

Summary

The study was in Sids Agricultural Research Station, belonged to Animal Production Research Institute in Beni-Suef governorate during the period from February 2009 to September 2010 including winter and summer lambing seasons to investigate the effect of some managerial and maternal factors on lamb performance.

Two hundred and seventy seven ewes and their lambs enrolled in this study, from winter and summer seasons of lambing. Ewes were divided according their temperament, BCS, body weight, age, and parity numbers, according to their management (nutrition, vitamin E and selenium injection, lambing season and vaccination). All animals were housed in partially sheltered and fenced yards on earthy floor, received a well mixed formulated ration.

The results showed that:

The relationship between ewe temperament and lamb behaviour and growth traits

- The temperament of ewes has significant effect on their lamb behavioural patterns specially their suckling frequency.

The relationship between ewe temperament and lamb blood picture

- The nervous temperament of ewes may constitute a condition of stress on their lambs which result in increase in WBC count and neutrophil percentage.

The relationship between ewe temperament and lamb blood parameters and immunity

- Calm ewes were superior in transferring passive immunity to their lambs than nervous ewes.

The relationship between ewe BCS and lamb growth traits

- Lambs born to ewes with a body condition score (≥ 4) had the highest growth traits.

The relationship between ewe body condition score (BCS) and lamb blood picture

- Ewes BCS was significantly affect the lamb's haemoglobin concentration and neutrophil, eosinophil and lymphocyte percentage.

The relationship between ewe body condition score (BCS) and lamb blood parameters and immunity

- Ewes with BCS (3- <4) were superior in transferring passive immunity to their lambs.

The relationship between ewe body weight and lamb growth traits

- The ewe body weight significantly affects the lambs ADG, while it had little effect on birth and weaning weights.

The relationship between ewe body weight and lamb blood picture

- There was significant effect of ewe body weight on lamb neutrophil and lymphocyte percentage.

The relationship between ewe body weight and lamb blood parameters and immunity

- Lambs born to ewes with body weight (48-56) was significantly higher in α_1 , α_2 and β_2 than that from ewes with body weight (37-47), while γ_1 was significantly ($p < 0.05$) higher in lambs born to ewes with body weight (37-47).

The relationship between ewe age and lamb growth traits

- Lamb birth weight was increased with increased ewe age, and ewes with 4 years were the best in their lamb growth traits.

The relationship between ewe age and lamb blood picture

- Age of the dam had no significant effect on lamb blood picture.

The relationship between ewe age and lamb blood parameters and immunity

- Lambs born to 4 years old ewes had the higher IgG and α_1 globulin fraction concentrations.

The relationship between ewe parity and lamb growth traits

- Ewes in third parity were superior in their lamb's growth traits.

The relationship between ewe parity and lamb blood picture

- There was significant difference in WBC counts, Neutrophil and lymphocyte percent between lambs born for ewes with different parities.

The relationship between ewe parity and lamb blood parameters and immunity

- Passive immune transfer to lambs was increased with higher parity.

The relationship between ewe nutrition plan and lamb growth traits

- Ewes in flushed + steamed up group were superior in their lamb's growth traits.

The relationship between ewe nutrition plan and lamb blood picture

- Lambs born to flushed + steamed up ewes had the highest haemoglobin concentration and lymphocyte percentage.

The relationship between ewe nutrition plan and lamb blood parameters and immunity

- Flushed + steamed up ewes were superior in transferring passive immunity to their lambs.

The relationship between vitamin E and selenium injection of ewes during late pregnancy and lamb growth traits

- Steamed up + vitamin E and selenium injected ewes had the best lamb growth traits.

The relationship between vitamin E and selenium injection of ewes during late pregnancy and lamb blood picture

- Lambs born to steamed up + vitamin E and selenium injected ewes had higher haemoglobin concentration and lymphocyte percentage.

The relationship between vitamin E and selenium injection of ewes during late pregnancy and lamb blood parameters and immunity

- Vitamin E and selenium injected ewes and steamed up + vitamin E and selenium injected ones were superior in transferring passive immunity to their lambs.

The relationship between lambing season and lamb growth traits

- Lambs born in winter season had higher growth traits.

The relationship between lambing season and lamb blood picture

- Lambing season had significant effect on lamb haemoglobin concentration and neutrophil and lymphocyte percent.

The relationship between lambing season and lamb blood parameters and immunity

- Lambing season has significant effect on passive immune transfer to lambs.

The relationship between vaccination of ewes against Clostridial diseases during late pregnancy and lamb growth traits

- There was no significant effect of ewe vaccination against Clostridial diseases during late pregnancy on lamb birth weight or pre weaning growth traits.

The relationship between vaccination of ewes against Clostridial diseases during late pregnancy and lamb blood picture

- There was no significant difference in blood picture for lambs born for vaccinated and non vaccinated dam groups.

The relationship between vaccination of ewes against Clostridial diseases during late pregnancy and lamb blood parameters and immunity

- Vaccinated ewes were superior in transferring passive immunity to their lambs.

The relationship between maternal factors and ewe's colostrum IgG

- Ewe's temperament and parity have significant effect on colostral IgG concentration.

The relationship between managerial factors and ewe's colostrum IgG

- Flushed + steamed up ewes, vitamin E and selenium injected and vitamin E and selenium injected+ steamed up ones were superior in their colostral IgG content.

The relationship between maternal and managerial factors and lamb mortality

- Lamb mortality can be affected by several factors at the ewe level including age and parity and by managerial factors including lambing season, and vaccination of ewes.