MULTIFACTORIAL APPROACH TO MORTALITY OF PIGLETS IN SEMI- ARID REGION OF TAMIL NADU

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ABSTRACT

The piglet mortality pattern of Large White Yorkshire pigs were analyzed utilizing the last data available in organized farm. Among the different causes of piglet mortality traumatic shock due to crushing by mother (25.0 per cent), pneumonia (25.0 per cent), hepatitis (17.13 per cent) and haemorrhagic enteritis (13.46 per cent) was found to be common. The percentage of mortality was higher (69.23 pr cent) in 0 to 15 days age group which was mostly due to crushing by mother. As the mortality during the first 15 days was high, it can be concluded that utmost care should be given in early life. Strict hygienic measures will help in reducing the infection related diseases.

KEY WORDS: Piglet, Mortality, Causes

INTRODUCTION

The success and efficiency of pig farming largely depends upon the reproductive performance of pigs. The major task in pig husbandry is avoiding piglet mortality and raising piglets successfully up to weaning. The major causes of neonatal death is likely to be starvation, diarrhea and crushing by the sow. Litters of low birth weight will have higher levels of mortality associated with starvation and disease. While the sow is retained in a farrowing crate, crushing levels are in general, significantly reduced. After weaning the mortality is comparatively less. In surveys and investigations of piglet mortality conducted throughout the world, stillbirth losses have varied from 4 – 8 % ; in India 10 % of the total still births, 70 – 80 % are intrapartal stillbirths. More than 50 % of live-born pigs die within 4 days of farrowing (English and Morrison, 1984). Keeping these factors in view the present study was undertaken in organized farm to analyse the various causes for piglet mortality.

MATERIALS AND METHODS

The present work was under taken to study the causes of mortality in Large White Yorkshire Pigs in an organized farm to provide more valid and technical information. The piglet mortality pattern of Large White Yorkshire pigs were analyzed utilizing the last five years data available at swine unit. The pigs were maintained under optimum management conditions. Animal of different age groups were fed appropriate concentrate mixture. Clean drinking water was provided at all times. Sows were housed in groups and at advanced stage of pregnancy, they were moved from breeding sty to farrowing pens 2 weeks prior to expected date of farrowing. Sows and their piglets were kept in the farrowing pen itself until weaning (56 days). Just after farrowing, each piglet was allowed to suckle colostrum from its mother. Bottle feeding of piglets were practised for piglets from more number of piglets in a litter, poor mothering ability and sows affected with agalactia. On first day needle teeth were cut and iron injection were given on 3rd day and 3rd week of age. Creep feeding was introduced from 10th day onwards. The data collected to study the mortality patterns in piglets were analyzed, as suggested by Snedecor and Cochran (1996).

RESULTS AND DISCUSSION

Among 352 piglets born, 52 piglets died during pre weaning stage with an overall mortality of 14.77 per cent. Kalita *et al.* (2002) reported higher pre weaning mortality at Guwahati, Assam Agricultural University farm in Hampshire pigs i.e. 21.30 and 24.89 per cent, respectively. Out of the total pre- weaning deaths, highest mortality was recorded within 15 days (69.23 per cent) followed by 15 to 30 days (21.25 per cent), which gradually declined up to 56 days. This can be attributed to lower intake of colostrum along with poorly developed immune system, which enhances the susceptibility to infection.

Among the different causes of piglet mortality traumatic shock due to crushing by mother (25.0 per cent), pneumonia (25.0 per cent), hepatitis (17.31 per cent) and haemorrhagic enteritis (13.46 per cent) was found to be common. This finding was supported by Kalita *et al.* (2002) who recorded high mortality rate due to pneumonia and gastro enteritis which was due to lower intake of colostrum per piglet in large litters and the consequent increased susceptibility of piglets to diseases. Improper protection of piglets from severe cold also contributes to higher incidence of pneumonia. As the mortality during the first 15 days was high, it can be concluded that utmost care should be given in early life. Strict hygienic measures will help in reducing the infection related diseases.

It is notable in the present study that mortality rate due to pneumonia was highest during the age group 15-30 days(63.63 %) followed by 30-45 days (60.00 %) , the other factor of death was Hepatitis (27.27% and 20.00 %) during the same age, similarly one case out of 5 due to haemorrhagic enteritis was observed during 30-45 days .

Table 1. Preweaning mortality of piglets based on age group and cause of death

Age group in days	Percentage of death	Causes of death (Percentage)							
		Crushed by mother /Traumatic shock	Pneumonia	Hepatitis	Haemorrhagic enteritis	Septicaemia	Agalactia	Debility	Other causes/ Atresia ani atrecti
0 to15	69.23 (36)	36.11 (13)	8.33 (3)	13.89 5	16.67 (6)	11.11 (4)	2.78 (1)	5.56 (2)	5.56 (2)
15 to 30	21.25 (11)	--	63.63 (7)	27.27 (3)	--	9.09 (1)	--	--	--
30 to 45	9.62 (5)	--	60.0 (3)	20.0 (1)	20.0 (1)	--	--	--	--
45 to 56	--	--	--	--	--	--	--	--	--
Total	**100.0 (52)**	**25.0 (13)**	**25.0 (13)**	**17.31 (9)**	**13.46 (7)**	**9.62 (5)**	**1.92 (1)**	**3.85 (2)**	**3.85 (2)**

Figures in parenthesis indicates number of piglets died

The overall percentage of pre weaning mortality was 14.77 per cent (Table1) . The percentage of mortality was higher (69.23 pr cent) in 0 to 15 days age group and pre weaning death, crushed by mother was a major (36.11 %) cause. The percentage of mortality was lower when age advances. Svendsen *et al.* (1986) observed that

the farrowing crate saved baby pigs by preventing crushing by the sow. However, some piglets were still crushed in a conventional crate (0.51 per litter). Mc Glone and Morrow (1990) observed significantly higher preweaning mortality (27.12 per cent) due to crushing by sows under farrowing pen than in sows under crate (10.8 percent). Whereas Curtis *et al.* (1989) stated that close confinement of sows at farrowing might increase number of still born. This was supported by Svendsen and Olsson (1991) who reported that change of sows from loose housing during gestation to confinement in a farrowing crate may be linked with a higher incidence of Metritis Mastitis and Agalactia (MMA), difficulty in farrowing and more still birth.

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