

Effects of Punicalagin on Some Productive and Reproductive Traits in Virgin Rabbit Does

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Abstract : Reactive oxygen species (ROS) is collective term both oxygen radical, such superoxide ($O_2\bullet$), hydroxyl($OH\bullet$), peroxy (RO_2), and hydroperoxyl ($HO_2\bullet$), and certain non-radical oxidizing agents, such as hydrogen peroxide (H_2O_2), hypochlorous acid ($HOCL$), and ozone (O_3), that can be convert easily to radical. The importance of antioxidants is shown here punicalagin. Punicalagin is preventing the harmful effect of (ROS) in all cells, specially gonadal cells. So, the aim of study was to investigate effects of punicalagin (PL) on maternal live body weight (MLBW), number of services/conception (NS), conception rate (CR), gestation length (GL), kindling rate (KR), total litter size (TLS), live litter size (LLS), kit weight (KW), progesterone (P4) and estradiol-17 (E2) concentrations at 1st and 2nd pregnancy of young does. A total of 28 healthy virgin does (6 months old) were divided into 2 equal groups. Group I, each doe, was injected IM with 100 ug PL twice/week pre-mating and one time 3 days post-mating. Group II, each doe was injected IM with sterilized water (control). Blood samples were taken at pre-mating, mating, post-mating, throughout pregnancy, and immediately post-kindling for assaying P4 and E2. All does were naturally mated with fertile bucks. Results revealed that PL displayed their significant impacts on MLBW, NS/conception, CR, GL, KR, TLS, LLS, KWs (birth and weaning), P4 and E2 concentrations either at 1st/2nd pregnancy or both of them. Conclusively, PL improved pregnancy outcomes of young do particularly at 2nd pregnancy and could be recommended in rabbit's farms.

Keywords : punicalagin, pregnancy, estradiol-17 β , progesterone, does

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