

CONTROL OF ASCARIASIS IN PIGS BY CONTINUOUS FEED ADMINISTRATION OF PYRANTEL.

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The number of producers of piglets for sale in Sweden is very high compared with the number of producers of fatteners. This situation means great possibilities for *Ascaris suum* to be spread to the fattening units.

Since many years the producers of piglets for sale have been recommended to deworm sows before farrowing to reduce the risks of heavy infections of the litters. The producers are also recommended to deworm the piglets by a single treatment before sale. Nevertheless, high *Ascaris* egg counts can be found in the pigs at arrival to the specialized fattening units at about 25 kg of bodyweight and at an age of 9-12 weeks. Deworming by a single treatment after arrival to the fattening house and a second treatment 3-4 weeks later has been recommended but does not seem to reduce the number of white spots at slaughter and some producers have more than 10 per cent of the livers condemned.

The mentioned control program does not adequately prevent the adverse effects of parasitic infection. Pyrantel tartrate (Banminth®) was reported to be highly effective in the prevention of *Ascaris suum* and *Oesophagostomum* infections when given in the feed continuously at a level of 106 ppm (Arakawa and Conway, 1969; Conway and Arakawa, 1969; Conway, 1976; Stewart et al., 1979; Zimmerman et al., 1973). This report summarizes the results of three trials investigating the efficacy of pyrantel tartrate in preventing infection of *Ascaris*.

In each trial the pigs were allotted to two groups. One of the groups was treated and the other remained untreated. The groups were kept separated from entering the fattening unit until slaughter. The medication period was two or four weeks after arrival to the fattening unit.

During the fattening period faecal egg output and bodyweight gain were recorded. At slaughter, at about 105 kg of bodyweight, 2215 pigs were registered of which 1134 pigs were treated and 1081 were untreated controls. Bodyweight, carcass weight, number of *Ascaris* in intestine, incidence of white spots and pneumonia were registered individually.

Comparing treated and untreated pigs there was a significant ($p < 0.001$) reduction of the frequency of white spots and *Ascaris* in the intestine in the treated animals as compared with controls at slaughter. No significant difference between groups could be registered concerning the frequency of pneumonia.

In Sweden a restricted feeding system is applied during fattening and the amount of feed given is calculated from bodyweights. During the trials no significant differences in daily weight gain between treated and untreated pigs were observed. The total feed consumption during fattening was registered. The feed conversion, measured as the number of kg of feed consumed per kg of weight gain, was in one of the trials reduced from 3.31 in the control group to 3.14 in the treated group and in the second trial from 3.34 in

the control group to 3.20 in the treated group. In the third trial no reduction of feed conversion was registered.

Conclusions:

In three field trials pyrantel 100 ppm administered in feed for two or four weeks after arrival to the fattening unit has been highly effective in reducing the faecal egg output during the fattening period and the number of white spots and the frequency of *Ascaris suum* in intestine at slaughter. No influence on the frequency of pneumonia was registered. In two out of three trials the feed conversion has been markedly reduced comparing treated animals with untreated controls.

Selected references: Arakawa, A. and Conway, D.P.: Amer. J. Vet. Res. 1969, 30, 1613; Conway, D.P. and Arakawa, A.: Cornell Vet. 1969, 59, 605; Conway, D.P.: Proc. Int. Pig Vet. Soc. 4th Congress, 1976, Ames, Iowa, U.S.A.; Conway, D.P. and Raynaud, J.-P.: Proc. Int. Pig Vet. Soc. 6th Congress, 1980, Copenhagen, Denmark; Stewart, T.B., Marti, O.G., Hale, O.M. and Lomax, L.G.: Amer. J. Vet. Res. 1979, 40, 1472; Zimmerman, D.R., Spear, M.L. and Switzer, W.P.: J. Anim. Sci. 1973, 36, 894.