

AGRICULTURAL SCIENCE

TOPIC _____ CROPPING SYSTEM

CLASS _____ JSS 2

WEEK _____ 4

TERM _____ SECOND TERM

The term cropping system refers to how the various crops grown in the farm by the farmer are combined. The crops are grown singly, one after the other or mixed together. The following are the systems of cropping practiced in Nigeria

- (a) Mono cropping
- (b) Mixed cropping
- (c) Continuous cropping
- (d) Multiple cropping
- (e) Crop Rotation

(A) MONO CROPPING(SOLE CROPPING): This involves the growing of only one type of crop on a piece of land at any given time. It is usually adopted by large scale farmers who produce cash crops like cocoa, oil palm, cotton etc.

ADVANTAGES OF MONO CROPPING

1. The farmer becomes highly specialized in the production of the particular crop.
2. Weeds, pest and diseases are the same, and can, therefore, be easily recognized and controlled.
3. Mechanization is adopted, since only one crop is produced.

DISADVANTAGES OF MONOCROPPING

1. The farmer will have to depend on other farmers for food crops which he does not produce.
2. There is high risk of crop failure due to adverse weather, attack by pest and diseases or low market value.
3. Land may be exposed to erosion after harvest

(B) MIXED CROPPING: This is a practice whereby the farmer grows more than one type of crop on a piece of land at the same time. Small scale farmers mostly practice mixed cropping. They plant varieties of crops like okra, maize, cassava, Telfara, on the same land.

ADVANTAGES OF MIXED CROPPING

1. It guards against crop failure; when one crop fails, the farmer makes up from the rest.

2. The system makes for a lower incidence of pest and diseases because of the mixture of crops.
3. It helps to cover the soil, and, so check erosion.
4. It saves erosion.

DISADVANTAGES OF MIXED CROPPING

1. The crops compete with one another for water, soil nutrients and sunlight.
2. Mechanization requirements may be difficult to determine.
3. Fertilizer requirement cannot be adopted in the system.
4. It may lead to heavy loss of soil nutrients.

In mixed cropping, any of this arrangement could be adopted:

(i)INTER-CROPPING: This is a form of mixed cropping in which two crops are planted on a piece of land, and the last crop planted is harvested before the first one, example where yam is inter-cropped with maize; yam is first, and harvested last.

(ii)INTER-PLANTING: In this method two crops are planted on a piece of land. The first crop planted matures and is harvested before the second crop. for example, a farmer plants maize in march and cassava in July, while the cassava remains in the ground.

(iii)RELAY CROPPING: If one crop is planted, and just before it is harvested, a second crop is planted and continues growing in the same year.

(C)CONTINUOUS CROPPING: This involves continuous cultivation of a piece of land, year after year. The same crop is grown on a piece of land every year for five or more years.

ADVANTAGES OF CONTINUOUS CROPPING

1. It is adopted where land is scarce.
2. It is also adopted where environmental condition limit the of crops that could be grown.

DISADVANTAGES OF CONTINUOUS CROPPING

1. Soil nutrients are quickly depleted, especially in case of arable crops, and there is need for application of fertilizer and manure.
2. Heavy build-up of pest and diseases year by year may result.
3. Soil structures could be destroyed by continuous cultivation, leading to erosion.

(D) MULTIPLE CROPPING: This is the growing of two or more crops on the same farm in the same year.

ADVANTAGES OF MULTIPLE CROPPING

1. The practice of growing different crops increases the total income from a peasant farm.
2. It enables the farmer to make maximum use of his farms.
3. Crop mixtures provide a kind of insurance to the farmer against crop failure.

DISADVANTAGES OF MULTIPLE CROPPING

1. Crop competition may be serious as to affect yield of a less competitive crop.
2. The use of machine to carry out farm operation is difficult and almost impossible in such a farm.
3. Chemicals, especially herbicides, are difficult to apply to a mixture of crops.

(E) CROP ROTATION: This is a planned sequence of growing different crops on a piece of land year after year.

ADVANTAGES OF CROP ROTATION

1. It facilitates efficient and economic use of the land from year to year.
2. It helps to reduce the risk of serious diseases and pest infestation.
3. It is less laborious.

DISADVANTAGE OF CROP ROTATION

If not well planned, it leads to nutrients exhaustion and low productivity.

