

EFFECT OF FENCE-LINE WEANING ON EGYPTIAN BUFFALO MILK YIELD AND THEIR CALVES PERFORMANCE

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The objectives of the current study was reducing the stress associated with weaning process for both mother, its weaned calf by increasing the productive performance of the mother and reproductive performance (early return to estrous and conception), increasing the growth rate and some body measurements of calves post-weaning as well as improving the immunological responses of both mother and calf by using 40 Egyptian buffaloes and their calves (n=40) were divided into two weaning system (20 buffaloes in fence-line and 20 buffaloes in traditional weaning). Buffaloes and their calves are placed on opposite sides of a strong fence. They have nose-to-nose contact, fence-line visits gradually decrease after the first three days. Milk production and its components were measured. Blood samples were taken weekly after calving till 8th week for analyzing. As a result, regression coefficients of the equation of Wood lactation curve showed that weaning system had a different ($P<0.001$) *a*, *b* and *c* parameters. Buffaloes with fence-line weaning had the higher ($P<0.001$) milk production (1889.90 vs. 1488.90 kg) and components during 8 months of lactation. Fence-line weaning calves had superior ($P<0.001$) performance than traditional weaning. Fence-line weaning had higher ($P<0.001$) values of blood metabolites (total protein, albumin, globulin, glucose, total lipids and cholesterol) than the other weaning system. Immunoglobulin (immunity) was increased in buffaloes and their calves weaned by the fence-line system. Calves sex and dams parity effects showed the normal expression on productive traits of buffaloes and their calves. Thus, we recommended that buffalo's producers should wean their calves by the fence-line system for more milk yield, calf growth performance and immunity.

Keywords: *Egyptian buffaloes, fence-line weaning, milk, calves performance, blood metabolites*