

**Comparing the effect of oral supplementation of vitamin E, injective vitamin E and selenium or both during late pregnancy on production and reproductive performance and immune function of dairy cows and calves**

**ABSTRACT**

The object of this study was to determine the effect of prepartum supplementation of vitamin E with or without injective vitamin E and selenium (Se) on productive and reproductive performances and immune function in dairy cows. Sixty multiparous Holstein dairy cows were divided randomly into three groups at the end of gestation. Cows in each group received one of three treatments: (1) a single intramuscular (im) injection of vit. E + selenium 3 weeks prepartum; (2) daily supplementation of oral vit. E given from 3 weeks prepartum to parturition; (3) injective vit. E + Se with daily supplementation of oral vit. E. Blood samples were collected from cows at calving and from calves at 0 and 7 days of age. Concentration of IgG in serum of cows and calves as well as in colostrum was determined. No significant differences among treatments occurred in the concentrations of IgG, animal, and calf production and reproduction performance. Due to the lack of significant difference between injection and oral supplementation, it is recommended to replace the injection with oral supplementation.

**Keyword:** Prepartum supplementation; Vitamin E; Selenium (Se); Reproductive performances; Immune function; Dairy cows