

SUBJECT: AGRICULTURAL SCIENCE

CLASS: SS1

TOPIC: ANIMAL REPRODUCTION

WEEK: 5

#### MEANING OF REPRODUCTION

Reproduction is the process whereby all living organisms and animals give birth to young ones. The main purpose of reproduction is to ensure continuity of several species. Organs responsible for reproduction are male and female reproduction organs alongside with some necessary reproductive hormones.

#### HORMONES AND THEIR ROLES IN ANIMAL REPRODUCTION

1. Hormones are chemical substances made in the ductless gland and transferred through the blood to the target organs in which they impact their effects.
2. Hormones maintain the rate of metabolic processes to that the survival of animals possible.
3. Hormones concerned with reproduction in farm animals can be grouped into male and females reproduction hormones.

#### MALE REPRODUCTIVE HORMONES

The testes secretes the male sex hormone called androgen or testosterone.

#### FUNCTION OF ANDROGEN

1. It stimulates the development of male secondary sexual characters and behaviors (sex drive)
2. Androgen stimulates optimum condition for sperm production.
3. Androgen promotes growth of accessory sex glands and their activities

#### FEMALE REPRODUCTIVE HORMONE

There are several hormones essential for proper functional of female animal's reproductive cycle. Among the hormones' are oestrogen, progesterone, oxytocin relaxin and luteinizing hormones

#### FUNCTION OF OESTROGEN

1. Oestrogen stimulates the formation of female secondary sexual characteristics.
2. It also stimulates the animal to be on heat.
3. Oestrogen regulates ovulation
4. It stimulates the growth of the duct system in mammary glands.
5. It increases capillary activities and mucus secretion in the oviduct
6. It promotes the production of eggs or ova through oogenesis.

#### FUNCTION OF PROGESTERONE

1. This is the pregnancy hormones produced by the ovary
2. Progesterone delays oestrus during pregnancy
3. It causes the development of the alveoli in udder.
4. It takes care of the implantation of the fertilized egg.

#### FUNCTION OF OXYTOCIN HORMONES

1. It contracts the uterine muscle's during parturition.
2. It encourages milk production immediately after parturition
3. It promotes the transportation of sperm in vagina.
4. Oxytocin is liberated during delivery from posterior pituitary.
5. It brings about the induction of parturition.

#### MALE REPRODUCTIVE SYSTEM

The male reproductive system is made-up of primary and secondary sexual characters. The primary sexual characters are the testes while the secondary sexual character consist the scrotum, prostate gland, vas deferens, urethra, Cowper's gland and so on.

The testes are located inside the scrotal sac. Spermatozoa stimulated the testes through the help of male sex hormones. scrotum houses the testes.

Penis is the organ which is used in introducing spermatozoa into the vagina. penis consists of arteries, veins; blood vessel. it is only when the penis is turgid that copulation can take place.

#### FEMALE REPRODUCTIVE SYSTEM

Female reproductive system of primary and secondary sexual characters. They primary sexual character is called the ovary while the secondary sexual characters include fallopian tube, oviduct, uterus, cervix, vagina, clitoris and vulva. fertilization of egg takes place in the oviduct, a part of female reproductive system. Fertilization is the fusion of male sex cell (sperm) and the female sex cell (egg).

#### REPRODUCTIVE SYSTEM OF POULTRY (FEMALE)

The female reproductive system of poultry consist only the left ovary and the right ovary. They appears during the embryonic stage and degenerate with hatching of the chicks. The oviducts extend from the infundibulum to the vagina. infundibulum receives the yolk released by the ovary albumen and chalazas are formed in magnum. An isthmus provides the inner and outer membranes (i.e. the inner and outer membranes) the shell is finally formed in the uterus after which it is laid through the cloaca.

#### REPRODUCTIVE PROCESS IN MALE POULTRY

In a male bird, there are two testes, a narrow tube connects the testes to the cloaca which helps the testes in the passage of sperms into the female vagina.

## EGG FORMATION OF FEMALE POULTRY

The process of egg formation is controlled by hormones. The egg is formed partly in the ovary and partly in the oviduct.

**OVARY:** The yolk is secreted by the ovary and enclosed in a follicle. The yolk increases in size by accumulating yolk materials carried from different parts of the body by blood streams.

**INFUNDIBULUM:** The yolk released by the ovary is taken up by the infundibulum, the internal terminal part of the oviduct, before the other components of whether the egg is fertilized or not. The egg spends 15 minutes in the infundibulum before it moves to the magnum.

**MAGNUM:** In the magnum, the egg stays for three hours and part of the albumen is secreted on the yolks. Chalaza is also formed in this region. The egg now moves to the isthmus.

**ISTHMUS:** The eggs stay here for 7.5 minutes and the two shell membranes are formed. The shape of the egg is also formed at this region after which it moves to the uterus.

**VAGINA:** The egg stays for a very short time before it is laid through the cloaca or vent. It takes almost 24 hours for a complete egg to be formed and laid.

## ASSIGNMENT

1. Draw a female reproductive system in poultry bird