

STUDIES ON OVARIAN ACTIVITY IN FORMULATED FEED TREATED *CLARIAS BATRACHUS* LINN.

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ABSTRACT - In the catfish, *Clarias batrachus* weight of ovary and uterus and ovarian ascorbic acid and cholesterol levels showed significant variations that has been correlated with different eight formulated pelleted plant and animal diets viz., *Phyllanthus niruri* Hook.F. Linn, *Asparagus adscendens* Roxb., *Pseudarthria vesida* Linn., *Moringa oleifera* Lam., *Tribulus alatus* Delile and *Tribulus terrestris* Linn., dried Shrimp and dried powder of grasshopper, *Poekilocerus pictus* Fabr. Four formulated diets viz., dried Grasshopper, *M. oleifera*, *T. terrestris* and *P. vesida* were found to reduce the weight of ovary as well as uterus of test feed excluding the diet of dried Grasshopper. So far the highly elevated weight of uterus is concerned in the Grasshopper diet as compared to control might be due to abnormal uterine fibrosis. Ascorbic acid and cholesterol content of ovary in dried Grasshopper, *T. terrestris*, *M. oleifera* and *P. vesida* formulated diets treated fishes exhibited a marked increase with slight variation in their values. The rest of the four diets like *T. alatus*, dried Shrimp, *P. niruri* and *A. adscendens* showed significantly decreased values of ascorbic acid and cholesterol as compared to control. The results suggest that ascorbic acid and cholesterol have an active role in catfish oogenesis and maintaining egg quality and Final Oocyte Maturation (FOM) metabolism in a limited treatment period dependent manner. Further, it can be concluded that administration of pelleted formulated diets as dried Grasshopper, *M. oleifera*, *T. terrestris* and *P. vesida* caused significant reduction in ovarian steroidogenesis. Such diets have got potentiality to reduce fertility although they are as good food for vital and vigor except diet of dried Grasshopper.

Key words : Catfish, *Claris batrachus*, formulated feed, ovarian activity, uterine fibrosis, ascorbic acid, cholesterol FOM, ovarian steroidogenesis.