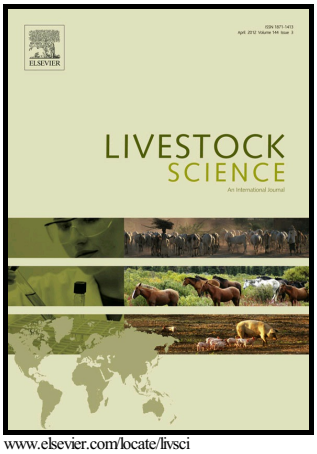

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PII: S1871-1413(18)30058-1
DOI: https://doi.org/10.1016/j.livsci.2018.02.012
Reference: LIVSCI3406

To appear in: *Livestock Science*

Received date: 6 November 2016
Revised date: 11 December 2017
Accepted date: 21 February 2018

Cite this article as: A.S. Morsy, M.M. Eissa, M.M. Anwer, H. Ghobashy, S.M.A. Sallam, Y.A. Soltan, A.M. Saber, E.A. El-Wakeel and W.M. Sadik, Colostral immunoglobulin concentration and milk production of ewes fed salt tolerant forages as alternatives to berseem hay, *Livestock Science,* https://doi.org/10.1016/j.livsci.2018.02.012

Colostral immunoglobulin concentration and milk production of ewes fed salt tolerant forages as alternatives to berseem hay

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Abstract

Feeding transition ewes on salt tolerant forages was proposed to enhance the immune response and milk production. Forty pregnant Barki ewes were assigned to four experimental diets (n=10 each): i.e. control [40% berseem hay (*Trifolium alexandrinum*) and 60% concentrate mix] or salt tolerant forage diets [40% either cassava (*Manihot esculenta*), acacia (*Acacia saligna*) or atriplex (*Atriplex nummularia*) and 60% concentrate mix)] for a period of 4 weeks before the expected lambing date until 8 weeks of lactation. Feeding with cassava resulted in the highest ($P < 0.05$) overall means of IgG and IgM in colostrum and lamb serum compared to other diets throughout the first 24h after birth. Both cassava and control groups showed similar ewe serum glucose concentration, while cassava enhanced ($P < 0.05$) the milk protein and yield compared to control. Lambs raised by cassava group had the highest ($P < 0.05$) daily gain compared to other groups. In conclusion, our results suggested that the bioactive components of salt tolerant forages may enhance the immune response and milk production during early lactation period.

Keywords

colostrum, immunoglobulin level, milk yield, lamb performance

1. Introduction

Berseem clover (*Trifolium alexandrinum*) is the traditional winter forage harvest in the Mediterranean-Middle East regions. In Egypt, berseem has achieved the distinction of being a base for livestock