

# Chapter 12 – Quick Revision Sheet

## Improvement in Food Resources



### Why Improvement in Food Resources

Population ↑ but farmland is limited → so agriculture must produce more food from the same land.

Improvement in food resources focuses on better seeds + balanced nutrients + proper irrigation + crop protection + scientific animal farming to increase yield, quality, and farmer income together.



### Crop Variety Improvement

Improved crop varieties are developed to give higher yield, better quality grains, resistance against pests & diseases (biotic stress), and tolerance to drought, flood, heat, or salinity (abiotic stress) so farmers get stable production even in difficult conditions.



### Cropping Patterns

Mixed cropping: two crops grown together → reduces risk of failure

Intercropping: crops grown in alternate rows → better nutrient use

Crop rotation: different crops grown one after another → maintains soil fertility



## Nutrient Management

Plants require macronutrients like Nitrogen, Phosphorus, Potassium (NPK) in large quantity and micronutrients like Iron, Zinc, Copper, Boron in small quantity. Balanced nutrients ensure healthy growth, stronger roots, and higher yield.



## Manure vs Fertilizer

**Manure:** natural, improves soil structure, eco-friendly but slow acting

**Fertilizer:** chemical, fast nutrient supply, increases yield quickly but excess harms soil

Smart recall line:

Manure improves soil | Fertilizer improves speed



## Irrigation Methods

Irrigation means supplying water to crops at the right time and right amount.

**Traditional:** moat, dhekli, rahat, chain pump

**Modern:** sprinkler (like rainfall), drip (water directly to roots)



## **Animal Husbandry**

**Animal husbandry means scientific management of livestock for increasing production of milk, eggs, meat, and wool using improved breeds, proper feeding, shelter, and disease control.**



## **Cattle Farming + Poultry Farming**

**Cattle farming provides milk from milch animals (cow, buffalo) and farm work from draught animals (ox, bull) with proper feeding and healthcare increasing productivity.**

**Poultry farming provides eggs (layers) and meat (broilers) using improved breeds, balanced nutrition, vaccination, and hygienic housing.**



## **Fish Production + Bee Keeping**

**Fish production includes capture fishing (natural water sources) and culture fishing (ponds & tanks). Composite fish culture increases yield because fish feed at different water levels without competition.**

**Bee keeping (apiculture) provides honey and beeswax and improves crop pollination, which increases agricultural productivity naturally.**