

## Lecture 9

### SYSTEMS OF PRODUCTION

#### Extensive System

This is the easiest and most unspecialized system of cattle production and can also be termed as the traditional system of production. Cattle production is therefore based purely on this system especially in the tropics. The animals are produced solely on ranges, the young calves are left with their dams to suckle, and they are thereafter maintained on pasture. The seasonality of rainfall and forage production invariably results in considerable nutritional stress of the animals. This restricted period of forage production occasioned by abundance of forage during the rainy season and followed by period of relatively rapid deterioration and long period of stagnation. In some areas, the climate is so unfavourable that the land is unfertile, therefore the animal will starve. In both cases, the period of plenty is too short to allow young stocks to complete sufficient growth to carry them to the condition where they may be profitably sold for meat.

During the unfavourable period, the animal subsist on diets that are barely sufficient for the maintenance of essential metabolic processes and have to draw on their body reserves for much needed energy. This not only results in an appreciable loss in body weight. The weight gained during the rainy season is lost during the dry season, this vicious cycle makes it difficult for the animal to reach market weight until they are 4-6 years of age.

#### Advantage of Extensive System

It is the cheapest form of livestock husbandry and does not involve investments like buildings, feeds and other sophisticated management practices

#### Disadvantages

It is considered wasteful in terms of land and can only be successful and economical where land is not use for crop production. Also, the seasonality of forage and water supply results in such fluctuations and irregularity in the growth pattern such that the genetic potential of the animal is not fully expressed. Slow growth rate therefore prolongs the period from birth to slaughter.

#### Semi Intensive System

This system consists essentially of partial rearing of animals on pasture and supplemental feed. The management practices adopted largely depends on the time of the year in which the calves are born. In Nigeria, the semi intensive system is used on the government and corporations owned estates and ranches. The animals are either produced or reared from birth or bought as store cattle and then fattened to slaughter.

### **Intensive System**

This system involves confinement of animal .Feed and water is provided adequate nutrients are provided to satisfy requirement for efficient feed conversion and growth. Intensive beef production can be broadly classified into:

**Veal production:** This is from calf fed from birth to slaughter weight on high quality milk /feed while the **Baby beef production:** This is based on pure beef breeds. In the case of using pure beef breed, the calf after weaning, is intensively fed with the aim of attaining slaughter weight faster. It also involves the fattening or finishing up of other animals which might have been earlier reared extensively on pastures. Such operation vary all the way from small mostly hand labour, barn yard enterprises, utilizing home grown feeds and obtaining manure to large and highly mechanized year round business, that grow little or more of the feed that is utilized. The intensive system is generally common in areas of close proximity to grain production.

### **Advantages of Intensive System**

1. Mechanization of farm operations is possible.
2. Growth is controlled and uniform, maturity is rapid.
3. Proper records can be kept and economic evaluation of the enterprise is possible.

### **Disadvantages**

1. It is capital intensive
2. The chances of disease spread is high