

Biotic Factors Affecting Agricultural Production

Soil Organisms

These include bacteria, fungi, earthworm, rodent, termite etc

Some, like bacteria and fungi, can cause diseases

Some aid aeration of soil, percolation and fertility

Some, like the root nodule bacteria can fix nutrients directly to plants and soil

Some open up wounds on plants or animals for other pathogens to enter

Some reduce the quality and quantity of crops e.g. potato, yam etc.

Some help in the decomposition of plants materials to form humus.

Pests

These include insects, rodents, birds and some mammals

They reduce the yield of crops and animals

They also reduce the quality of crops and animals

Some are vectors or carriers of diseases

They reduce the income of the farmers

The cost of their control increases the cost of production

Parasites

They include ticks, liver flukes, tapeworms dodder, mistletoe, lice etc.

Some transmit diseases

They reduce the quantity or yield of produce

They also reduce the quality of produce

They may cause the death of plants and animals

They reduce production capacity of livestock or crops

Cost of control increases cost of production.

They may be external or internal (i.e ecto or endoparasites)

Diseases

They may be diseases caused by viruses, bacteria, fungi , protozoa, e.t.c

They cause reduction in yield of crops and animals

They can cause the loss or death of plants and animals

The cost of control increases the cost of production

They cause reduction in farmer's income

Weeds

They compete with crops for space, water, nutrients and sunlight.

Some weeds can harbor diseases and pests

They reduce the yield of crops

Weedcontrol, increases the cost of production

Weeds cause poor growth of crops

Predators

These are birds, rodents, praying mantis etc

Some are beneficial in agricultural production

Some are used to control some harmful pests of crops and animals.

Some feed on farm animals, for example, hawks feed on chicks.

Human activities

Human activities include the influence of man on the production of plants and animals.

1. His activities may improve the fertility of the soil if he uses fertilizers and manure.

2. There could be increase in yield if he practises crop rotation.

3. There could be increase in yield if he controls pests and diseases.
4. Increase in yield or production can also be enhanced if he gets rid of weeds from his farm.
5. Continuous cultivation-bush burning and inability to control erosion can lead to lower agricultural output.