

Fecal progestin extraction and analysis for non-invasive monitoring of ovarian cycle in beef cows.

Abstract

The aims of the present study were to determine presence of immunoreactive progestins in feces, correlate fecal progestins with plasma progesterone (P 4) concentrations and subsequently assess the role of fecal progestins in monitoring estrous cycle in Kedah Kelantan (KK) beef cows. A total of 12 cycling cows were subjected to blood and matched fecal sampling twice a week for 9 weeks. The concentrations of plasma P 4 and fecal progestins extracted using a modified technique, were determined by a P 4 radioimmunoassay (RIA) kit. There was a significant positive correlation between the concentrations of fecal progestins and plasma P 4 ($r = 0.6$, $P < 0.01$), as tested for the whole group except one animal. High performance liquid chromatographic separation of fecal extracts and subsequent radioimmunoassay revealed presence of four immunoreactive progestins against the P 4 antibodies. These results imply that the non-invasive measure of fecal progestins using a DSL-3900 RIA kit can be used to monitor the ovarian activity in beef cows

Keyword: Feces; Kedah Kelantan cows; Ovarian cycle; Plasma; Progesterone; Progestin.