INTRODUCTION

1 - INTRODUCTION

Rabbit production in Egypt, represents a considerable component in poultry industry. The vast growth of this industry, necessitates the development of research projects aimed to elucidation of local environmental and managerial impact on rabbit productivity.

Reproduction of rabbits is demonstrated in generation of offspring and meat production. Increasing litter size along with prolongation of breeding season of rabbits would help intensifying production.

The present study was conducted to fulfill the following objectives:

{1} A primary objective in this study is to establish an indigenous radioimmunoassay systems for estradiol and progesterone. Provision of such a powerfull microanalytical technique is indispensible in endocrinological studies. Aside the economy in analysis of large number of samples, practicability and improvement of accuracy, precision and sensitivity were motivated.

{2} To analyze the assumption that litter size in does is correlated with mating serum level of progesterone and / or estradiol. Expanding information about ovarian endocrine steroidal status prior to copulation of females can help in selecting does with possible high litter size yield. Otherwise, stimulated hormonal treatment could be advised to

increase litter size.

{3} To study the interrelationship between gonadotropic hormones, prostaglandins and ovarian steroid function in does. Shedding more light on these endocrine mechanisms governing reproduction in does will provide valuable information for intinsified rabbit production programmes.

{4} Investigation of seasonal effects on ovarian endocrine functions in rabbits. Ovarian endocrine responses to gonadotropin induced ovulation in does, reared under normal summer and winter conditions prevailing in Egypt are proposed to study. Results are expected to cast light upon hormonal pattern underlying reproductive faliure during hot summer conditions.

{5} To examine the interaction between reproductive hormonal and thyroid function in rabbits. Seasonal reproductive arrest in does during summer is expectedly linked to seasonal variations in thyroid activity. The study might provide useful information in extending reproductive season in rabbits.

{6} The female rabbit represents a valiable animal model for studying pituitary - gonadal endocrine axis due to its induced ovulatary function. External induction of ovulation makes the overall endocrine events tangible to elaborate study. Pseudopregnancy and its end after gonadotropin stimulus can provide valuable information about the postpartum endocrinology in does and other mammals.