**3. Terms related to Cropping Systems:**

**3.1 Cropping scheme**

It is a plan according to which crops are grown on individual plots of a farm during a giving period of time with the objective of obtaining maximum return from each crop without impairing the soil fertility.

Thus a cropping scheme is related to the most profitable use of resources, land, labour, capital and management.

**3.2 Cropping pattern**

The yearly sequence and spatial arrangement of crops and fallow on a given area (region). It is on larger area. A large number of cropping patterns are followed in different region E.g. cotton-wheat-cotton in Multan, Maize-wheat in Faisalabad and rice-wheat-rice in Gujranwala.

**3.3 Cropping system**

The cropping pattern used on a farm and their interaction with farm resources, other farm enterprises and available technology which determine their make-up.

“It is on an individual farm”.

**3.4 Farming system**

All the elements of a farm which interact as a system including people, crops, livestock, other vegetation, wildlife, the environment, the social, economic and ecological action between them is called farming system.

**Farm:**  A piece of land on which crops, livestock or both are raised.

**System:** It is an established way of operating or doing things.

**3.5 Intercropping**

Planting two or more crops in the same field at the same time. Crops can be planted in rows (row intercropping) or seed can be dibbled at random or broadcasted (mixed intercropping). Planting in rows makes fertilization, weeding and harvesting easier E.g. growing of sugarcane+ berseem, sugarcane+ wheat, onion+ sugarcane, gram+ wheat, lentil+ wheat and sarson+ wheat.

**3.6 Multiple cropping**

Multiple cropping is a one year cropping system in which two or more crops are grown in succession within a year.

Or

Multiple cropping system refers to the growing of two or more crops on the same piece of land in a year.

This system generates more employment and optimize land utilization.

There are three major multiple cropping systems.

1. **Sequential cropping**

In this system two or more crops are grown in fixed order (sequence) one after the other on the same piece of land each year.

E.g. wheat-maize (two crops in a year)

wheat-sunflower-maize (three crops in a year)

cabbage-cauliflower-onion-maize (four crops in a year)

1. **Intercropping**

This refers to the sowing of two or more crops at the same time on the same field E.g. maize+ soybean

Sorghum+ pigeon pea

Sorghum+ tobacco or maize or vegetables.

1. **Relay cropping**

This involves the seeding (growing) of the second crops in the same field before the harvest of first one. E.g. sugarcane in sugar beet, berseem in cotton.

**3.7 Cropping intensity**

It refers to the ratio of total cropped area to the total farm area over a year as percentage.

It refers to the percentage of the total farm land that to occupied by crops in one-year E.g. if a farmer has 12.5 hectares of land, out of which 3 hectares are cropped in kharif and 7 are grown in rabi season. The cropping intensity will be calculated as

Cropping intensity=Actual cropped area/total farm area×100

=10/12.5×100

80%

If the area under crops is 15 acres over the whole year, the cropping intensity would be

=15/12.5×100

120%

If all (12.5) acres were under wheat crop in rabi season and during kharif season all land (12.5) used to grow rice, then cropping intensity will be

=25/12.5×100

200%