. A repeated administration of the anthelmintics dichlorvos and levamisole after a gap of six weeks has no positive effect on the average growth rate and degree of liver infection. A higher degree of liver infection at the time of slaughter is accompanied by a lower average growth rate per day. The maximum difference in mean growth rate is 40 grams a day regardless the anthelmintic and the placebo.

This is the difference between pigs with a good liver and pigs whose livers have turned completely white as a result of migrating roundwormlarvae.

Summary.

This preliminary report give results of investigations of about 49.000 slaughters on the presence of white spots to try developpe the influence of the management factors on the farms of the pig feeders. On the other hand this report give the results of a deworming trial. The investigations were made in the period of may 30, 1973 to april 16, 1975.

The slaughters came from an integrated group of pig breeders, pig feeders and the cooperative slaughterhouse of the Vee- en Vleescentrale of the Noord-Brabantse Christelijke Boerenbond at Boxtel (Netherlands). It has been registered and reported by the central Bureau of slaughter insurance, that there is a seasonal influence on the presence of white spots. Replacement of fattening pigs in another pen did not reduce the degree of the presence of white spots. Slaughters laying in pens with straw, showed a higher degree of infection of ascariasis than pigs housed in pens on slatted floors. Farms with a great number of fattening pigs had better results than small ones. Pigfeeders with a system of continuous start of fattening pigs had a lower degree of white spots than the farmers with the all in - all out system.

When the farmers cleaned the pens before the beginning of the fattening period the slaughters had fewer white spots.

The same can be said when pigs were treated at the beginning of the fattening period.

The difference in daily growth of 40 grams between slaughters without white spots and those with totally white livers was recorded.

The anthelmintics dichlorvos, levamisole and mebendazole effected a significant improvement in daily growth and reduced the degree of white spots on the liver.