



University of zabol
Graduate school
Faculty of Agriculture
Department of Animal Science

**The Thesis submitted for the Degree of M. Sc
(in the field of Animal Nutrition)**

Title:

**Meta-analysis of the maternal effect on the immunological
system of dairy calves**

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Abstract

Maternal factors have a positive effect on the immune system and calf health often depends on these factors. Because calves that experience different stages of the disease have lower growth, productivity, calving, and lactation performance, which increases veterinary costs. Numerous studies have examined the effects of maternal effects on calves and provided various recommendations in this regard. However, each study was conducted under specific conditions and sometimes it is not possible to compare or synergize studies to reach a general conclusion. The use of meta-analysis method allows the researcher to reach a single conclusion on a particular subject by considering all aspects. Accordingly, the purpose of this study is to review the studies conducted on the effect of maternal factors on the immune system and their blood parameters. For this purpose, a number of studies related to maternal effect on immune system and blood parameters were collected and at the end, the data were analyzed using rmeta software. The results showed that maternal factors were effective on some parameters of immune system and blood parameters of dairy calves, so that maternal factors were effective on IgG, IgG Colostrum and protein of dairy calves. But the effect of maternal factors on lymphocytes, neutrophils and WBC was not significant.

Keywords: Maternal Parameters, Immunological System, Calves, Immunoglobulin, Immunological Parameters