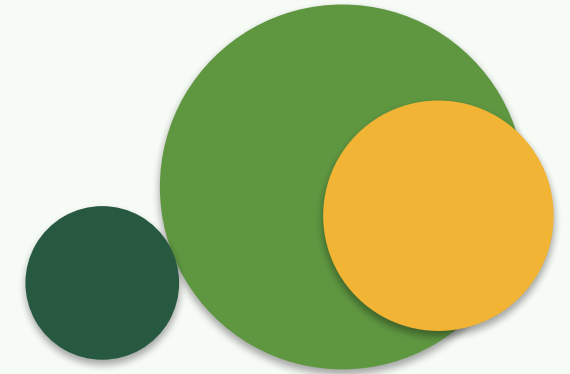


Introduction to Economics and Agricultural Economics



Definitions by Adam Smith, Alfred Marshall and Lionel Robbins |
Subject Matter, Nature, Importance and Scope

**Teaching Material +
Practice Set**

Needs

Efforts

Resources

Choice

Satisfaction

Learning Outcomes

After this lesson, students should be able to:

Economics

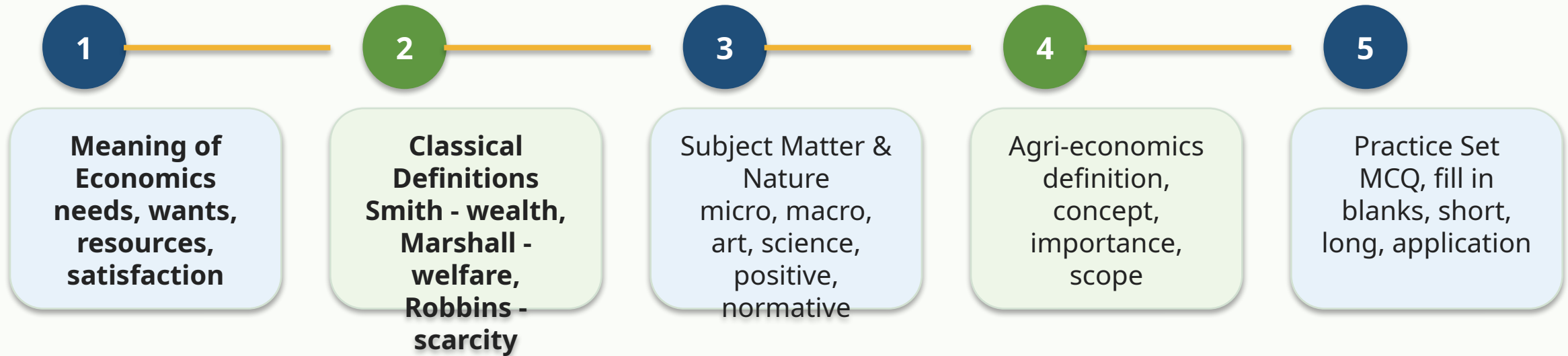
define economics using the wealth, welfare and scarcity approaches;
explain Adam Smith, Alfred Marshall and Lionel Robbins definitions with merits and limitations;
differentiate microeconomics and macroeconomics;
describe subject matter, nature and limitations of economics;

Agricultural Economics

define agricultural economics and explain its concept;
identify the characteristics, importance and scope of agricultural economics;
connect economic ideas with farm decision-making;
answer objective, short, long and application-based questions.

Lesson Roadmap

Use this sequence for classroom teaching.



Why is Economics Difficult to Define?

Economics is dynamic because human wants, resources and institutions change continuously.

Core idea

It studies human activities related to production, consumption, exchange and distribution.

It explains how individuals, firms and governments use limited resources.

It also deals with education, health, law, politics, social institutions and science where choice is involved.

Different economists emphasized different aspects: wealth, welfare and scarcity.

Economics = Study of choice under scarcity

Wants are unlimited.

Resources are limited.

Means have alternative uses.

Human beings must choose among alternatives.

Three Major Definitions of Economics

The PDF notes group the definitions into three approaches.

Approach	Economist	Central Focus	Key Word
Wealth definition	Adam Smith	Wealth, production and distribution	Wealth
Welfare definition	Alfred Marshall	Material welfare of ordinary human beings	Welfare
Scarcity definition	Lionel Robbins	Choice among scarce means with alternative uses	Scarcity / Choice

Teaching tip: Present these definitions as a historical development - from wealth, to welfare, to scarcity and choice.

Adam Smith: Economics as Science of Wealth

Adam Smith is associated with the classical wealth definition.

“Economics is a science which inquires into the nature and causes of wealth of nations.”

— Adam Smith

Main points

Book: An Enquiry into the Nature and Causes of the Wealth of Nations.

Focus: increase the riches and power of a country.

Subject matter: wealth and the activities that create wealth.

Activities emphasized

Production

Consumption

Exchange

Distribution

Economic development through wealth changes

Features of Adam Smith's Definition

Wealth-centered approach

Major features

Economics is the study of wealth only.

It deals with consumption, production, exchange and distribution.

It studies causes of changes in wealth and economic development.

Meaning of wealth

Scarce and useful material goods are considered wealth.

Free goods and non-material services were not treated as wealth in the classical view.

Main objective: accumulation of national wealth.

Classroom note

Smith's definition gives a starting point for economic analysis.

However, it gives less attention to human welfare and non-material services.

Criticisms of Adam Smith's Definition

Why the wealth definition is considered narrow

Too much importance to wealth: wealth is primary and human beings become secondary.

Restricts meaning of wealth: it considers mainly material goods.

Concept of economic man: assumes people are always self-interested.

No mention of welfare: ignores satisfaction and well-being.

Narrow subject matter: non-material services are neglected.

Defective logic: economics should study both wealth and economic activities of human beings.

Alfred Marshall: Economics as Material Welfare

Marshall shifted the emphasis from wealth to human welfare.

“Economics is a study of mankind in the ordinary business of life.”

— Alfred Marshall

Key meaning

Economics studies economic activities of ordinary people.

It studies both individual and social activities.

It focuses on material welfare rather than wealth alone.

Teaching message

Human beings are more important than wealth.

Wealth is only a means to promote welfare.

Economics is a social science because it studies people in society.

Characteristics of Marshall's Definition

Material welfare approach

Characteristics

Study of mankind: economics studies human beings in social life.

Ordinary business of life: daily economic activities of ordinary people.

Individual and social activities: personal and group activities linked with welfare.

Material welfare: emphasis on welfare derived from material goods.

Interpretation

Economics does not study all human activities.

It studies those activities that promote material welfare.

It is a normative social science because welfare involves value judgement.

Marshall's view improved Smith's wealth-focused definition.

Merits of Marshall's Welfare Definition

Strengths of the material welfare approach

Merit 1-2

Classificatory definition: it classifies welfare as material/non-material and people as ordinary/extraordinary. Avoids the main criticism of Adam Smith by giving importance to people.

Merit 3-4

Clearer scope: economics studies ordinary human activities related to material welfare.
Clear nature: economics is neither a pure science nor an art only, but a social science.

Classroom value

Places welfare at the center of economic study.
Connects economics with real social life and daily livelihood.

Criticisms of Marshall's Definition

Why Robbins and others criticized the welfare approach

Main criticisms

Study of all types of economy is limited: scarcity exists in rich, poor, ordinary and extraordinary conditions.

Restricts scope: excludes non-material goods and services though they also satisfy wants.

Welfare is unclear: the same activity may create welfare for one person and harm for another.

Further criticisms

Economics is not simply a welfare science; it should analyze economic problems scientifically.

Non-analytical: it classifies activities but does not fully analyze choice and allocation.

It does not fully include the universal problem of scarcity.

Lionel Robbins: Economics as Scarcity and Choice

Robbins gave a more analytical and universal definition.

“Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.”

— *Lionel Robbins*

Ends = human wants or objectives.

Scarce means = limited resources such as land, labour, capital, time and money.

Alternative uses = the same resource can be used for many purposes.

Economics studies how people allocate scarce resources to satisfy unlimited wants.

Characteristics of Robbins' Scarcity Definition

Four pillars of the scarcity approach

1

Unlimited wants/ends
Human wants are unlimited; one want is satisfied and another emerges.

2

Limited resources/means
Resources are scarce in relation to human wants.

3

Alternative uses
The same resource can be used for different purposes.

4

Choice and allocation
People choose the best use of scarce resources.

Merits of Robbins' Definition

Why the scarcity definition became very influential

Merits

Status of scarcity: scarcity is the foundation of economic problems.

Analytical definition: it explains the reasons behind economic problems.

Clear concept of human behaviour: people choose among unlimited wants and limited means.

Clear scope: whenever scarcity exists, economic study is needed.

Agri-connection

Universal definition: scarcity exists in every country and economy.

Problem of valuation: choice helps decide which use of a resource is more valuable.

Applicable to agriculture: farmers must allocate scarce land, labour, seed, fertilizer, water and capital.

Criticisms of Robbins' Definition

Limitations of the scarcity approach

Self-contradictory: Robbins called economics positive, but economic choices are connected with social concerns.

Concealed welfare: welfare is indirectly present because people choose resources to maximize satisfaction.

Too broad and abstract: the scope becomes generalized and each subject has its own scarcity problem.

Ineffective attempt: economics should also suggest solutions, not only describe problems.

Ignored economic growth: growth is also an economic problem, not only scarcity.

Difficult to separate ends and means in real life.

Comparison: Smith, Marshall and Robbins

Use this table for quick revision.

Basis	Adam Smith	Alfred Marshall	Lionel Robbins
Definition type	Wealth definition	Material welfare definition	Scarcity definition
Main focus	Wealth of nations	Human material welfare	Choice under scarcity
View of human beings	Secondary to wealth	Central; ordinary people	Decision-maker choosing among alternatives
Nature	Classical / wealth oriented	Social and welfare oriented	Analytical and positive
Limitation	Narrow; ignores welfare	Welfare is vague and restrictive	Too abstract; ignores growth/welfare issues

Marshall and Robbins: Similarities and Differences

Useful for long-answer questions

Similarities

Both put human beings at the center of economics.

Both consider scarcity of resources important.

Both connect economics with wants and satisfaction.

Both accept that people try to maximize welfare or satisfaction.

Differences

Marshall: economics studies material welfare; Robbins: economics studies choice under scarcity.

Marshall: social science; Robbins: human science.

Marshall: normative/welfare oriented; Robbins: positive/analytical.

Marshall: narrower; Robbins: broader and universal.

Subject Matter and Nature of Economics

Scope means the area or boundary of economic study.

**Scope of Economics asks three questions: What is the subject matter?
What is the nature? What are the limitations?**

Subject matter

It examines how people use scarce resources for unlimited wants.

It studies both individual units and the economy as a whole.

It explains production, consumption, exchange, distribution and development.

Nature

Economics may be studied as art and science.

It is both positive and normative depending on the question asked.

It uses observation, reasoning, analysis and policy judgement.

Major Areas Within the Scope of Economics

Branches mentioned in the notes

Microeconomics

Individual units: consumers, producers, firms and prices

Macroeconomics

Aggregates: national income, employment, inflation and growth

International Economics

Trade, exchange rate, international production and investment

Public Finance

Government income, expenditure, debt and fiscal policy

Development Economics

Economic and social improvement in developing countries

Health / Environmental /

Urban Economics

Specialized applied branches

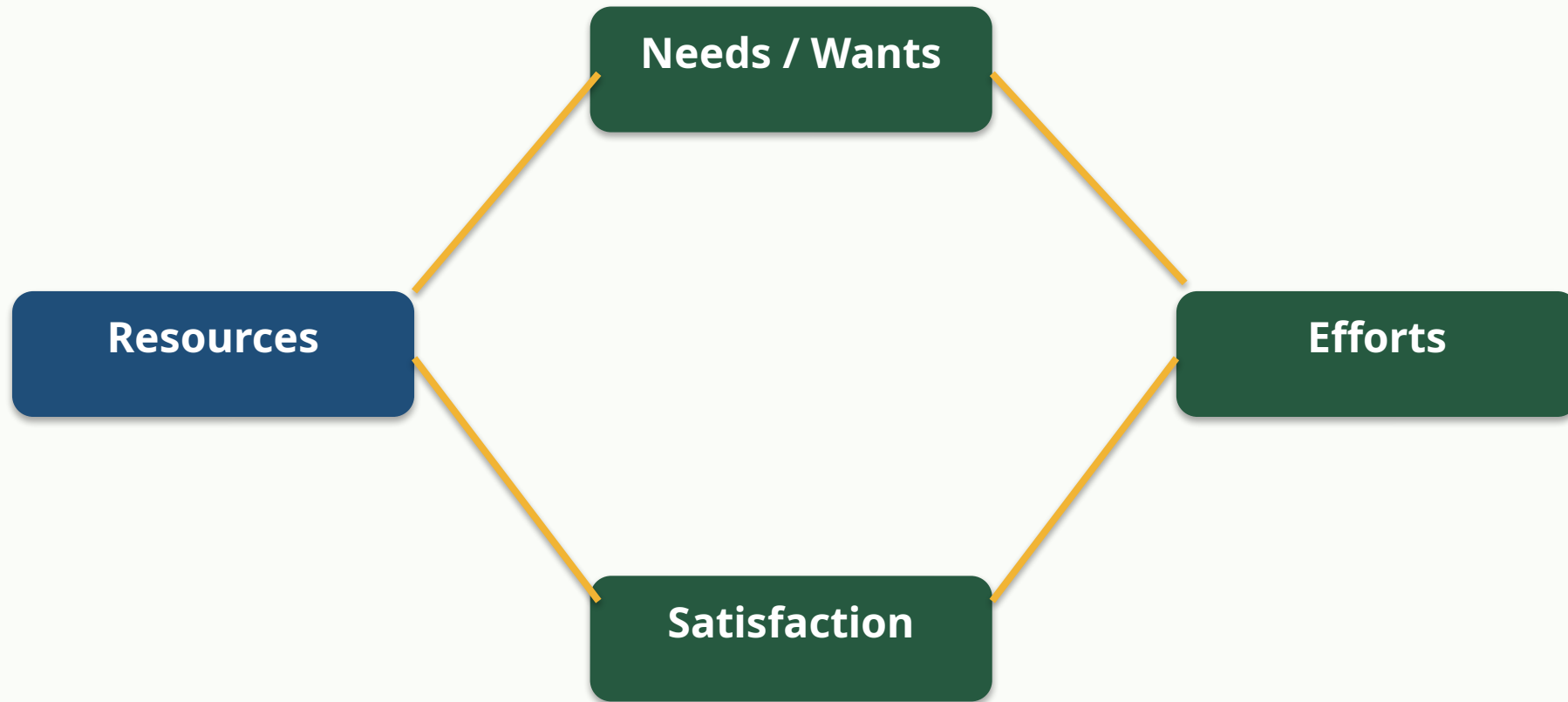
Microeconomics vs Macroeconomics

Important comparison table

Microeconomics	Macroeconomics
Studies individual economic units such as consumer, producer and firm.	Studies aggregates of the economy such as national income, saving, investment and employment.
Takes account of a small component of the economy.	Takes account of the whole economy.
Deals with price determination of individual goods and factors.	Deals with general price level and inflation.
Explains allocation of resources among alternative uses.	Explains aggregate output, income and employment.
Aim: optimize individual consumer and producer decisions.	Aim: optimize performance of the entire economy.

Subject Matter/Economic Cycle: Wants, Efforts and Satisfaction

Human wants lead to effort, effort leads to satisfaction, and satisfaction generates further wants.



Economics studies how limited resources are used to satisfy unlimited wants and obtain maximum satisfaction.

Types of Wants or Needs

The notes divide wants mainly into natural and artificial wants.

Natural wants

Natural wants are satisfied by naturally available goods and services.

Examples: fresh air, water, sunlight and other free goods of nature.

Such wants are generally not studied in economics when no scarce resource is used.

Artificial wants

Artificial wants are satisfied by man-made goods and services.

Examples: food, clothes, shelter, health services, banking and insurance.

They require effort and scarce resources; therefore, they are studied in economics.

Nature of Economics: Economics as an Art

Art means practical application of knowledge to achieve a definite end.

Economics as an art helps people use scarce resources in the best possible way. It guides practical decision-making in production, consumption, saving, investment and policy.

Professor Pigou considered economics an art because it helps solve economic problems.

In agriculture, art means applying economic knowledge to decide crop choice, input use, marketing and farm planning.

Example: choosing between maize seed, vegetable seed or fertilizer when farm capital is limited.

Nature of Economics: Economics as a Science

Science explains cause-and-effect relationships using systematic study.

As science

Economics has systematically divided subject matter: consumption, production, exchange and distribution.

Economic laws show cause-and-effect relations among economic activities.

Economics can analyze price, demand, supply, cost, income and employment.

Important caution

Economic laws are not as exact as physical science laws because human behavior changes.

Many economic laws assume “other things remaining the same”.

Still, economics uses observation, data and analysis for scientific explanation.

Positive and Normative Economics

Both are useful but answer different

q

Positive Economics	Normative Economics
Explains what is, what was, or what will be.	Explains what ought to be or what should be done.
It is based on facts, logic and cause-effect relationships.	It includes value judgement, welfare and policy recommendations.
Example: If fertilizer price increases, cost of vegetable production rises.	Example: Government should subsidize fertilizer for small farmers.
It can be tested with evidence.	It may differ according to values and opinions.

Limitations of Economics

Economics has boundaries; it does not study everything.

It studies activities related to wealth or economic activities; not all religious, cultural, political or social activities.

It studies social human actions, not actions of non-social persons like sadhus or saints in isolation.

It studies normal human behavior, not abnormal or irrational behavior.

It studies real human beings, not a purely selfish “economic man”.

It does not directly study free goods.

Economic laws are not fully certain because human behavior is affected by social and cultural factors.

Most economic laws use the phrase “other things remaining the same”.

Definition of Agricultural Economics

Agricultural economics applies economic principles to agriculture.

“Agricultural economics may be defined as applied social science which deals with how mankind chooses to use technical knowledge and scarce productive resources such as land, labour, capital and organization to produce food and fiber and distribute it for society’s consumption.”

— Textbook definition

It studies agricultural production, marketing, farm management, finance, accounting, product transport, farm cooperation and agricultural law and policy. It connects farming decisions with allocation of scarce resources and distribution of agricultural output.

Concept of Agricultural Economics

Economics applied to farm and agricultural sector problems

Concept

Concerned with allocation of resources in agriculture.

Studies alternatives in production, marketing and public policy.

Examines efficiency in farm production and employment of inputs.

Studies patterns and forces behind agricultural industry development.

Farm-level questions

Helps answer: what crop to grow?

How much input should be used?

When and where should products be sold?

How can farmers increase income and reduce risk?

Characteristics of Agricultural Economics

Important points from the notes

Characteristics 1-4

Land distribution system: land arrangement affects agricultural development and production.

Supply of consumer goods: agriculture produces food goods consumed by society.

Supply of industrial inputs: agriculture provides raw materials to industry.

Labour employment: agriculture absorbs large labour force in developing countries.

Characteristics 5-9

Primary stage of economic development: agriculture is a base of national development.

Capital formation: agriculture can generate capital for development.

Risk and uncertainty: natural factors, market information and price changes affect production.

Existence of middlemen and subsistence farming affect farmer income.

Importance of Agricultural Economics

Why class 12 agriculture students should study it

Helps identify cause-and-effect relationships in agriculture.

Uses economic theory to solve problems of agricultural and agribusiness sectors.

Clarifies the major role of agriculture in foundation systems and national economy.

Provides knowledge for production, finance, marketing and government policy decisions.

Helps find suitable solutions to farm problems through systematic analysis.

Supports better resource allocation, higher farm income and informed decision-making.

Scope of Agricultural Economics

Agricultural economics has the same major branches as general economics, applied to agriculture.

Farm and market scope

Production economics: input-output relationship, cost, return and efficiency.

Farm management: planning, budgeting, record keeping and decision-making.

Agricultural marketing: assembling, grading, storage, transport, processing and selling.

Agricultural finance: credit, investment, savings and capital use.

Sector and policy scope

Agricultural policy: price, subsidy, insurance, land and trade policy.

Cooperatives and agribusiness: group marketing, input supply and enterprise development.

Micro and macro study: from farm household decisions to national agricultural growth.

Static and dynamic analysis: present condition and changes over time.

Agricultural Economics in Farm Decision-Making

Application-based understanding for students

Crop choice

Rice, maize or vegetables?

Input use

**How much seed, fertilizer,
feed or labour?**

Cost & return

Is the enterprise profitable?

Marketing

When and where to sell?

Risk

**How to manage price, pest
and weather risk?**

Policy

**How do subsidy, credit and
market rules affect farmers?**

Economic thinking helps farmers use scarce resources to achieve maximum benefit.

Relevance for Nepalese Agriculture

Connect the lesson with local farm realities.

Many farms are small and resources are limited, so choice and allocation are very important.

Agricultural economics helps compare enterprises such as cereals, vegetables, fruits, fish, bee keeping and mushroom production.

It supports decisions about inputs, labour, irrigation, storage, processing and marketing.

It explains how price fluctuation, middlemen, transport cost and market information affect farmer income.

It helps students understand farm records, budgeting and agricultural project planning.

Key Summary

Ten points to remember

Economics studies how scarce resources are used to satisfy unlimited wants.

Adam Smith defined economics as the science of wealth.

Marshall defined economics as the study of mankind in ordinary business of life.

Robbins defined economics as the study of human behaviour in relation to scarce means with alternative uses.

Microeconomics studies individual units; macroeconomics studies aggregates.

Economics can be studied as art, science, positive science and normative science.

Agricultural economics applies economic principles to agriculture.

It covers production, marketing, farm management, finance, cooperation and policy.

It is important for solving farm problems and improving farm income.

The central idea in both economics and agri-economics is rational choice under scarcity.

Practice Set A: Multiple Choice Questions

Choose the best answer.

1. "An enquiry into the nature and causes of wealth of nations" is the book of: a) Adam Smith b) Marshall c) Robbins d) None
2. Economics is the science of wealth was defined by: a) J.K. Mehta b) Marshall c) Adam Smith d) Robbins
3. Scarcity definition of economics was given by: a) Adam Smith b) Marshall c) Robbins d) Robertson
4. Economics as a science generally means: a) relation between cause and effect b) inductive method c) experiment d) all
5. Price theory is generally included under: a) microeconomics b) macroeconomics c) employment theory d) none
6. Which is an economic activity? a) school teaching b) tea at home c) mother serving child d) playing football as student

Practice Set B: Multiple Choice Questions

Choose the best answer.

7. Economic theory means: a) principles of economics b) economic facts c) economic law d) economic model
8. Basic economic problem is: a) inflation b) unemployment c) poverty d) scarcity
9. Three basic economic problems are: a) what, how and for whom b) why, where and when c) what, which and how d) why, which and why
10. Macroeconomics deals with: a) how to buy groceries b) aggregate economic activity c) industrial activity d) establishment of a firm
11. In economics, “assumptions” mean: a) make useless b) other things equal c) make complex d) used only in macroeconomics
12. Validity of economic theories can never be proved with 100 percent certainty because: a) ceteris paribus b) limited observations c) future may refute theory d) all

Practice Set C: Fill in the Blanks and True/False

Use these for quick classroom evaluation.

Fill in the blanks

1. Adam Smith's definition is called the _____ definition.
2. Marshall emphasized _____ welfare.
3. Robbins said means are scarce and have _____ uses.
4. Microeconomics studies _____ economic units.
5. Agricultural economics is an _____ social science.

True / False

1. Economics studies unlimited wants and limited resources. (T/F)
2. Macroeconomics studies only one firm. (T/F)
3. Positive economics deals with facts. (T/F)
4. Normative economics never gives suggestions. (T/F)
5. Agriculture does not involve risk and uncertainty. (T/F)

Practice Set D: Matching and One-Word Answers

Good for oral revision

Column A	Column B
Adam Smith	Scarcity
Marshall	Wealth
Robbins	Material welfare
Microeconomics	Aggregates
Macroeconomics	Individual unit

One-word / very short answers

1. Name the economist related to the wealth definition.
2. Which branch studies national income?
3. What is the meaning of “ends” in Robbins’ definition?
4. Which economics gives value judgement?
5. Write one example of a scarce farm resource.
6. Write one scope area of agricultural economics.

Practice Set E: Short Answer Questions

Answer in 3-5 sentences each.

1. Define economics according to Adam Smith.
2. State any four features of Marshall's welfare definition.
3. Write any four characteristics of Robbins' scarcity definition.
4. Differentiate between microeconomics and macroeconomics.
5. Explain economics as a positive science.
6. Define agricultural economics and mention its major areas.
7. Write any four characteristics of agricultural economics.
8. Explain the importance of agricultural economics for farmers.

Practice Set F: Long Answer Questions

Answer with definition, explanation, points and conclusion.

1. Explain the definitions of economics given by Adam Smith, Marshall and Robbins. Which definition do you prefer and why?
2. Discuss the subject matter, nature and limitations of economics.
3. Compare Marshall's welfare definition and Robbins' scarcity definition.
4. Define agricultural economics. Explain its importance and scope.
5. How does agricultural economics help in solving farm production, marketing and finance problems? Explain with examples.

Practice Set G: Application-Based Questions

Use real farm examples in answers.

1. A farmer has one ropani of land and limited capital. Explain how Robbins' definition helps the farmer choose between tomato and maize cultivation.
2. Vegetable prices fall during harvest season. Which areas of agricultural economics help farmers reduce loss?
3. A school farm wants to start fish culture, mushroom and vegetable production, but budget is limited. How should economic choice be made?
4. Explain how middlemen affect the income of small farmers and how agricultural marketing can improve the situation.
5. Prepare a simple cost-return idea for any one crop or livestock enterprise studied in your school.

Practice Set H: Answer Key for Objective Questions

For teacher use during checking

MCQ A: 1-a, 2-c, 3-c, 4-a, 5-a, 6-a

MCQ B: 7-a, 8-d, 9-a, 10-b, 11-b, 12-d

Fill blanks: 1. wealth 2. material 3. alternative 4. individual 5. applied

True/False: 1. True 2. False 3. True 4. False 5. False

Matching: Adam Smith-Wealth; Marshall-Material welfare; Robbins-Scarcity;
Microeconomics-Individual unit; Macroeconomics-Aggregates

Suggested Classroom Activity

15-minute group work

Divide students into groups of 4-5.

Give each group one farm enterprise: rice, tomato, fish, honeybee, mushroom or poultry.

Ask them to list scarce resources needed for that enterprise.

Ask them to identify at least three alternative uses of those resources.

Ask them to present one economic decision that can increase profit or reduce risk.

End the lesson by linking their answers with Robbins' scarcity definition and the scope of agricultural economics.

Unit 2

Basic Concepts in Economics

Goods • Utility • Value • Wealth • Equilibrium • Margin

Class 12 Agriculture Economics Teaching Material



Learning Outcomes

By the end of this unit, students should be able to

Define

Explain goods, utility, value, wealth, equilibrium and margin.

Classify

Classify goods and distinguish different forms of utility and wealth.

Apply

Use concepts in farm, market and consumer examples.

Analyze

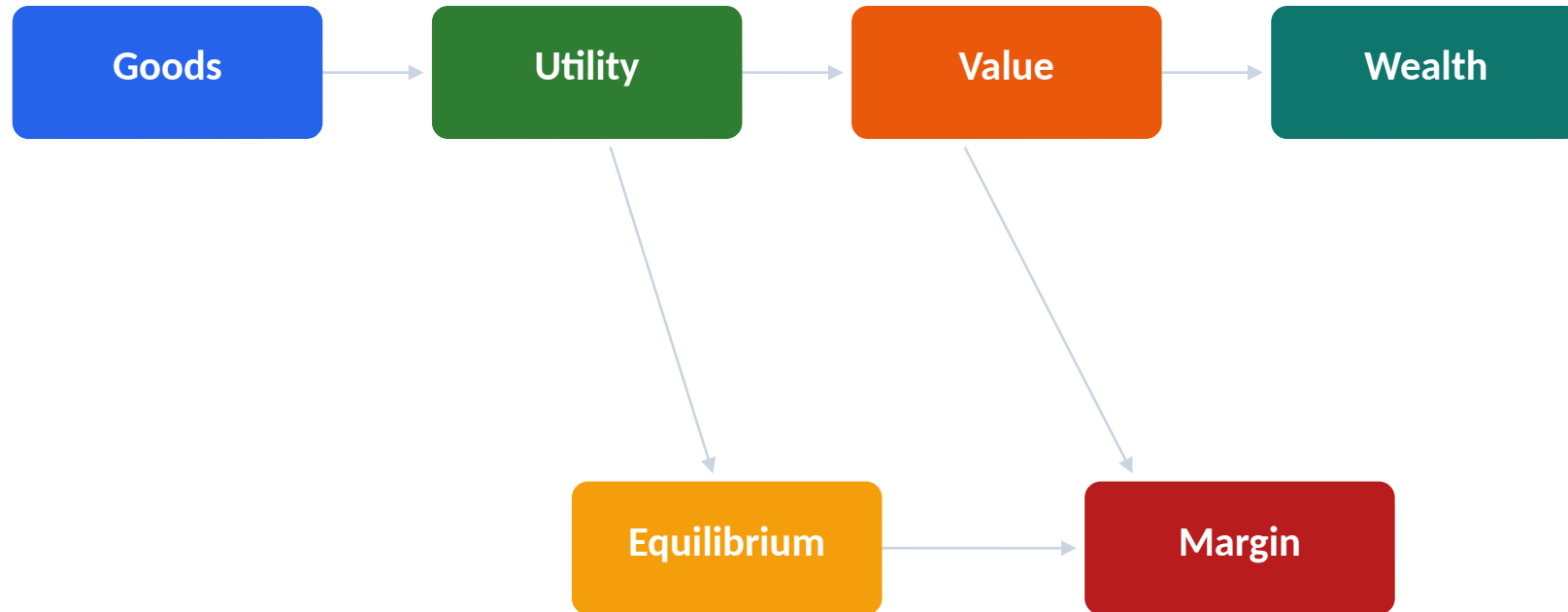
Interpret marginal utility, marginal cost and marginal returns in agriculture.

Solve

Answer objective, short, long and application-based questions.

Unit 2 Concept Map

How the basic concepts are connected



Economic decisions start with goods that satisfy wants. Utility creates value. Wealth includes valuable, transferable, scarce goods. Equilibrium and margin help us make rational choices.

1. Goods: Meaning

Unit 2: Basic Concepts

Goods are materials or services that satisfy human wants. In economics, goods may be physical items or useful services. Examples in agriculture: seed, fertilizer, vegetables, milk, tractor service and veterinary service. A good becomes economic when it is scarce and has value.

Classroom example

Rice seed is a good because it satisfies the farmer's need for crop production. If seed is scarce and farmers pay for it, it is an economic good.

Classification of Goods

Unit 2: Basic Concepts

Free goods: available without payment, such as air and sunlight.

Economic goods: scarce and have price, such as land, seed and machinery.

Consumer goods: directly satisfy wants, such as food grains and fruits.

Producer goods: help produce other goods, such as tools, irrigation pipe and fertilizer.

Free goods

No price
Air, sunlight

Economic goods

Scarce + price
Seed, land

Consumer goods

Direct use
Rice, milk

Producer goods

Production use
Plough, tractor

Other Important Types of Goods

Unit 2: Basic Concepts

Normal goods: demand increases when income increases.

Inferior goods: demand decreases when income rises.

Substitute goods: one can be used instead of another.

Complementary goods: used together to satisfy a want.

Agriculture examples

Tea and coffee = substitutes

Tractor and diesel = complements

Fine rice may be normal good

Coarse grain may behave as inferior good in some contexts

2. Utility: Meaning

Unit 2: Basic Concepts

Utility means the want-satisfying power of a commodity or service.

It is subjective: the same good may give different utility to different people.

Utility does not always mean usefulness in moral or health terms.

Example: cold water has high utility to a thirsty worker in the field.



Formula idea

Utility = capacity of a good to satisfy human want

Characteristics of Utility

Unit 2: Basic Concepts

Utility is psychological and cannot be seen directly.
Utility differs by person, place, time and situation.
Utility is measurable indirectly through price or willingness to pay.
Utility changes as consumption changes.

Person

Farmer vs student

Place

Terai vs hill

Time

Summer vs winter

Situation

Hungry vs full

Forms / Types of Utility

Unit 2: Basic Concepts

Form utility: created by changing form, such as wheat into flour.

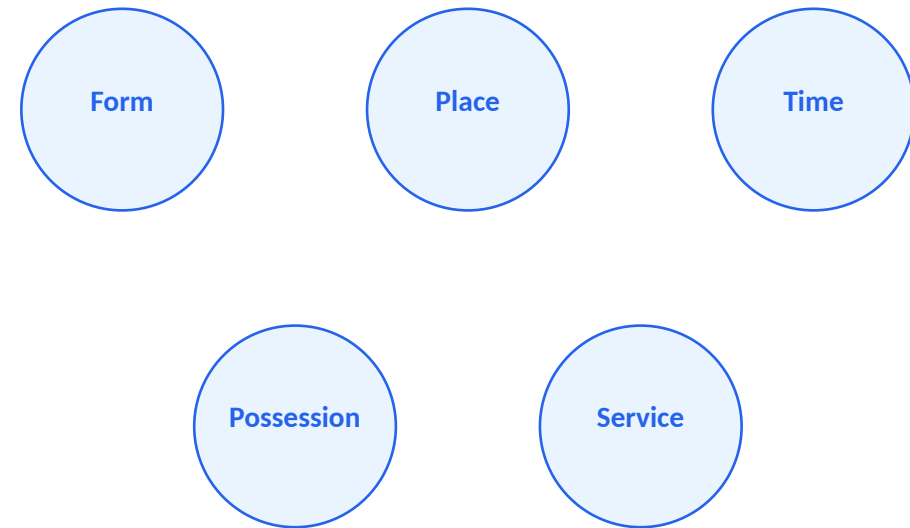
Place utility: created by moving goods to useful locations.

Time utility: created by storing goods for future use.

Possession utility: created by transferring ownership.

Service utility: created by useful services.

Wheat → Flour → Bakery → Consumer



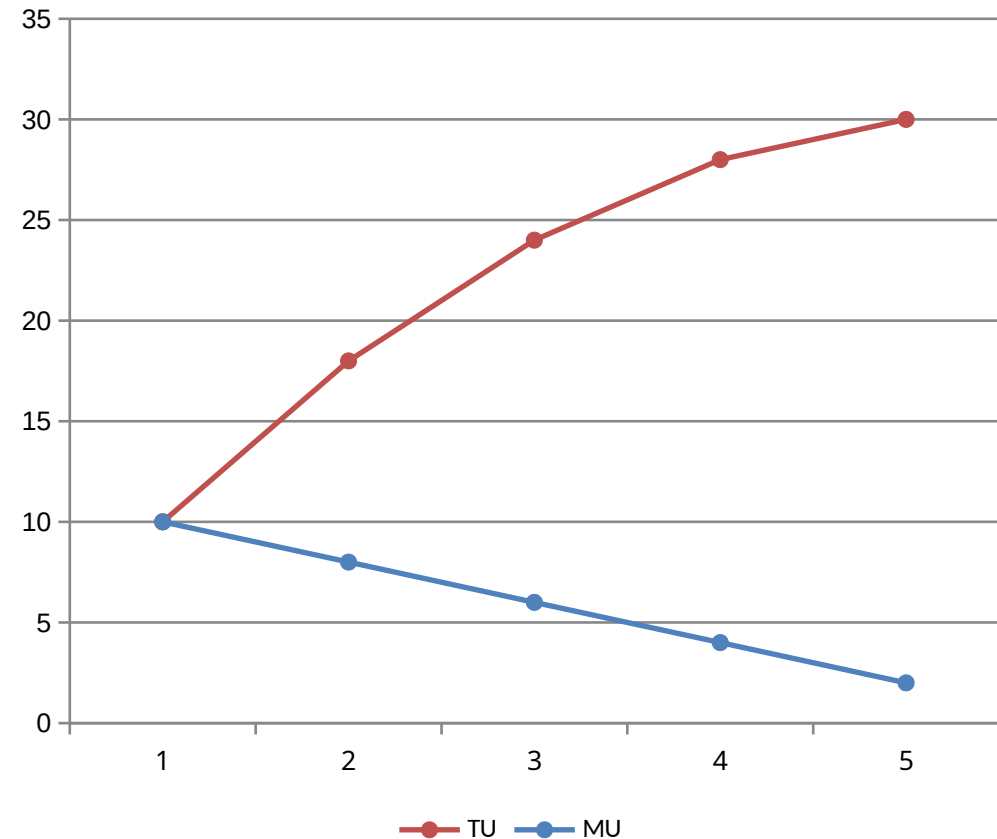
Total Utility and Marginal Utility

Understanding change in satisfaction

Total Utility (TU): total satisfaction from consuming units of a good.
Marginal Utility (MU): additional utility from one more unit.

Units	TU	MU
1	10	10
2	18	8
3	24	6
4	28	4
5	30	2

MU generally declines as more units are consumed.



Law of Diminishing Marginal Utility

Unit 2: Basic Concepts

As a person consumes more and more units of a commodity, additional satisfaction from each extra unit tends to decline. This law helps explain demand and consumer choice. Example: first glass of water after field work gives high utility; second less; third even less.

Key point

More consumption does not always mean equal extra satisfaction.



MU falls

3. Value: Meaning

Unit 2: Basic Concepts

Value means the power of a commodity to command other goods in exchange.

Value is related to usefulness, scarcity and transferability.

Price is the monetary expression of value.

Example: improved seed has value because farmers are willing to pay for it.

Usefulness

Can satisfy wants

Scarcity

Limited supply

Exchange

Can be traded

Value in Use and Value in Exchange

Unit 2: Basic Concepts

Value in use: direct capacity of a good to satisfy wants.

Value in exchange: capacity of a good to exchange with other goods or money.

Water has high value in use but may have low exchange value in areas where it is abundant.

Diamond has high exchange value because it is scarce.

Value in Use

Usefulness for satisfying wants

Example: water for drinking

Value in Exchange

Power to obtain other goods

Example: rice sold in market

Value depends on both utility and scarcity.

4. Wealth: Meaning

Unit 2: Basic Concepts

Wealth means all economic goods that possess utility, scarcity, transferability and externality. It includes material assets such as land, livestock, machinery, stored grain and money. Personal qualities like honesty or knowledge are valuable but not economic wealth because they cannot be transferred. Wealth is a stock concept measured at a point of time.

Farm wealth examples

Land, tractor, irrigation equipment, livestock, seed stock, harvested crops, farm buildings and cash balance.

Characteristics of Wealth

Unit 2: Basic Concepts

Utility: it must satisfy human wants.
Scarcity: it must be limited in supply.
Transferability: ownership can be transferred.
Externality: it must be external to human beings.

Utility

want-satisfying

Scarcity

limited

Transferability

can be exchanged

Externality

outside human
body

Value and Wealth: Difference

Unit 2: Basic Concepts

Value is a measure of exchange power; wealth is a stock of valuable economic goods.

All wealth has value, but not every valued thing is counted as wealth.

Value can change frequently; wealth is recorded at a point of time.

Example: price of tomato changes daily, but stored tomato stock is wealth for a trader.

Basis	Value	Wealth
Meaning	Exchange power	Stock of economic goods
Nature	Concept/measure	Asset stock
Example	Price of seed	Seed inventory

5. Equilibrium: Meaning

Unit 2: Basic Concepts

Equilibrium means a state of balance where there is no tendency to change.

It occurs when opposing forces become equal.

In economics, equilibrium can be consumer, producer, market or firm equilibrium.

Example: market equilibrium occurs when quantity demanded equals quantity supplied.



Balance point

No pressure for price or quantity to change.

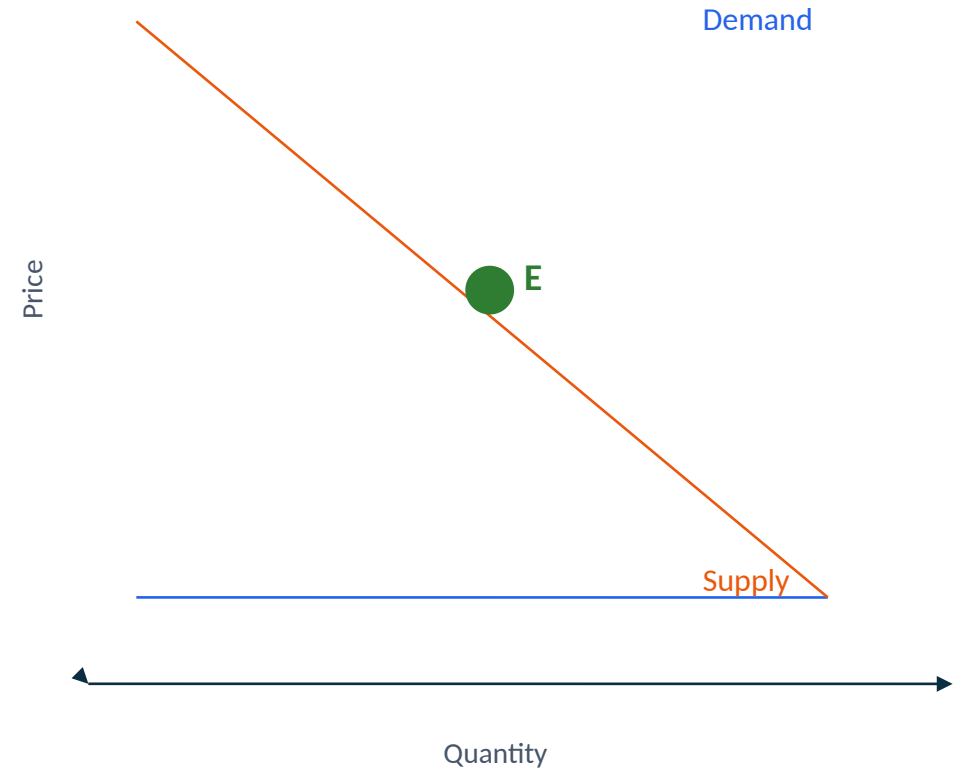
Market Equilibrium Diagram

Demand and supply in a simple market

When price is above equilibrium, surplus occurs.
When price is below equilibrium, shortage occurs.
At equilibrium: $Q_d = Q_s$.

Agriculture example

Vegetable market price becomes stable when farmers' supply equals consumers' demand at that price.



Consumer Equilibrium

Unit 2: Basic Concepts

Consumer equilibrium is the condition where a consumer gets maximum satisfaction from income.

The consumer has no desire to change the pattern of spending.

In simple terms, money is allocated where marginal satisfaction is highest.

Example: a household balances spending on rice, vegetables, milk and cooking oil.

Decision rule

Spend income so that the last rupee gives equal satisfaction in each use.

Class activity

Ask students to allocate Rs. 500 for weekly food items and justify choices.

Producer / Farm Equilibrium

Unit 2: Basic Concepts

Producer equilibrium occurs when a producer gets maximum profit from available resources.

A farmer compares marginal cost and marginal return before using extra input.

The farmer should continue using input until additional return equals additional cost.

Example: applying fertilizer up to the level where extra yield value covers extra fertilizer cost.

Continue if: $MR > MC$
Stop when: $MR = MC$

MR = Marginal Revenue • MC = Marginal Cost

This is a key marginal decision rule in farm management.

6. Margin: Meaning

Unit 2: Basic Concepts

Margin means the extra or additional unit of an economic variable.

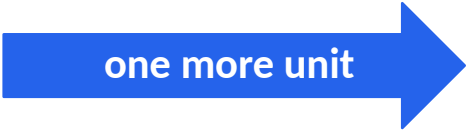
Marginal analysis studies the effect of a small change in decision.

Important marginal terms: marginal utility, marginal cost, marginal revenue, marginal product and marginal return.

Farm decisions are often made at the margin.

Simple meaning

Margin = extra / additional / next unit



one more unit

Marginal Concepts in Agriculture

Unit 2: Basic Concepts

Marginal Utility: extra satisfaction from one more unit consumed.

Marginal Cost: extra cost of producing one more unit.

Marginal Revenue: extra revenue from selling one more unit.

Marginal Product: extra output from one more unit of input.

Marginal Return: extra benefit from an additional investment.

Example: one extra kg fertilizer

Extra cost: fertilizer price

Extra product: extra crop yield

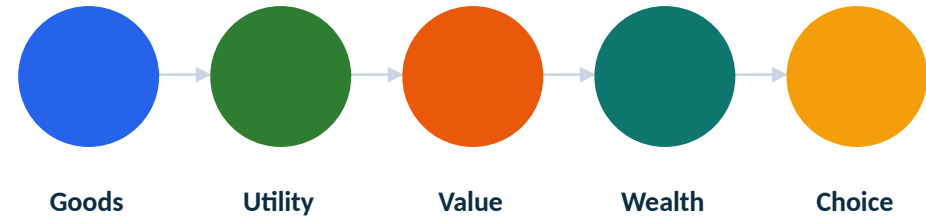
Extra revenue: value of extra yield

Decision: use if extra benefit > extra cost

Relationship Between Basic Concepts

Unit 2: Basic Concepts

Goods satisfy wants and provide utility.
Utility and scarcity create value.
Valuable, scarce, transferable goods become wealth.
Equilibrium shows balance in decisions and markets.
Margin helps decide whether one more unit is beneficial.



Economic reasoning

Choose the option where marginal benefit is greater than marginal cost.

Classroom Agriculture Scenario

Apply all concepts to tomato production

Concept	Tomato example
Goods	Seedling, fertilizer, irrigation service, tomato fruit
Utility	Tomato satisfies food need and seedling satisfies production need
Value	Market price of tomato per kg
Wealth	Tomato crop, tunnel, sprayer and cash
Equilibrium	Price where tomato demand equals supply
Margin	Extra yield from one more fertilizer dose

Teaching tip: Ask students to add one more crop example from their school farm.

Quick Revision

One-line memory points

Goods

Satisfy wants

Utility

Want-satisfying power

Value

Exchange power

Wealth

Valuable economic goods

Equilibrium

Balance condition

Margin

Extra unit/change

Teaching Activity

Pair work for agriculture students

Make groups of two students.

Each group chooses one farm item: seed, land, milk, tool, vegetable or labor service.

Classify it as good, value item or wealth item.

Explain its utility and one marginal decision related to it.

Present in one minute.

Example prompt

“Is a tractor wealth? What utility does it give? What is one marginal decision related to it?”

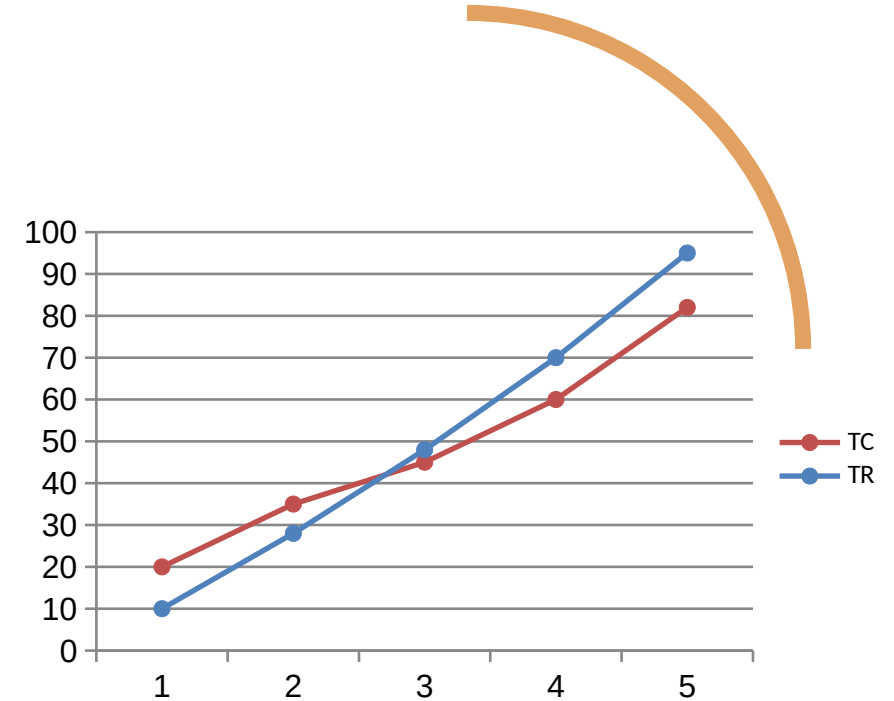
Expected skill

Students connect textbook concepts with real farm situations.

Cost

Class 12 Agricultural Economics

Teaching slides with tables, graphs and practice questions



Key idea: cost guides production, pricing and profit decisions.

Learning Objectives

By the end of this unit, students will be able to:

- Define cost in economics and agricultural production.
- Distinguish money cost, real cost, explicit cost, implicit cost and opportunity cost.
- Classify fixed cost and variable cost with farm examples.
- Calculate total cost, average cost and marginal cost.
- Interpret cost tables, cost curves and break-even point.

Meaning of Cost

Cost is the sacrifice made to produce goods and services.

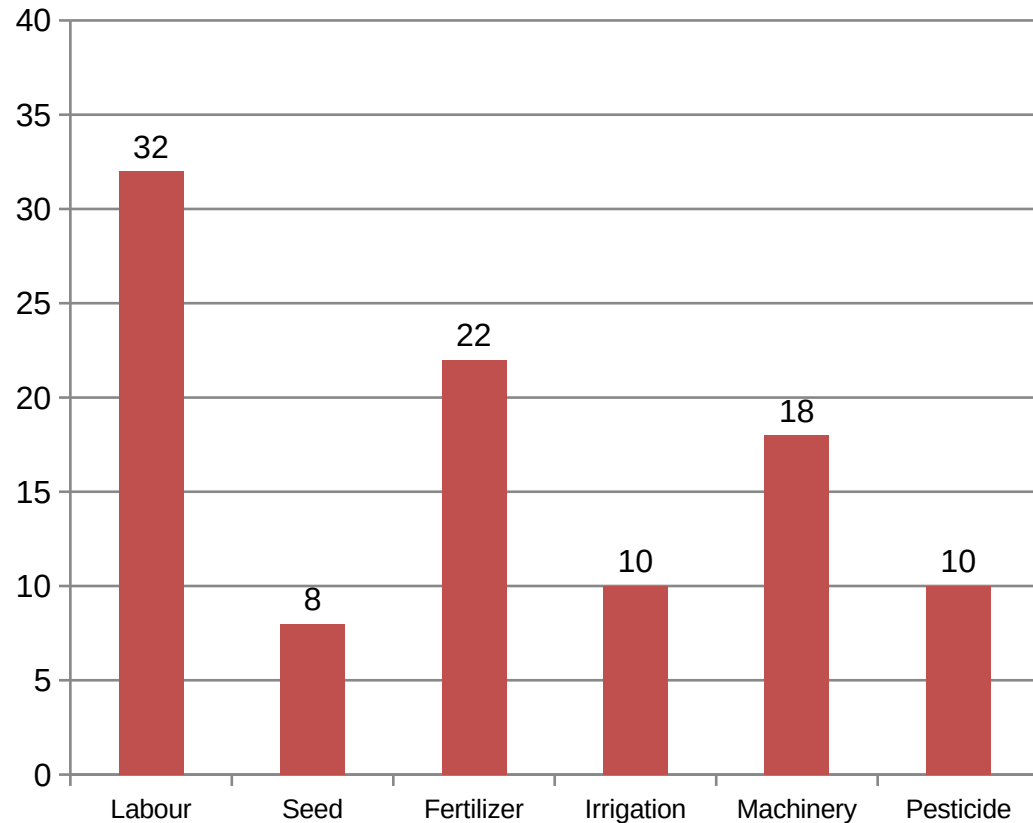
In economics, cost means the value of resources used in production.

In farming, cost includes seeds, fertilizers, labour, machinery, irrigation, land rent, interest and management.

Agricultural example

- Rice production cost includes seed, nursery, transplanting labour, fertilizers, pesticides, irrigation, harvesting, threshing and transport.
- A farmer compares total cost with total revenue to know profit or loss.

Why Cost Study Is Important in Agriculture



- Helps to estimate profit or loss before cultivation.
- Supports selection of profitable crop or enterprise.
- Shows where unnecessary expenses can be reduced.
- Helps to fix selling price and plan farm budget.
- Useful for loan, subsidy, insurance and project proposal.

Types of Cost: Overview

Type	Meaning
Money cost	Amount paid in cash or money
Real cost	Effort, pain and sacrifice of production
Explicit cost	Actual payment to outside factors
Implicit cost	Cost of self-owned resources
Opportunity cost	Value of the next best alternative

Note: In farm management, economic cost = explicit cost + implicit cost.

Money Cost and Real Cost

Money Cost

Cash expenditure made for production.

Example: Rs. 3,000 paid for maize seed.

Real Cost

Physical and mental effort, pain, waiting and sacrifice involved in production.

Example: family labour and hard work during transplanting.

Teaching point: Money cost is easy to record; real cost is difficult to measure exactly.

Explicit Cost and Implicit Cost

Explicit Cost	Implicit Cost
Paid to outside suppliers	Not paid in cash
Recorded in farm account	Often ignored by farmers
Example: hired labour wage	Example: family labour
Example: fertilizer purchase	Example: own land rent
Example: tractor hire	Example: interest on own capital

Opportunity Cost

Cost of choosing one alternative instead of the next best alternative.

Example

A farmer uses 1 ropani land for tomato instead of cauliflower. If cauliflower could give Rs. 20,000 net return, then Rs. 20,000 is the opportunity cost of using land for tomato.

Formula

Opportunity Cost = Return from the next best alternative forgone

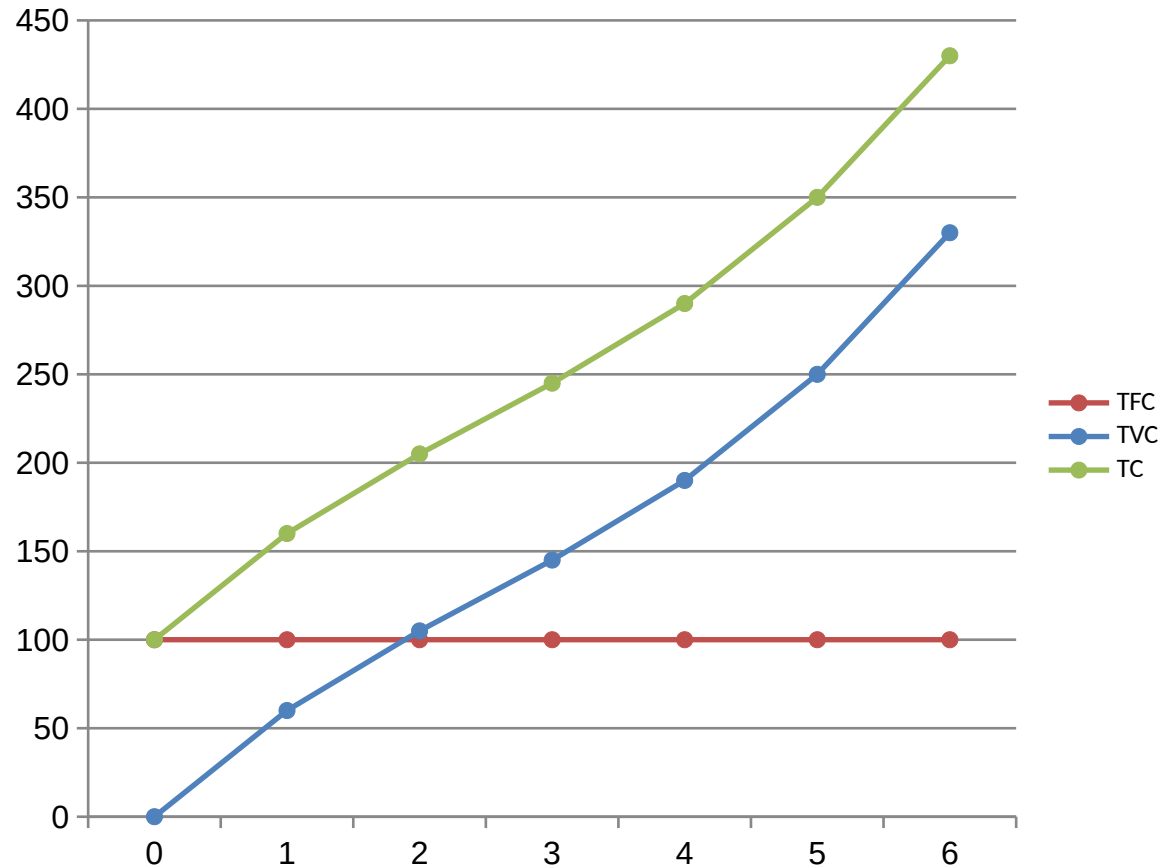
- Useful in crop selection.
- Important when resources are limited.
- Helps compare enterprises like vegetables, fish, bee keeping and cereal crops.

Fixed Cost and Variable Cost

Basis	Fixed Cost	Variable Cost
Meaning	Does not change with output in short run	Changes with output level
Even if production is zero	Must be paid	Usually not paid
Farm examples	Land rent, depreciation, interest, tax	Seed, fertilizer, feed, hired labour, fuel
Decision role	Important in long-term planning	Important in daily production decision

Short-run Total Cost: $TC = TFC + TVC$

Total Fixed, Total Variable and Total Cost



- TFC remains constant at all output levels.
- TVC rises as output increases.
- TC starts from TFC and rises with TVC.
- When output is zero, $TC = TFC$.

Cost Schedule: Short-Run Example

Output (Q)	TFC	TVC	TC = TFC + TVC
0	100	0	100
1	100	60	160
2	100	105	205
3	100	145	245
4	100	190	290
5	100	250	350
6	100	330	430

Average Cost Concepts

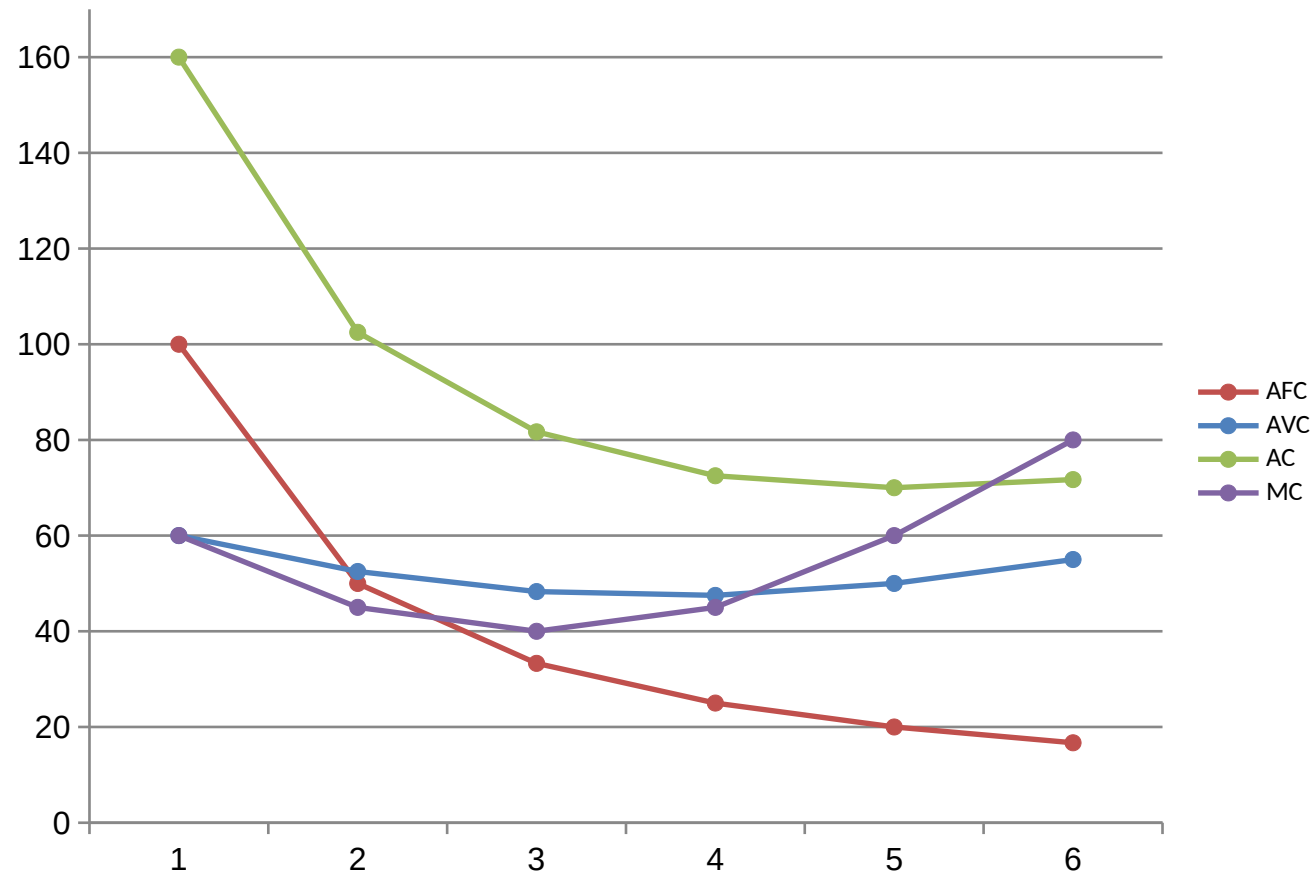
Concept	Formula	Meaning
AFC	$TFC \div Q$	Fixed cost per unit of output
AVC	$TVC \div Q$	Variable cost per unit of output
AC / ATC	$TC \div Q$ or $AFC + AVC$	Total cost per unit of output
MC	$\text{Change in } TC \div \text{Change in } Q$	Extra cost of producing one more unit

These concepts help farmers know the cost per kg, per quintal, per litre or per fish.

Average and Marginal Cost Table

Q	TFC	TVC	TC	AFC	AVC	AC	MC
1	100	60	160	100.0	60.0	160.0	60
2	100	105	205	50.0	52.5	102.5	45
3	100	145	245	33.3	48.3	81.7	40
4	100	190	290	25.0	47.5	72.5	45
5	100	250	350	20.0	50.0	70.0	60
6	100	330	430	16.7	55.0	71.7	80

Average and Marginal Cost Curves



- AFC continuously falls.
- AVC and AC usually become U-shaped.
- MC first falls, then rises.
- MC cuts AC at its lowest point.

Relationship Between AC and MC

When $MC < AC$, AC falls.

When $MC = AC$, AC is minimum.

When $MC > AC$, AC rises.

- This is important for deciding the most efficient level of production.
- A farmer should compare extra cost with extra income before increasing output.
- If additional cost is greater than additional revenue, expansion may reduce profit.

Marginal Cost: Farm Decision Example

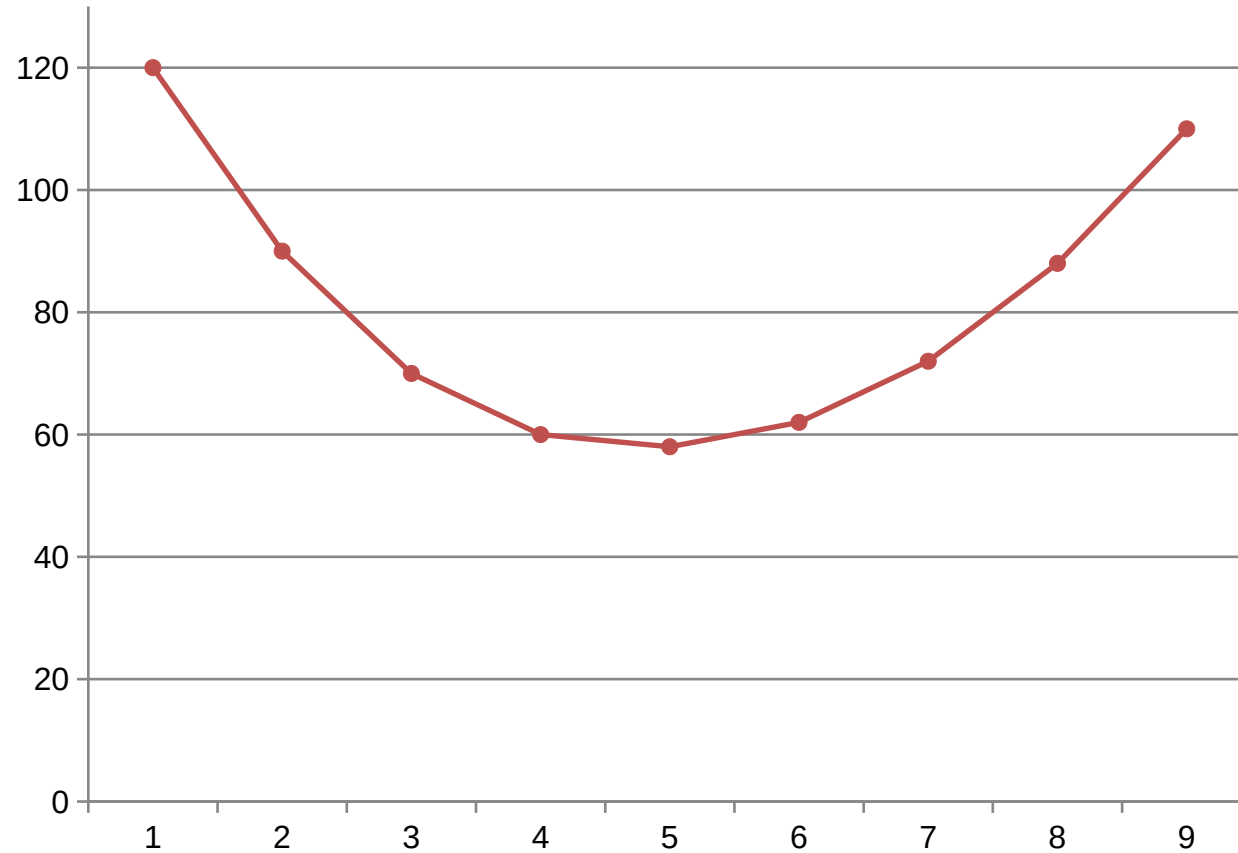
Extra input decision	Extra cost	Extra output value	Decision
Add 1 bag fertilizer	Rs. 2,000	Rs. 3,500	Use it
Add extra irrigation	Rs. 1,200	Rs. 1,800	Use it
Extra pesticide spray	Rs. 1,500	Rs. 900	Do not use unless needed for risk control

Decision rule: Use an extra input only when the additional return is greater than the additional cost.

Short Run and Long Run Cost

Basis	Short Run	Long Run
Factor flexibility	Some factors are fixed	All factors are variable
Examples	Land size, machinery, building may be fixed	Farm size, machinery and technology can change
Cost types	Fixed and variable cost	No fixed cost in strict economic meaning
Agriculture example	One season vegetable production	Shifting from cereal farm to commercial vegetable farm

Long-Run Average Cost Curve



- At first, average cost falls due to economies of scale.
- After optimum scale, average cost rises due to diseconomies of scale.
- Farmers should choose a manageable and efficient farm size.

Economies and Diseconomies of Scale

Economies of Scale

Average cost decreases when scale of production increases.

Diseconomies of Scale

Average cost increases when farm becomes too large to manage efficiently.

Economies examples	Diseconomies examples
Bulk purchase of inputs	Difficult supervision
Better machinery use	Labour management problem
Specialized labour	Transport and storage problem
Improved bargaining power	Wastage and delay

Cost of Production

Cost of Production = Total expenditure incurred to produce a given quantity of output.

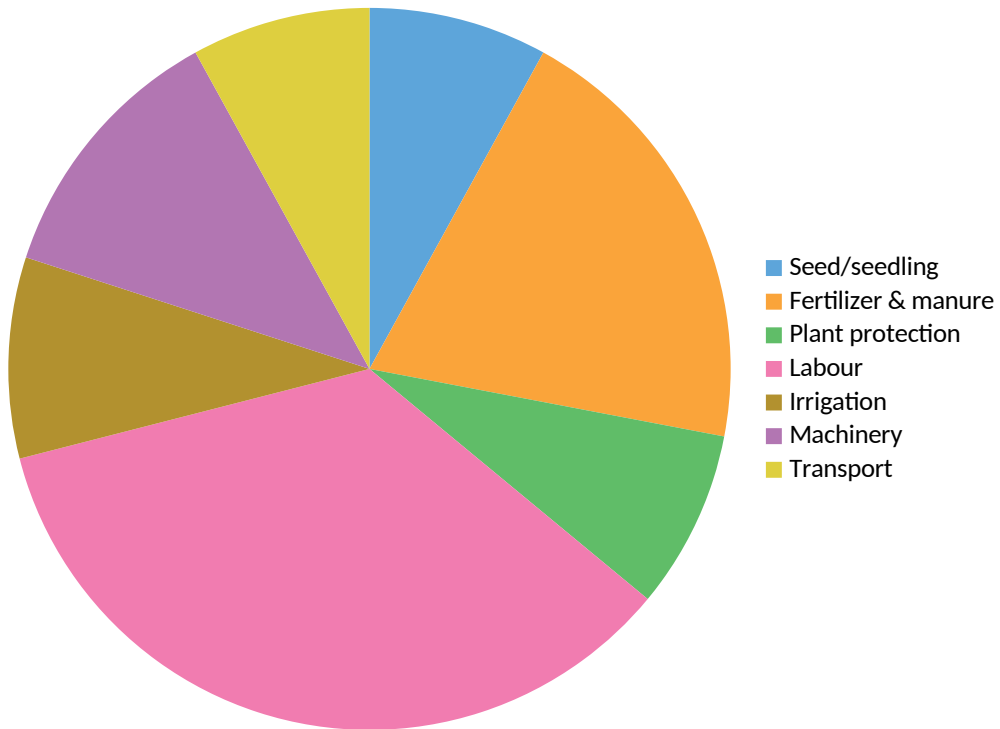
Unit Cost Formula

Cost per unit = Total Cost ÷ Total Output

Example

If total cost of tomato production is Rs. 80,000 and output is 2,000 kg,
Cost per kg = Rs. 40

Cost Components in Crop Production



- Land preparation
- Seed or seedling
- Manure and fertilizer
- Irrigation and drainage
- Plant protection
- Labour and machinery
- Harvesting, grading, packaging and transport

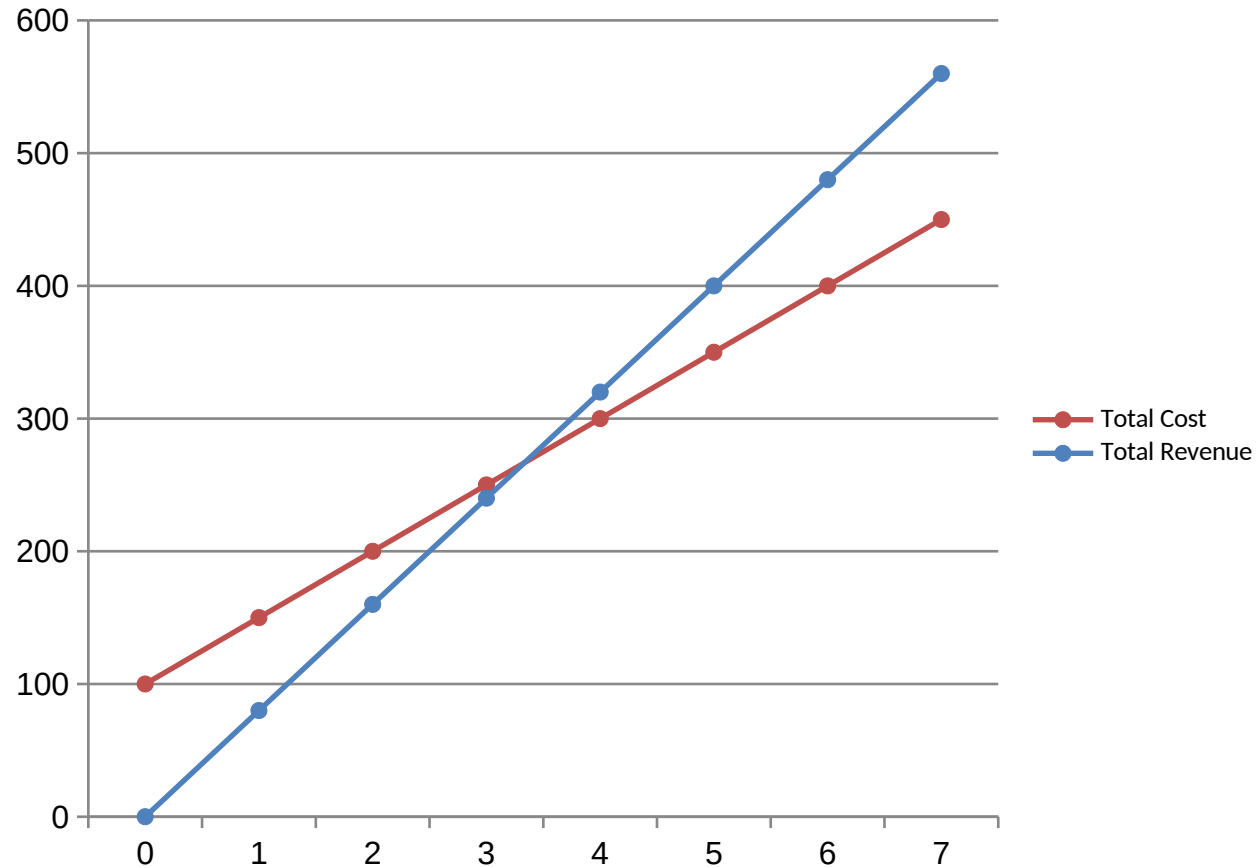
Cost Components in Livestock, Fish and Bee Enterprises

Enterprise	Major cost items
Dairy	Animal purchase, shed, feed, medicine, labour, breeding, equipment
Fish culture	Pond/tank, fingerlings, feed, lime, manure, aeration, labour, netting
Poultry	Chicks, feed, vaccine, litter, housing, electricity, labour
Beekeeping	Hive, colony, sugar feeding, medicine, hive stand, migration, labour

Sample Crop Cost Sheet

Item	Quantity	Rate (Rs.)	Amount (Rs.)
Seed	2 kg	500/kg	1,000
FYM/compost	500 kg	4/kg	2,000
Fertilizer	50 kg	60/kg	3,000
Labour	15 days	800/day	12,000
Irrigation	4 times	500/time	2,000
Plant protection	Lump sum	-	1,500
Harvest & transport	Lump sum	-	3,500
Total cost			25,000

Break-Even Analysis



- Break-even point is where total revenue equals total cost.
- Below break-even: loss.
- Above break-even: profit.
- Useful for deciding minimum production or sales required.

Break-Even Formula

Break-even output = Fixed Cost ÷ (Price per unit – Variable cost per unit)

Example

Fixed cost	Rs. 20,000
Selling price per kg	Rs. 50
Variable cost per kg	Rs. 30
Contribution per kg	Rs. 20
Break-even output	$20,000 \div 20 = 1,000 \text{ kg}$

Profit, Revenue and Cost

Profit = Total Revenue – Total Cost

Total Revenue = Price × Quantity Sold

Particular	Amount
Output sold	2,000 kg
Price	Rs. 50/kg
Total Revenue	Rs. 100,000
Total Cost	Rs. 80,000
Profit	Rs. 20,000

Cost Control Measures in Agriculture

- Use recommended seed rate and fertilizer dose.
- Prepare farm budget before production.
- Reduce wastage of seed, feed, fertilizer and chemicals.
- Use integrated pest management to avoid unnecessary spraying.
- Adopt timely irrigation and proper machinery use.
- Maintain records of cost, output and sales.

Common Mistakes in Cost Calculation

Mistake	Correction
Ignoring family labour	Estimate wage value of family labour
Ignoring own land rent	Include rental value of land
Only counting cash expenses	Include explicit and implicit costs
Not recording small expenses	Maintain daily farm record
Using total profit only	Calculate profit per unit and per area

Key Terms Recap

Term	Quick meaning
Cost	Value of resources used in production
Fixed cost	Cost unchanged with output in short run
Variable cost	Cost that changes with output
Average cost	Cost per unit
Marginal cost	Extra cost of one additional unit
Opportunity cost	Value of next best alternative forgone

Practice Set A: Multiple Choice Questions

Choose the correct answer.

1. Cost in economics means:

a) Profit only b) Sacrifice made for production c) Sales only d) Tax only

2. Fixed cost in farming is:

a) Seed b) Fertilizer c) Land rent d) Feed

3. Marginal cost means:

a) Total output b) Extra cost of producing one more unit c) Total revenue d) Average profit

4. Opportunity cost is:

a) Next best alternative forgone b) Total cash received c) Fixed cost only d) Market price only

Practice Set B: More MCQs

5. Total cost is equal to:

- a) $TFC - TVC$ b) $TFC + TVC$ c) $TR - TC$ d) $Price \times Quantity$

6. Average cost is calculated by:

- a) $TC \div Q$ b) $Q \div TC$ c) $TR \div TC$ d) $MC \div Q$

7. Which cost is usually ignored by farmers?

- a) Explicit cost b) Implicit cost c) Seed cost d) Fertilizer cost

8. Break-even point occurs when:

- a) $TR = TC$ b) $TR < TC$ c) $TC = 0$ d) Profit is maximum

Practice Set C: Very Short Answer

- Define cost.
- What is fixed cost? Give one farm example.
- What is variable cost? Give one farm example.
- Write the formula of total cost.
- Define marginal cost.
- What is opportunity cost?
- Write the formula of average cost.
- What is break-even point?

Practice Set D: Short Answer Questions

- Differentiate between fixed cost and variable cost with examples.
- Explain explicit cost and implicit cost in agricultural production.
- What is marginal cost? Explain its importance in farm decision making.
- Explain the relationship between average cost and marginal cost.
- Why is cost analysis important for commercial farming?

Practice Set E: Long Answer Questions

- Explain the different types of cost with suitable agricultural examples.
- Describe total cost, average cost and marginal cost with a cost schedule and graph.
- Explain cost of production and its importance in farm planning and price decision.
- Describe break-even analysis and explain its usefulness in agricultural enterprises.

Practice Set F: Numerical Questions

1. A farmer spends Rs. 60,000 to produce 1,500 kg tomato. Calculate cost per kg.
2. Fixed cost is Rs. 20,000 and variable cost is Rs. 45,000. Find total cost.
3. Total cost increases from Rs. 30,000 to Rs. 36,000 when output increases from 100 kg to 120 kg. Calculate marginal cost per kg.
4. Fixed cost is Rs. 30,000, selling price is Rs. 60/kg and variable cost is Rs. 40/kg. Calculate break-even output.

Answer Key: Objective and Numerical

MCQ	Answer
1	b
2	c
3	b
4	a
5	b
6	a
7	b
8	a

Numerical	Answer
1	Rs. 40/kg
2	Rs. 65,000
3	Rs. 300/kg
4	1,500 kg

Ask students to show formula and calculation steps in numerical answers.

Class Activity

Make a cost sheet for one crop grown in your school farm.

Task	Student work
Select crop	e.g., tomato, cauliflower, rice, maize
List costs	Seed, fertilizer, labour, irrigation, pesticide, transport
Calculate	Total cost, unit cost, profit/loss
Present	Share result in class and discuss cost control

MCQ • Very Short • Short • Long • Application / Numerical

Unit 2: Basic Concepts

Practice: Multiple Choice Questions

Choose the best answer

1. Want-satisfying power of a commodity is called: a) Value b) Utility c) Wealth d) Equilibrium
2. Goods that are scarce and have price are: a) Free goods b) Economic goods c) Unlimited goods d) Natural goods
3. The monetary expression of value is: a) Wealth b) Price c) Utility d) Margin
4. Wealth must be: a) scarce b) transferable c) useful d) all of these
5. Balance between demand and supply is called: a) Margin b) Equilibrium c) Utility d) Value

Practice: More MCQs

Choose the best answer

6. Extra satisfaction from one more unit is: a) Total utility b) Marginal utility c) Wealth d) Value
7. Which is a producer good? a) Mango eaten at home b) Tractor c) Cooked rice d) Drinking water
8. Goods used together are called: a) substitutes b) complementary goods c) inferior goods d) free goods
9. Marginal cost means: a) total cost b) average cost c) extra cost of one more unit d) fixed cost
10. A stock of valuable economic goods is called: a) value b) demand c) wealth d) utility

Practice: Very Short Answer Questions

Answer in one sentence

Define goods.

What is utility?

What is meant by value in exchange?

Write any two characteristics of wealth.

What is equilibrium?

Define margin.

Give one example of complementary goods in agriculture.

Give one example of marginal decision in farming.

Practice: Short Answer Questions

Answer in 3–5 points

Differentiate between free goods and economic goods.

Explain value in use and value in exchange with examples.

Write the characteristics of wealth.

Explain total utility and marginal utility with a simple example.

Explain consumer equilibrium in simple words.

Why is marginal analysis important in farm decision-making?

Practice: Long Answer Questions

Answer with explanation and examples

Define goods and explain major types of goods with agricultural examples.

Define utility. Explain characteristics and types of utility.

Define value and wealth. Distinguish between value and wealth.

What is equilibrium? Explain market equilibrium with a diagram.

Explain the concept of margin and its importance in agricultural economics.

Practice: Application and Numerical Questions

Use examples from farm and market

A farmer applies one extra kg of fertilizer and gets extra output worth Rs. 180. The extra fertilizer cost is Rs. 120. Should the farmer apply it? Give reason.

A family spends Rs. 1000 on rice, vegetables and milk. Explain how consumer equilibrium is reached.

Classify these as wealth or not wealth: land, honesty, tractor, skill, harvested rice, air.

Draw a simple demand-supply diagram and mark equilibrium point.

Prepare a table showing TU and MU for five units of mango consumption.

Practice: Fill in the Blanks / True-False / Matching

Objective practice

Fill in the blanks

Utility means ____ satisfying power.
Price is the monetary expression of ____.
Margin means ____ unit/change.

True / False

Free goods always have price.
Wealth must be transferable.
Market equilibrium occurs where demand equals supply.

Matching

A	B
Utility	Extra cost
MC	Balance
Equilibrium	Want satisfaction
Wealth	Economic goods stock

Instruction

Students should write answers individually first, then check in pairs.

Answer Key: Objective Questions

For teacher use / self-check

MCQ	1.b 2.b 3.b 4.d 5.b 6.b 7.b 8.b 9.c 10.c
Fill	want; value; extra/additional
True/False	False; True; True
Matching	Utility–Want satisfaction; MC–Extra cost; Equilibrium–Balance; Wealth–Economic goods stock

End of Unit 2

Market

Market refers to a system in which **buyers and sellers** come in close **contact** of each other for **sale and purchase** of goods.

Industry: A group of businesses doing similar things, like making cars or providing healthcare.

Firm: A company or business that makes or sells goods or services to make money.

FORMS OF MARKET(12 dimensional)

1. On the basis of competition

a. Perfect competition

- large number of seller selling homogeneous product
- Perfect mobility of factor of production

b. Imperfect competition

i. Monopoly : single seller

ii. Bilateral monopoly: single seller faces a single buyers

iii. Monopsony: single buyer

iv. Oligopsony: only few buyers

v. Duopoly: two seller

vi. Oligopoly : more than two seller

vii. Monopolistic: large number of seller selling heterogeneous product.

A.PERFECT COMPETITIVE MARKET

- Perfect competition market is the world of price-takers.

- Characteristics of Perfect Competition Market:**

1. **Large Number of Buyers and sellers:** Output of any single firm is only a small proportion of the total output and of the total demand.
2. **Homogeneous Product:.** They must be of similar content, quality, price, smell, packaging. Due to homogeneous nature of the product the demand is perfectly elastic.

4. Free Entry or Exit: There should be no restrictions, legal or otherwise, on the firms' entry into, or exit from, the industry. Therefore there is always normal profit.

5. Perfect Knowledge: Purchasers and sellers should be fully aware of the prices, quality and quantity that are being offered and accepted.

6. Individual firm is price taker price fixed by the industry: Individual competitive producer is at the mercy of the market.

7. There is perfect mobility of the resources from one production activity to another

For e.g. if the poultry business fails it can be converted into the goat shed.

B. Pure monopoly

Monopoly is a market structure in which there is a single seller, there are no close substitutes for the commodity it produces and there are barrier to entry.

- e.g. National security:- Nepal army, Nepal electricity authority, Nepal oil corporation.

Main characteristics of pure monopoly:

1. Single seller

A pure, or absolute, monopoly is an industry in which a single firm is the sole producer of a specific good or the sole supplier of a service; the firm and the industry are synonymous.

2. No close substitutes

A pure monopoly's product is unique in that there are no close substitutes. Due to this the demand curve is inelastic.

3. Price maker

It has control over price. He can change its product price by adjusting the supply.

4. Blocked entry

- There is blocked entry of new firm due to technological, legal or some other types of barrier.
-

5. Firm and industry

- There is no distinction between the firm and industry in monopoly market situation.
-

6. Price discrimination

- A monopolist may be able to charge different prices for the same product from different customers.

C. Oligopoly market

- 1. Few Sellers** :An oligopoly market is characterized by a few sellers and their number is limited. Oligopoly is a special type of imperfect market. It has a large number of buyers but a few sellers.
- 2. Homogeneous or Differentiated Product** : The Oligopolists produce either homogenous or differentiated products. Products may be differentiated by way of design , trademark or service
- 3. Interdependence** : The most important feature of the Oligopoly is the interdependence in decision making of the few firms which comprise the industry.The reactions of the rival firms may be difficult to guess. Hence price is indeterminate under Oligopoly.

4. Competition: Competition is unique in an oligopoly market. It is a constant struggle against rivals.

5. Group Behaviour : Each Oligopolist closely watches the business behaviour of other Oligopolists in the industry and designs his moves on the basis of some assumptions of their behaviour .

6. Uncertainty :The interdependence of other firms for one's own decision creates an atmosphere of uncertainty about price and output

7. Price Rigidity :In an oligopoly market each firm sticks to its own price to avoid a possible price war. The price remains rigid because of constant fear of retaliation from rivals.

Demand

- Demand means the various quantities of a good that would be purchased per unit of time at different prices in a given market.
- three main characteristics of demand in economics:
 - Willingness and ability to pay.
 - Demand is always at a price
 - Demand is always per unit of time.

Assumption for law of demand

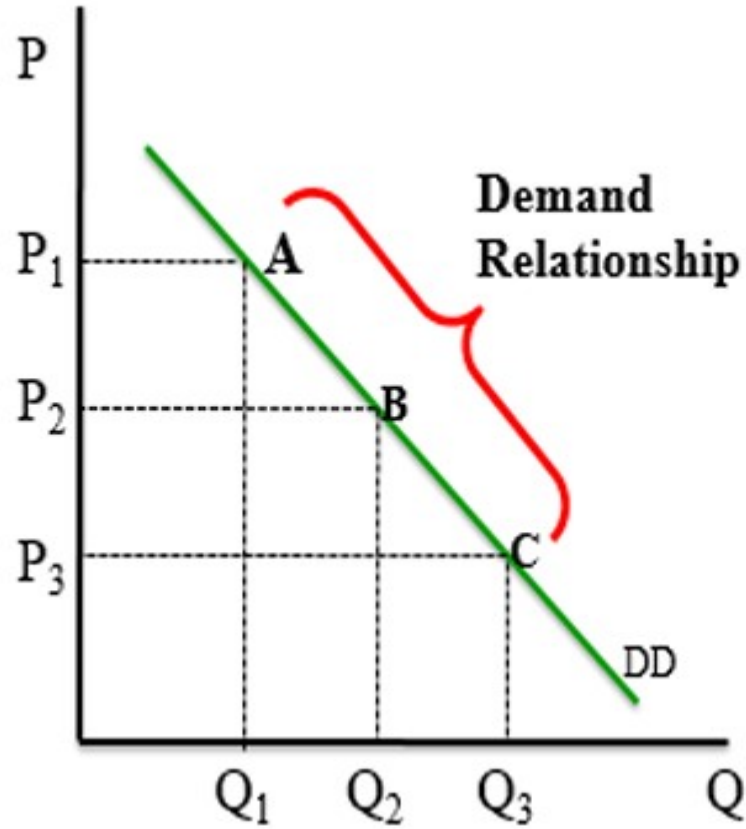
- No change in taste and preferences
- Income remains the same
- No change in price of the related commodities
- No change in the consumer's wealth

Law of Demand

The law of demand states that, other things remaining constant, as price increases (decreases) consumers will purchase less (more) of the specific commodity. Demand varies inversely with price.

$$QD \propto 1/\text{Price}$$

Note : “everything else remains the same” is known as the “ceteris paribus” or “other things equal” assumption. In this context, it means that income, wealth, prices of other goods, population, and preferences all remain fixed



As price falls from **P₁ to P₂** the quantity demanded increases from Q₁ to Q₂. As price falls **from P₂ to P₃** the quantity demanded increases from **Q₂ to Q₃**.

This is a negative relation between price and quantity, hence the negative slope of the demand schedule; as predicted by the law of demand.

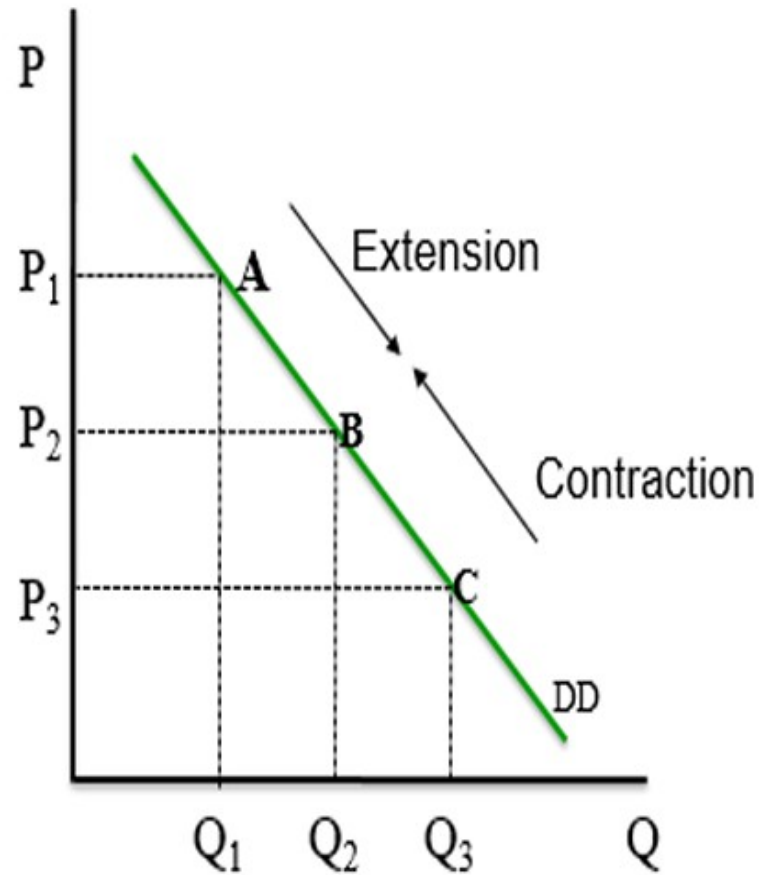
Demand curve has a negative slope, i.e, it slopes downwards from left to right depicting that with increase in price, quantity demanded falls and vice versa.

Shift (change) of the demand curve

- Two types:
- (1) Shifts along the demand curve OR
Movement along the demand curve(Extension and contraction)
- (2) Shifts of the demand curve (change in demand i.e. Increase or decrease) itself

Shifts along the demand curve

- It refers to the upward and downward movement of quantity demanded along the same demand curve.
- This is usually known as expansion or contraction of demand.
- These particular movements along the same demand curve are caused by no other factor, except **the price of the commodity**.



- From the fig , when the movement is from point A to point B, the situation is known as an extension (expansion) in demand. This is in the sense that the quantity demanded has expanded from Q_1 , to Q_2 .
- When the movement is from C to B, this is known as a contraction in demand. There is a movement of quantity demanded from Q_3 to Q_2 signifying a fall in the quantity demanded.

Fig: Shift along the demand curve

Shifts of the demand curve

Factors which cause shift of the demand curve,

- **Income** : A rise in incomes increases the demand for normal goods such as restaurant meals, sports tickets, and necklaces while reducing the demand for inferior goods such as cabbage, turnips, and inexpensive wine.
- If ice-cream is a normal good (as we all know it is!!), an increase income will increase the demand for ice-cream. If ice cream was an inferior good, the demand of ice-cream would decrease (i.e. the demand curve shifts to the left) when income increases.

- **Price of Related Goods:** A change in the price of a related good may either increase or decrease the demand for a product, depending on whether the related good is a substitute or a complement. Frozen yogurt is a substitute to ice-cream. If the price of frozen yogurt declines, it is most likely that the quantity demanded of ice-cream will also decline.
- On the other hand, suppose that gasoline is complement to Car. An decrease in the price of car will probably increase the quantity demanded of gasoline

- **Tastes:** Physical fitness rises in popularity, increasing the demand for jogging shoes and bicycles; cell phone popularity rises, reducing the demand for traditional land phones.
- **Number of Buyers:** A decline in the birthrate reduces the demand for children's toys. When the number of buyers increases, the quantity of ice-cream increases. That is, the quantity demanded depends on the size of the market

- **Summary: movement** along a demand curve is the result of increase or decrease of the **price of the good**, while the demand **curve shifts** when any **demand determinant other than price** changes.

Exception of law of demand

- 1. **Giffen goods** : (special type of inferior good e.g. fall in price of bread- QD bread reduced; but QD of meat increased)
- 2. **Article of distinction**- QD of Diamond and Jewelry increases as their price rises.
- 3. **Expectation of rise and fall in price in future**. War?
- 4. **Ignorance of quality**- Generally, consumer perceive a commodity with low price as inferior and with high price as superior and purchase more of the commodity with high price. (consideration of inferior if price is less and vice versa.

THE DETERMINANTS OF MARKET DEMAND

- The price of the product itself
- The price of related goods
- Income of the consumer
- Taste and preference of the consumer
- Expectation about future income and price
- Advertisement and sales promotion
- Population of the country i.e. number of consumption

Supply

Quantity supplied(Q_s) is the total amount of a good that sellers would choose to produce and sell under given conditions.

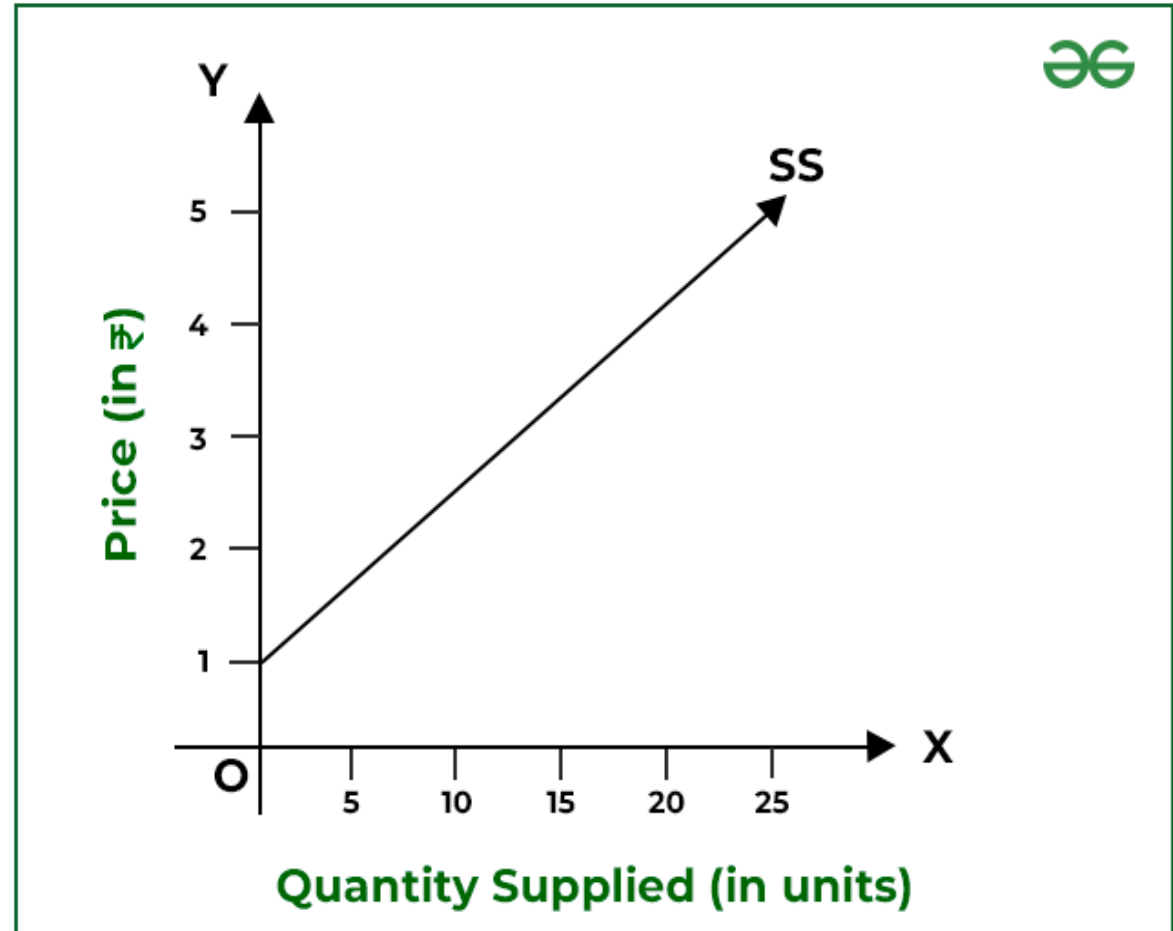
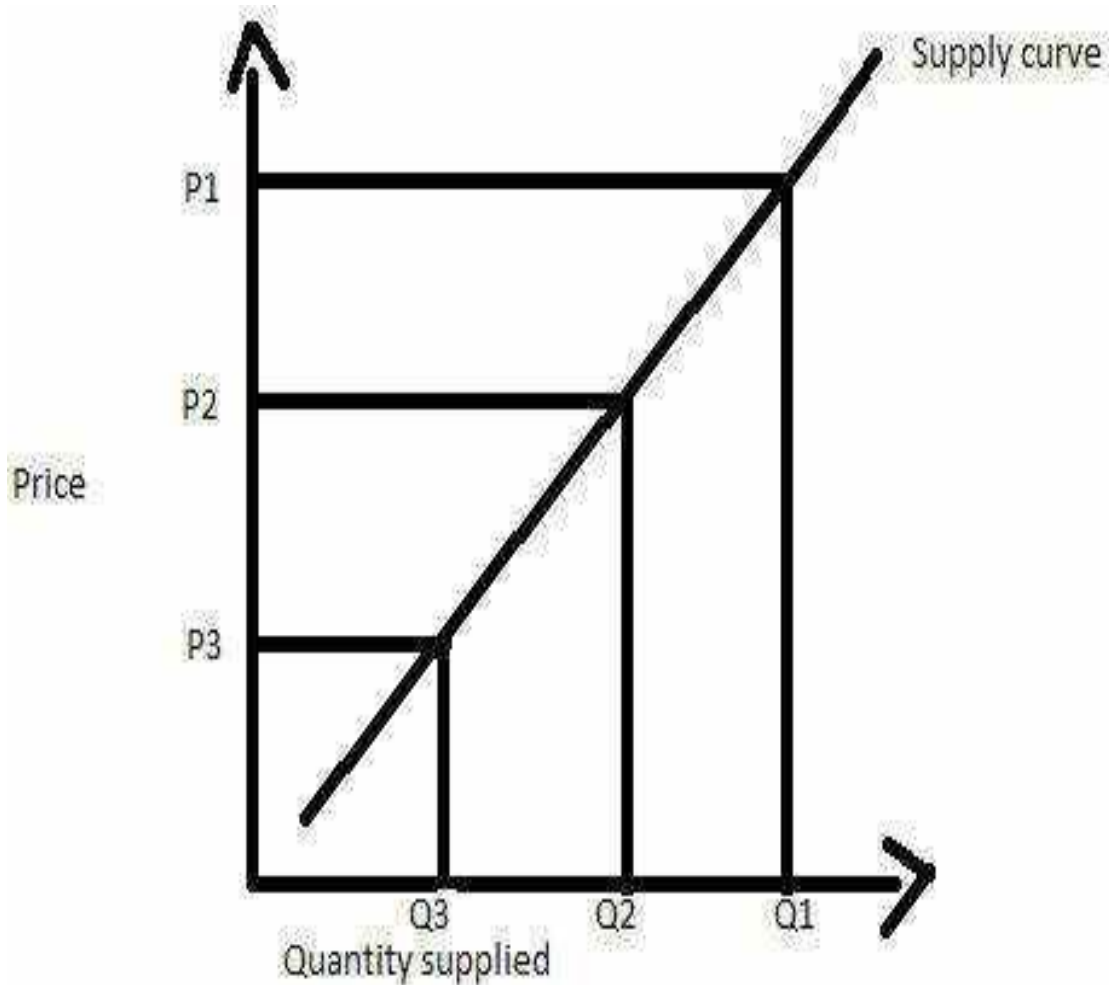
- The given conditions include:
 - price of the good
 - prices of factors of production (labor, capital)
 - prices of alternative products the firm could produce
 - Technology
 - productive capacity
 - expectations of future prices

The law of supply

The law of supply states that, other things remaining constant, as price increases (decreases) supplier will supply more (less) of the specific commodity. Supply varies directly with price.

$Q_s \propto \text{Price}$

Supply curve



Determinants of supply

- Change in the cost of production
- Technological progress
- Discovery of new sources of raw material
- Complementary relationship
- Natural factors
- Intensity of desire for self consumption
- Change in the price of substitutes
- Means of transport
- Social and political factors

Cooperative

- **working or acting together willingly for a common purpose or benefit.**
- A cooperative is "an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically-controlled enterpris."

Principle of cooperatives

- Voluntary and Open Membership
- Democratic member control
- Members economic participation
- Autonomy and independence
- Education , Training and Information
- Cooperation among Cooperatives
- Concern for community

Types of Cooperatives

- Producer cooperatives
- Workers cooperatives
- Consumer Cooperatives
- Marketing cooperatives
- Production cooperatives
- Processing cooperatives

Role of cooperatives in commercial farming

- Collective Bargaining Power
- Economies of Scale
- Risk Sharing
- Access to Information and Training
- Market Access and Market Diversification
- Value Addition and Processing Facilities
- Policy Advocacy and Representation
- Easier and cheaper transport
- Provision of credit

- NCDB: National cooperative development board : August, 1991

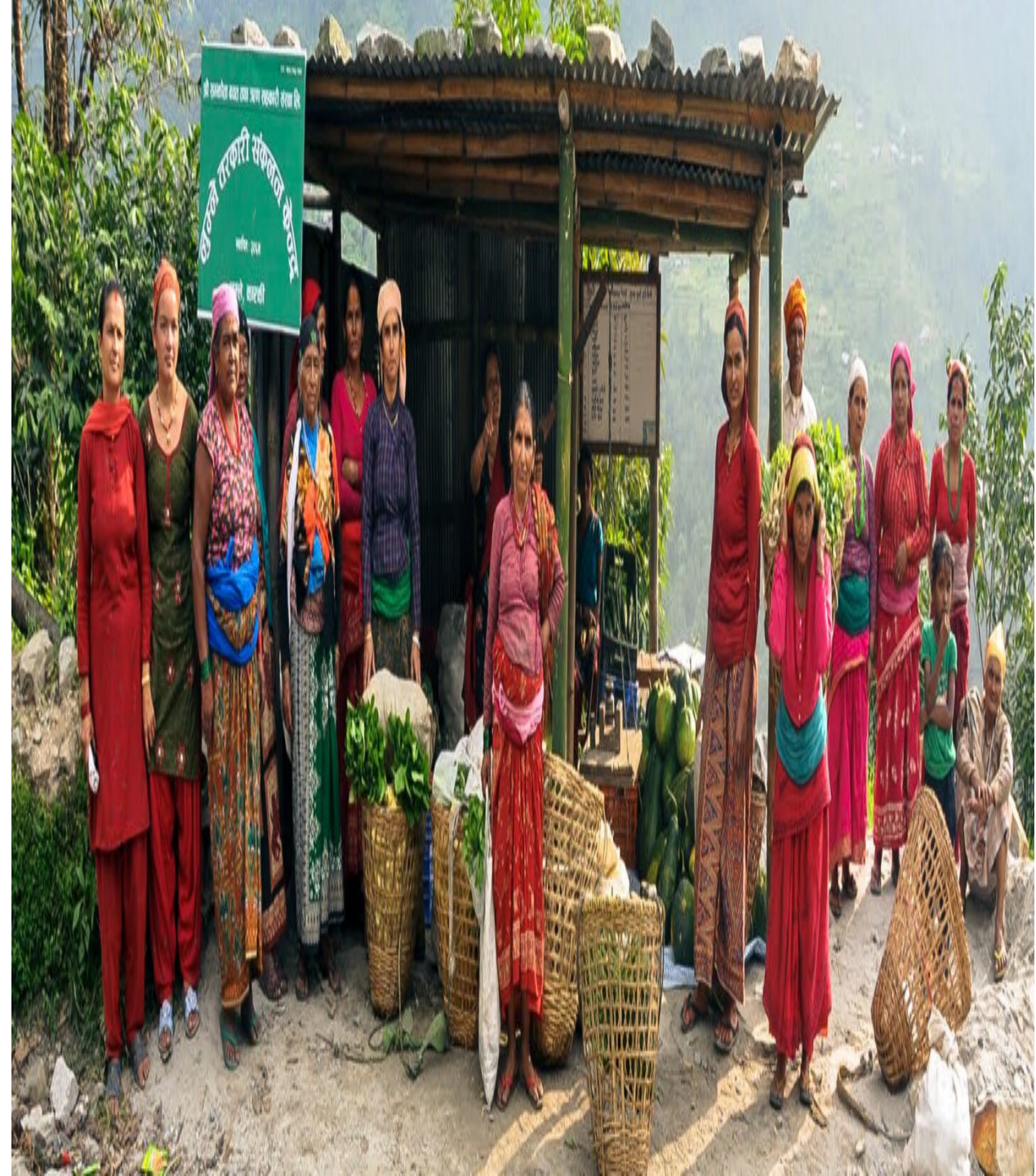
Contribution of cooperatives to Nepal's economy

- 34,737 – number of primary cooperatives in Nepal.
- 6.5 million members in cooperatives (23% of Nepal's population).
- 51% of members in cooperatives are women.
- 40% of the board of directors in cooperatives are women.
- 63,500 – number of employees in cooperatives.
- US\$ 63.47 billion – total share capital of cooperatives.
- US\$ 302 billion held in deposits in cooperatives, of which US\$ 273 billion are disbursed as loans.

(All figures as of 2019)

Cooperative in Nepal

Introduction, History, Principles, Legal Framework,
Current Status & Cooperative Farming



- **Father** of Cooperative : Robert Owen
- **Nepals first** cooperative : Bakhan Sahakari Sansthaa (loan)
Established: 2013/12/20(Chitwan Debinagar)
- Cooperative **act** : 2048 BS
- Cooperative **Rugulations** : 2049 BS
- National Cooperative policy : 2069 BS
- Main theme of cooperatives: **All for one , One for All**

Introduction

- Cooperative means working together voluntarily for a common benefit.
- It is an autonomous association of persons united to meet shared needs.
- It serves economic, social and cultural interests of members.
- It operates through a jointly owned and democratically controlled enterprise.

Core idea: member-owned, member-used, member-controlled



Meaning of Cooperative



- A cooperative is a group organization based on mutual help.
- Members join together to solve common economic or social problems.
- Every member gets equal opportunity and democratic voice.
- The foundation is unity, self-help, cooperation and trust.

Seven Principles of Cooperatives

1. Voluntary & open membership

2. Democratic member control

3. Members' economic participation

4. Autonomy & independence

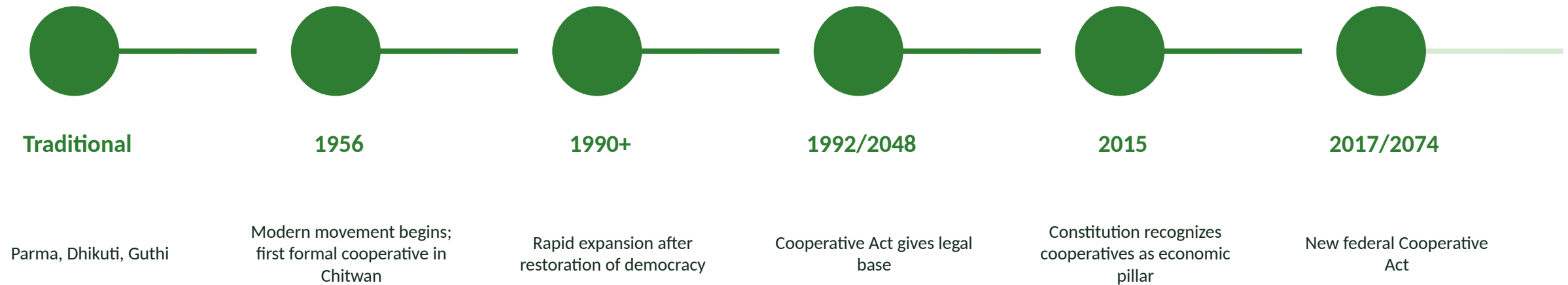
5. Education, training & information

6. Cooperation among cooperatives

7. Concern for community

Exam point: these are internationally recognized cooperative principles.

History of Cooperatives in Nepal



Development of Cooperatives

Savings & Credit

Agriculture

Dairy

Consumer Goods

Small Industries

Multipurpose

- Cooperatives support savings, loans, inputs, production, processing and marketing.
- They are important for women empowerment, rural entrepreneurship and inclusion.
- Community-level cooperatives connect small producers with finance and markets.

Legal Framework: Cooperative Act 2074

Registration

Management

Member Rights

Audit & Accounts

- The current key federal law is the Cooperative Act, 2074 BS / 2017 AD.
- It provides legal identity, registration, membership and operational rules.
- It defines roles of the general assembly, board/committee, registrar and members.
- It includes provisions for accounts, audit, reporting and financial discipline.

Note: Older study materials may mention Cooperative Act 2048; current legal reference is Act 2074.

Cooperative Regulation 2075 & Governance

- Regulation 2075 explains procedures to implement the Act in practice.
- It guides registration, records, meetings, accounts, reporting and administration.
- Good governance requires transparency, internal control, timely audit and member accountability.
- Recent policy attention has increased on savings-and-credit cooperative supervision.



Good Governance = Trust + Transparency + Accountability

National Co-operative Development Board (NCDB)

Policy Advice

Research & Planning

Sector Development

Movement Support

- NCDB was established under the National Cooperative Development Board Act, 2049 BS.
- Its role is to support development of cooperative associations and unions at national level.
- It advises government, supports research/planning and helps strengthen the cooperative sector.

Current Status of Cooperatives in Nepal

31,450

primary cooperatives reported in
2025 Nepal snapshot

7.4 M

members, about 23% of Nepal's
population

56%

women among cooperative members

94,002

employees in cooperatives

- Cooperatives are present in finance, agriculture, dairy, multipurpose, consumer, energy and other sectors.
- They contribute to financial access, livelihoods, market linkage and inclusive development.
- Savings-and-credit cooperatives remain the largest and most sensitive part of the sector.

Source basis: ICA Asia-Pacific 2025 Nepal Snapshot and cooperative sector reports.

Problems and Challenges

Weak supervision

Poor governance

Misuse of deposits

Financial irregularities

Low public trust

Need stronger accountability

- Challenge is not the cooperative model itself; it is weak compliance and governance in some institutions.
- Solutions require member awareness, regular audit, transparent reporting and effective regulatory supervision.

Types of Cooperative Farming

Better farming

Private land remains; joint input purchase, technology and marketing.

Joint farming

Members pool land and cultivate together.

Tenant farming

Cooperative leases land and members cultivate.

Collective farming

Land, production and management are jointly organized.

Cooperative Farming: How It Works



- Cooperative farming can reduce input cost, improve bargaining power and support collective marketing.
- It is especially useful for small and fragmented landholders.

Importance of Cooperatives

Supports small farmers

Improves credit access

Strengthens marketing

Promotes self-reliance

Builds community

Encourages democracy

- Cooperatives convert scattered savings, skills and resources into organized local development.
- For agriculture students: remember their role in input supply, credit, production, processing, storage and marketing.

Practice Questions

Very short / MCQ

- Define cooperative.
- List any four principles of cooperatives.
- NCDB stands for _____.

Short answer

- Write a short history of cooperatives in Nepal.
- Mention the main provisions of Cooperative Act 2074.

Long answer

- Explain the importance and challenges of cooperatives in Nepal.
- Describe types of cooperative farming with examples.

Exam tip: Use keywords — voluntary, democratic control, member participation, legal identity, audit, transparency, collective marketing.

Conclusion

- Cooperatives are an important part of Nepal's social and economic development.
- They support farmers, workers, low-income groups and local communities.
- The sector needs strong governance, member awareness and effective regulation.
- With proper management, cooperatives can contribute more to inclusive national development.



Cooperation → Inclusion → Local Development

References

- Nepal Law Commission — Cooperatives Act, 2074 and Cooperative Regulation, 2075.
- FAOLEX — National Cooperatives Development Board Act, 2049.
- ICA Asia-Pacific — 2025 Nepal Snapshot: primary cooperatives, members, women participation and employees.
- Coops4dev Legal Framework Analysis — Constitution 2015 and cooperative legal framework.
- Heifer / NACCFL / iDE images used for educational visual support.

Images and references are used for classroom teaching material. Verify latest numbers from Department of Cooperatives before official reporting.

Farm Record Keeping and Depreciation

Farm records:-

- Those records(written databases) that are mainly related to the financial aspects of a farm are k/a farm records.

Advantages of Farm Records and Accounts

- 1. Means to higher income
- 2. Basis for diagnosis and planning
- 3. Way to improve managerial ability of the farmer
- 4. Basis for credit acquisition and management
- 5. Basis of conducting research in Agricultural Economics and production economics
- 6. Basis for government policies

Problems in Farm Accounting

- 1. Subsistence nature of farming
- 2. Farming is a laborious work
- 3. Triple role of Nepalese farmer
- 4. Illiteracy and lack of business awareness
- 5. Complicated nature of the agricultural business
- 6. Inadequate extension service
- 7. Non-availability of suitable farm record books
- 8. Fear of taxation

Brief Concept of Balance Sheet, Income Statement and Cash Flow Statement

- **1) Balance Sheet(Net-worth statement):-**

It shows the financial condition of the farm business at a particular point of time and it helps to find out whether the business is either a stable or unstable at that exact time.

- Net worth is shown as excess over liabilities and it is prepared for the farmer not the business.
- In other words, it shows whether the business is expanding or shrinking.

$$\text{Net Worth} = \text{Total Assets} - \text{Total liabilities}$$

Table 8.2: Net-worth Statement of Parangat Fish Farm:

BALANCE SHEET			
Falgun 25/2070		Parangat Fish Farm	
Liabilities		Assets	
Current Liabilities		Current Assets	
Accounts Payable =	400,000.00	Cash (Rs.) =	43,000.00
Wages Payable =	310,000.00	Accounts Receivable =	275,000.00
Interest Payable =	145,000.00	Inventory =	331,000.00
Taxes Payable =	240,000.00	Prepaid Insurance =	170,000.00
Total Current Liabilities =	1,095,000.00	Total Current Assets =	819,000.00
Intermediate Liabilities		Intermediate Assets	
Machinery Depreciation =	50,000.00	Fishes (1000 @ Rs. 100) =	100,000.00
Equipment Depreciation =	68,000.00	Machinery & Equipments =	800,000.00
Truck Depreciation =	42,000.00	Truck =	400,000.00
Total Intermediate liabilities =	160,000.00	Total Intermediate Assets =	1,300,000
Long – Term Liabilities		Fixed Assets	
Farm Real Estate =	150,000.00	Land (3 ha @ 1,000,000 per hectare) =	3,000,000
Building Depreciation =	280,000.00	Farm Buildings =	650,000
Total long-term liabilities =	430,000.00	Total Fixed Assets =	3,650,000
Total Liabilities =	1,685,000.00		
Owner's Equity (OE)			
Parangat's equity =	4,084,000.00		
Total Liabilities + OE = Rs. 5,769,000.00		Total Assets = Rs. 5,769,000.00	

Assets:-

- They are items that are owned and have value. They belong on the balance sheet whether these items are paid for or there is debt against them
- **3 types of assets:-**
 - a. **Current assets:-** they are the most liquid assets and are consumable in a year. E.g., seeds, fertilizers, cash on hand, bill receivable, livestock for sale.
 - b. **Fixed assets:-** They are the nature that it is difficult to convert them into cash to meet any current obligations. E.g., Land, building, etc.
 - c. **Working assets:-** These are liquid than fixed assets such as farm machinery, equipment's, etc.

Liabilities:-

The future sacrifices of the economic benefits that the entity is obliged to make to other entities

- a. **Current liabilities:-** expected to be liquidated within a year. E.g., Account payable, wages payable, Taxes payable, interest payable, etc.
- b. **Long term liabilities:-** these liabilities are reasonably expected not to be liquidated within a year. E.g., building depreciation,
- c. **Intermediate liabilities:-** e.g., machinery depreciation, Equipment depreciation, etc._

Income statement

- It is the list of all farm expenses or business debts in one hand and farm income/ receipts on the other hand.
- After making entry of these income together in a convenient form, expenses are subtracted from receipts/ income to determine net income of the year. .

INCOME STATEMENT

Thapa Poultry Farm, Surkhet-Road, Nepalgunj Baisakh 1, 2074 to Chaitra 30, 2074

Farm Income/Receipts (In Rs.)		Farm Operating Expenses (In Rs.)	
Poultry Sold	41,000.00	Vaccines & Medicines	1,800.00
Eggs sold	15,000.00	Feeds	26,000.00
Machinery Income	30,000.00	Labor	5,000.00
Miscellaneous Income	2,000.00	Repair and maintenance of poultry house	3,500.00
One-day old chicks sold	12,000.00	Property taxes	900.00
		Insurance	650.00
		Supplies	2,000.00
		Fuel (Gas, Petrol, etc.)	5,500.00
		Waste disposal	1,200.00
		Miscellaneous	650.00
		Interest on capital	2,100.00
Total farm receipts (A)	100,000.00	Total Farm Operating Expenses (B)	49,300.00
		Net Cash Operating Income = (A) – (B)	50,700.00

Definition of farm inventory and process of taking farm inventory

Farm inventory:-

- It is the list of all the physical property of a business along with their values at a particular period of time of the year.
- Inventory in simple terms means keeping track of raw materials and finished products in stock at the farm.
- It includes a complete listing of all that a farm owns and owes at a particular date, generally at the beginning and at the end of each agricultural year.
- It includes not only the physical assets but also values of all such assets, liabilities and debts as well.

Table 8.1: Inventory of 'Quality Food Farm' from July 5th 2017 to July 4th, 2018

FARM INVENTORY					
S.N.	Items	Beginning of year (05/07/2017)		End of the year (04/07/2018)	
		Quantity (In Kg.)	Value (Rs.)	Quantity (In Kg.)	Value (Rs.)
A.	Non-Depreciable Assets				
	(a) Crop Produce	—	—	—	—
	(b) Supplies				
	(i) Seeds	—	—	—	—
	(ii) Fertilizers				
	Urea	5	200	2	80
	DAP	2	60	1	30
	MoP	—	—	1	40
	(iii) Chemical Insecticides				
	Malathion (Litres)	7	245	4	140

(c) Growing crops	2	30,000	2	30,000
Rice (ha.)	0.5	2,000	0.5	2,000
Soybean (ha.)				
(d) Marketable livestock				
Chicken	10	3,000	2	600
Goats	2	20,000	—	—
(e) Others	—	—	—	—
Sub Total	—	55,505		32,890
B. Depreciable Assets				
(a) Machines				
(i) Tractors	1	11,000	1	10,000
(ii) Tractor Mountages	3	3,000	3,	2,500
(iii) Threshor	1	1,500	1	1,200
(iv) Seed-cum-Fertilizer -drill	1	1,500	1	1,200
(v) Hand toots (Spade, knife, sickles)	10	2,000	10	1,750
(b) Buildings		100,000.00		95,000.000
(c) Livestock (Poultry, Goats)		150,000.00		145,000.00
(d) Land owned (ha)	3	500,000.00	3	515,000.00
Sub-Total	—	769,000	—	771,650
C. Cash Assets:				
(a) Cash in hand		2500.00		4000.00
(b) Saving in Banks and Co-operatives.		25,000.00		9,300.00
(c) Other properties,		—		—
Sub-Total		27,500.00		13,300.00
Grand Total		852,005.00		817,840.00

Change in Inventory

(a)	Beginning Total Rs.	852,005.00
(b)	Closing Total Rs.	817,840.00
	=	
	Change =	Rs. 34,165

Steps of taking farm inventory:-

- There are two steps in preparing a farm inventory, they are;
 - a) **Examination of physical assets:-** It includes a **complete listing of all the physical assets, certification numbers, weights and measurements.** The losses or gains which occur over the time should be accounted for this process.
 - b) **Valuation of physical assets:-** After all physical assets have been examined and listed, it is important to evaluate them in terms of money. Valuation is an important step in the process of taking farm inventories of a farm. The **physical assets can be valued by using an appropriate valuation methods**, which are as follows;
 - i. Cost depreciation
 - ii. Valuation at market price i.e., cost or market price (whichever is less)
 - iii. Net selling price
 - iv. Replacement cost-depreciation
 - v. Income capitalization
 - vi. Valuation at cost
 - vii. Replacement cost

Concept of depreciation and methods of calculating depreciation

Concepts of depreciation:-

- **Depreciation is a slow using of a long lived assets.**
- **It represent the amount by which a farm resource decreases in values as a results of cause other than a change in the general price of the items.**
- **In other words, it is decline in the value of a given assets as a results of the use, wear and tear, accidental damage and time obsolescence/outdated.**

- **Methods of Calculating Depreciation:-**

- a) **Annual Revaluation:-**

- **This method implies estimating the market value of the assets in the beginning and the end year inventory and then taking the difference as depreciation.**

i.e. market value of the assets in the beginning - Market value of the assets of end year

- **This methods has the limitation that estimation of establishing annual values for items such as machines and buildings that are not bought and sold frequently become difficult.**
- **This method is, however, useful in case of livestock in the early years of life i.e., in the appreciating phase.**

b) Straight line method:-

$$\text{Depreciation} = \frac{\text{Purchase price of the assets} - \text{the junk value}}{\text{No. of useful years of life (Expected life)}}$$

- **Junk value, salvage value, scrap value or residual value**
= the amount that an asset is estimated to be worth at the end of its useful life)
- E.g., Suppose a tractor costs Rs. 24,000 when new and expected to last 10 years. The junk value of the tractor after 10 years would be Rs. 4,000/- then the annual depreciation would be
$$= \frac{24,000 - 4,000}{10} = \frac{20,000}{10} = \text{Rs. } 2,000/\text{ year}$$

c. Diminishing balance method:-

- Depreciation can be computed by establishing a constant percentage rate of depreciation and using this rate each year to the remaining depreciated value of the article.
- The fixed rate is applied to the balance until the salvage value is reached and no further depreciation is possible.

Suppose, annual depreciation is calculated by this method at the rate of 20% for a tractor costing Rs. 24,000. These results are shown in table 7.1.

We go on taking 20% of the remaining balance until salvage value is reached, as in this case about Rs. 4033/-.

Table 7.1: Calculating of annual depreciation by diminishing balance method

Value at the beginning of year	Annual depreciation	Remaining balance
1 st year Rs. 24,000	(20% of Rs. 24000) = Rs. 4800	(Rs. 24000 – 4800) = Rs. 19200
2 nd year Rs. 19200	(20% of Rs. 19200) = Rs. 3840	(Rs. 19200 – 3840) = Rs. 15360
3 rd year Rs. 15360	(20% of Rs. 15360) = rs. 3072	(Rs. 15360 – 3072) = Rs. 12288
4 th year Rs. 12288	(20 % Rs. 12288) = Rs. 2457.60	(Rs. 12288 – 2457.60) = rs. 9830.40
5 th year Rs. 9830.40	(20% of 9830.40) = Rs. 1966.08	(Rs. 9830.40 – 1966.08) = Rs. 7864.32
6 th year Rs. 7864.32	(20% of Rs. 7864.32) = Rs. 1572.86	(Rs. 7864.32 – 1572.86) = Rs. 6291.46
7 th year Rs. 6291.46	(20% of Rs. 6291.46) = Rs. 1258.29	(Rs. 6291.46 – 1258.29) = Rs. 5033.17

d) Sum of the years digits methods:-

Annual amount of depreciation=

original cost of assets - junk value * Remaining years of useful life/ Sum of the digits from one through useful life

- Sum of the digits can be computed quickly from the equation that is $n(n+1)/2$.

Example

Original cost of a plough = Rs. 500

Junk value = Rs. 50

Useful life = 5 years

$$\text{Sum of the digits of useful life} = \frac{5(5+1)}{2} = 5 \times 3 = 15$$

Sum of the digits of useful life can also be computed by adding all the digits from 1 to useful life.

$$5 + 4 + 3 + 2 + 1 = 15$$

Computation of depreciation by sum of the years digits method

Years	Rate	Amount (Rs.)	Book value (Rs.)
1	$\frac{5}{15}$	$(500 - 50) \times \frac{5}{15} = 150$	350
2	$\frac{4}{15}$	$(500 - 50) \times \frac{4}{15} = 120$	230
3	$\frac{3}{15}$	$(500 - 50) \times \frac{3}{15} = 90$	140
4	$\frac{2}{15}$	$(500 - 50) \times \frac{2}{15} = 60$	80
5	$\frac{1}{15}$	$(500 - 50) \times \frac{1}{15} = 30$	50
Total		450	

Total annual amount of depreciation + Junk value = Original value

$$\text{Rs. } 450 + 50 = \text{Rs. } 500$$

The annual amount of depreciation is declining from Rs. 150 in the first year to Rs. 30 in the fifth year. The same analogy which is presented in diminishing balance method holds well here also for charging different amounts of annual depreciation with every passing year.

Definition, types and characteristics of good farm planning:-

Characteristics of a Good Farm Plan:-

1. Should provide for efficient use of farm resources such as land, labor, power and equipment
2. Should have balanced combination of enterprises
3. Should avoid excessive risks
4. Should utilize the farmer's knowledge, training and experience
5. Should give considerations to efficient marketing facilities.
- 6 . Should provide program for obtaining , using and repaying the credit
- 7 Should provide modern agricultural practices.

Importance of farm planning

- Enable farm entrepreneurs to achieve the objectives in a more organized manner;
- Enable careful examination of the existing resources,
- efficient allocation and reduces wastes;
- Help input and output sell,
- Calculate estimated farm incomes,
- Arrangement of required credit ahead of time;
- Helps preventing stress and strains in the farming business;
- Planning eases cash income in a regular way;
- **“In sum, it is money saving device, cheaper to commit mistakes on the paper than in the business”.**

Definition of farm budgeting

- Farm budgeting is a process of estimating costs, returns and net profit of a farm or a particular enterprise.

Types of farm budgeting (complete, partial and enterprise budgeting)

1. Partial Budgeting:-

- It refers to the estimating the out come or returns for a part of the business, i.e., one or few activities.
- Partial budgeting may be well used as an aid in full budgeting.
- It is easy, quick and simpler compared to complete budgeting.
- Partial budgeting helps in full/complete budgeting of a farm.

The format of partial budget Consists of 4 elements:-

- 1. Additional costs**
- 2. Reduced revenue/Income.**
- 3. Additional Income**
- 4. Reduced costs**

Limitation of partial budgeting:-

- **Partial budgeting can only compare the present management plan with one alternative at a time.**
- **If there are many alternatives to consider, the manager will need to develop many partial budgets to compare many alternatives.**
- **Also, partial budgeting uses one set of price and yield expectations. If these parameters become variable, then cash flow may be problem in some years.**

B. Complete Budgeting:-

- It is also K/a **total budgeting**.
- It refers to **preparing budgets for the entire farm plan**.
- In other words, it **refer to making a budget for the farm as whole or for all decisions as one enterprise.**
- The complete budgeting considers **all the crops, livestock, fisheries, horticultural crop, methods of production, aspects of marketing in a farm and it estimates their costs and returns.**

C. Enterprise Budgeting:-

- It is a financial management tool used in agriculture and other business sectors to assess the profitability and financial performance of a specific enterprise within a larger operation.
- An enterprise, in this context, refers to a specific crop, livestock, or other agricultural product or activity.
- The main purpose of enterprise budgeting is to estimate the costs and revenues associated with a particular agricultural operation to make informed decision and evaluate its economic feasibility.

Sr.No.	Complete Budgeting	Sr.No.	Partial Budgeting
1	The whole farm is considered as one unit	1	It is adopted when a minor aspect of farm organization is touched.
2	All the aspects like crops, livestock, machinery and other assets are considered	2	It is practiced with in the existing resources structure of the farm.
3	Both fixed and variable costs are calculated for working out costs and returns.	3	Only variable costs are considered.
4	Net income is estimated by deleting fixed costs and costs of variable inputs from the value of the product	4	Net income is estimated by deleting only cost of variable inputs from the value of the product.
5	It requires more efforts and time for preparation.	5	It requires relatively less efforts and time for preparation.

Components of enterprise Budgeting:-

- 1. Revenue Estimate:-
- 2. Cost Estimate:-
- 3. Net income calculation:- $R - C$
- 4. Break even Analysis:- total Cost = total Revenue
- 5. Sensitivity Analysis:- used to illustrate and assess the level of confidence that may be associated with the conclusion of an economic evaluation
- 6. Risk Assessment:-

Benefits of Enterprise Budgeting:-

1. Informed decision making:-
2. Resource allocation:-
3. Performance Evaluation:-
4. Risk Management:-
5. Business Planning:-

Steps of farm planning and Budgeting:-

- 1. Specification of the technical co-efficient of production:** A farm planner should investigate all the information from reliable sources(organization or agricultural technicians) to learn some of the improved farming method and knowledge of various input-output factors.
- 2. Specification of appropriate prices:-** While making a farm plan, a farm manager can never be 100% sure of what the future price will be, as there are so many uncertainty in the field of agriculture. So, the price of the farm products will have to be specified, by looking at the last year's average price, future expectations and nature of changing technology.
- 3. Preparation of enterprise profitability chart:-** Farm manager will have to make evaluations of the alternative opportunities which can give best output from utilization of his/her farm resources.
- 4. Preparation of the farm map:-** A farm manager needs to prepare a farm map on a chart paper and use it to further formulate the plan accordingly. The farm map should represent all physical features of the farm such as, topographical feature, irrigation facilities, water channel, buildings, soil type, etc.
- 5. Inventory of limited resources:-** A farm manager should prepare a complete list of the farm resources(land, labor, animals, building, machinery, capitals, etc). This helps to assess the limitations of farm resources and their production capabilities.

Contd,

- 6. Examine the existing farm plan:-** While preparing farm plan and before implementing the plan is always a wiser step to recheck the farm plan and look any weak points in that plan.
- 7. Locate the weakness of the present plan:-** After careful and thorough analysis of the farm plan, a farmer will be able to locate some weakness in that plan. A farm manager must find alternative plan that overcomes the weakness of the existing plan.
- 8. List out the risks to agricultural production on that farm:-** A farm manager knows all the risks related to his farm. Risks can be avoided through gaining sufficient knowledge about those possible problems however uncertainty can't avoided by knowledge.
- 9. Prepare the alternative plans:-** An intelligent farm manager always has alternative plan if any things goes wrong in his/her farm.
- 10. Analysis of the alternative plans :-** A farm manager must check the vulnerability of his/her alternate plan too. If plan need to be changed a/cc to introduction of new technologies, then the farmer should do it, if it will give him higher returns.
- 11. Implementing the plan:-** When every things is all set, a farm manager should implement his plan in order to achieve his/her farm objectives.

VALUE CHAIN

- A value chain is a concept used to describe the series of activities involved in the production and delivery of a product or service, from its conception to its final consumption by the end-user.
- It includes all the processes involved in creating and delivering a product or service, including research and development, design, production, marketing, sales, distribution, and customer support.
- The value chain concept emphasizes that value is added at each stage of the process, and that the ultimate goal is to create value for the end-user.

What is value chain governance?

- Value chain governance refers to the way in which the various actors involved in a value chain coordinate and govern their activities to achieve common goals.
- It involves the management and coordination of the relationships between buyers, suppliers, and other stakeholders within the value chain to create value for all parties.
- Effective value chain governance is important for achieving efficiency, quality, and sustainability in the production and delivery of goods and services.

What do you understand by value chain approach?

- The value chain approach is a way of analyzing and understanding how value is created and distributed within a particular industry or sector.
- It is based on the idea that a product or service goes through a series of value-adding activities or stages from the production of raw materials to the delivery of the final product to the end consumer.
- The value chain approach involves breaking down the entire process into smaller, more manageable parts and analyzing each part to identify ways to increase efficiency, reduce costs, and improve quality.
- This approach can be applied to various industries, including agriculture, manufacturing, and services.

The value chain approach offers several advantages / importance, including:

- **Increased efficiency:** By analyzing the entire value chain, businesses can identify inefficiencies and areas for improvement. This can help to reduce costs and increase productivity.
- **Improved quality:** By focusing on every aspect of the value chain, businesses can ensure that the final product meets or exceeds customer expectations.
- **Enhanced competitiveness:** By streamlining the value chain, businesses can gain a competitive advantage in the market.
- **Better risk management:** By understanding the value chain, businesses can identify potential risks and develop strategies to mitigate them.
- **Increased profitability:** By optimizing the value chain, businesses can improve profitability through cost reduction, improved product quality, and increased sales.

- **Greater collaboration:** The value chain approach emphasizes collaboration between different actors in the chain, including producers, processors, distributors, and retailers. This can lead to more effective partnerships and better coordination.
- **Improved social and environmental outcomes:** The value chain approach can help to identify opportunities for improving social and environmental outcomes, such as by reducing waste or supporting local communities.
- **Increased transparency:** By mapping the value chain, businesses can gain a better understanding of the entire process, including the origin of raw materials, production methods, and distribution channels. This can lead to greater transparency and accountability.

What are the features of value chain approach?

- Focus on the entire value chain
- Analysis of value-adding activities
- Identification of opportunities for improvement
- Focus on collaboration
- Integration of technology

What is value chain upgrading?

- **Process upgrading:** This involves improving the efficiency and effectiveness of the production process. This can be achieved through the adoption of new technologies, improved production methods, and better management practices.
- **Product upgrading:** This involves improving the quality and features of the product or service. This can be achieved through product design, innovation, and the use of high-quality inputs.
- **Functional upgrading:** This involves adding value to the product or service by integrating new functions or services. **For example**, a company may add a new service, such as maintenance or repair, to their existing product offering.
- **Network upgrading:** This involves improving the relationships and collaboration between different actors in the value chain. This can include strengthening supplier relationships, improving distribution channels, and building partnerships with other businesses.

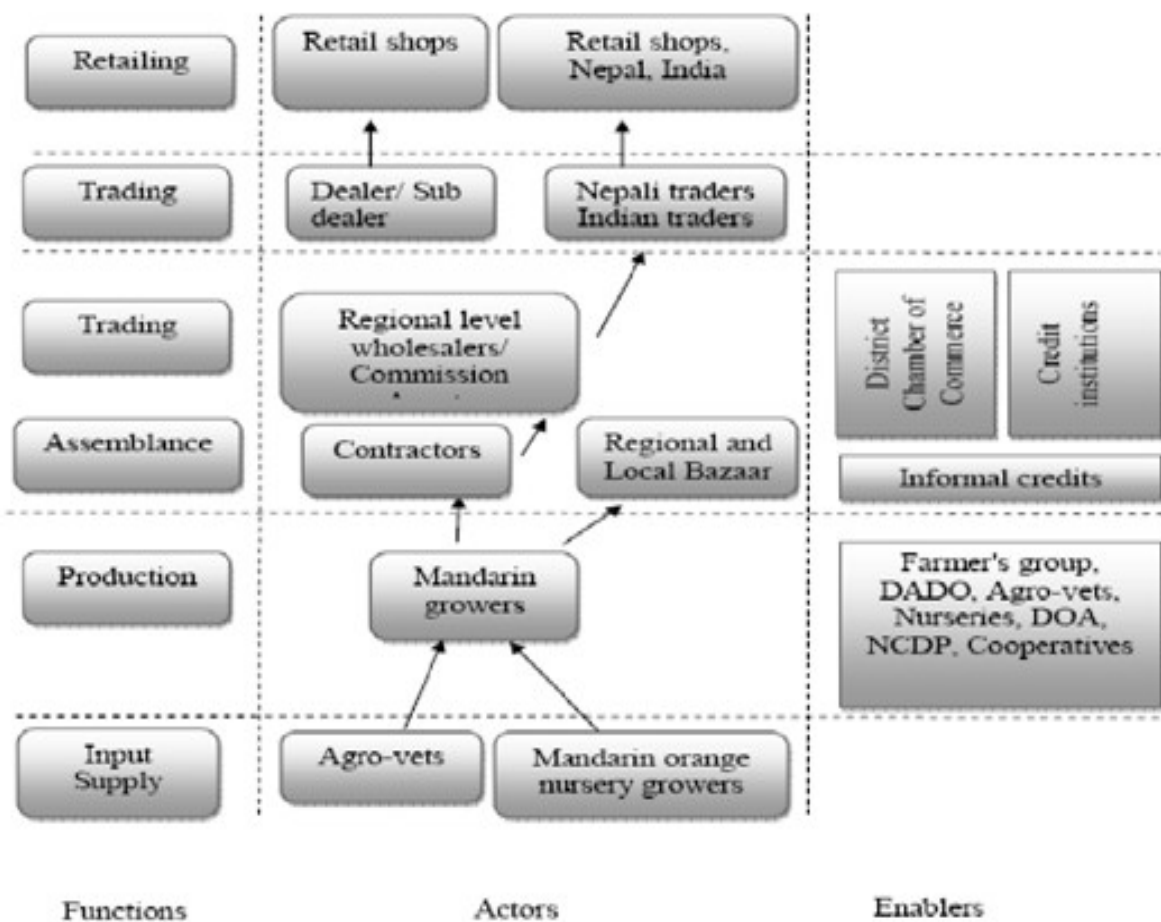


Fig: Mandarin value chain of Nepal

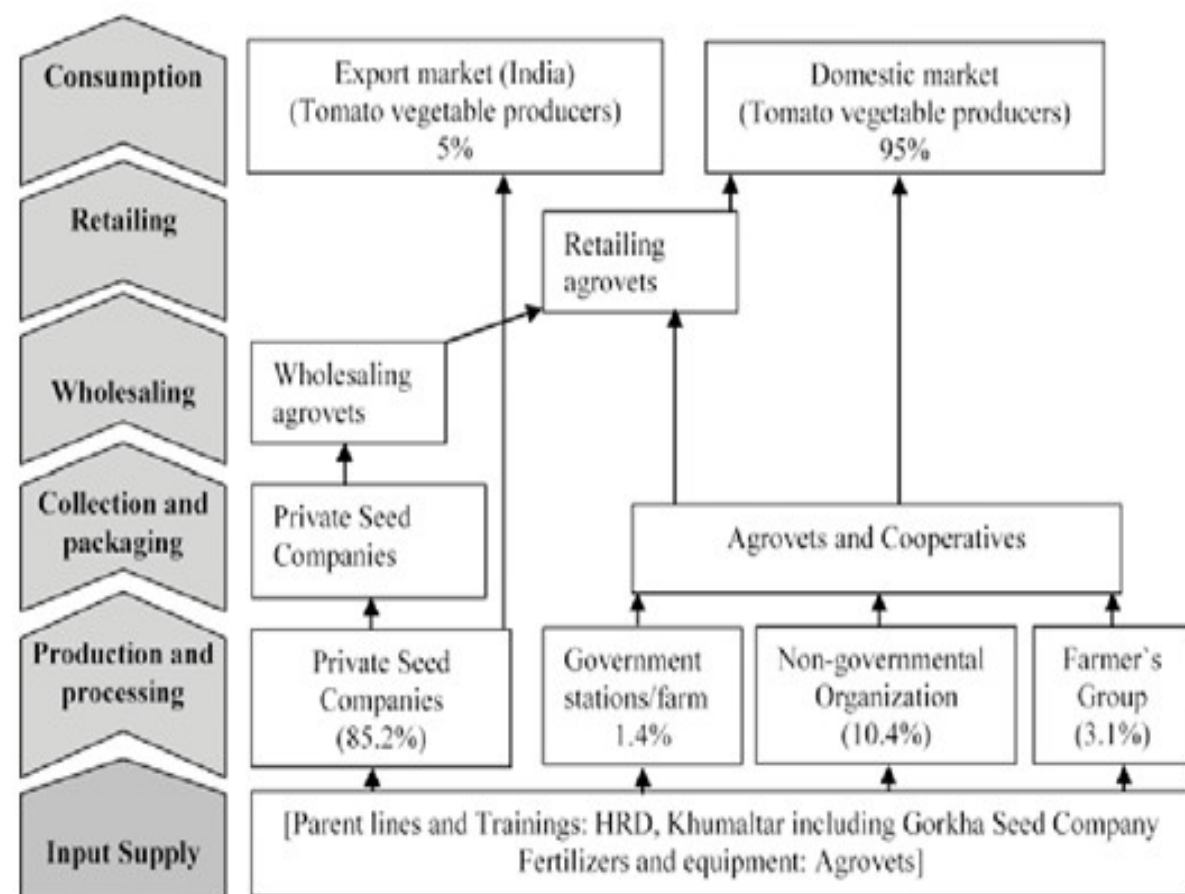
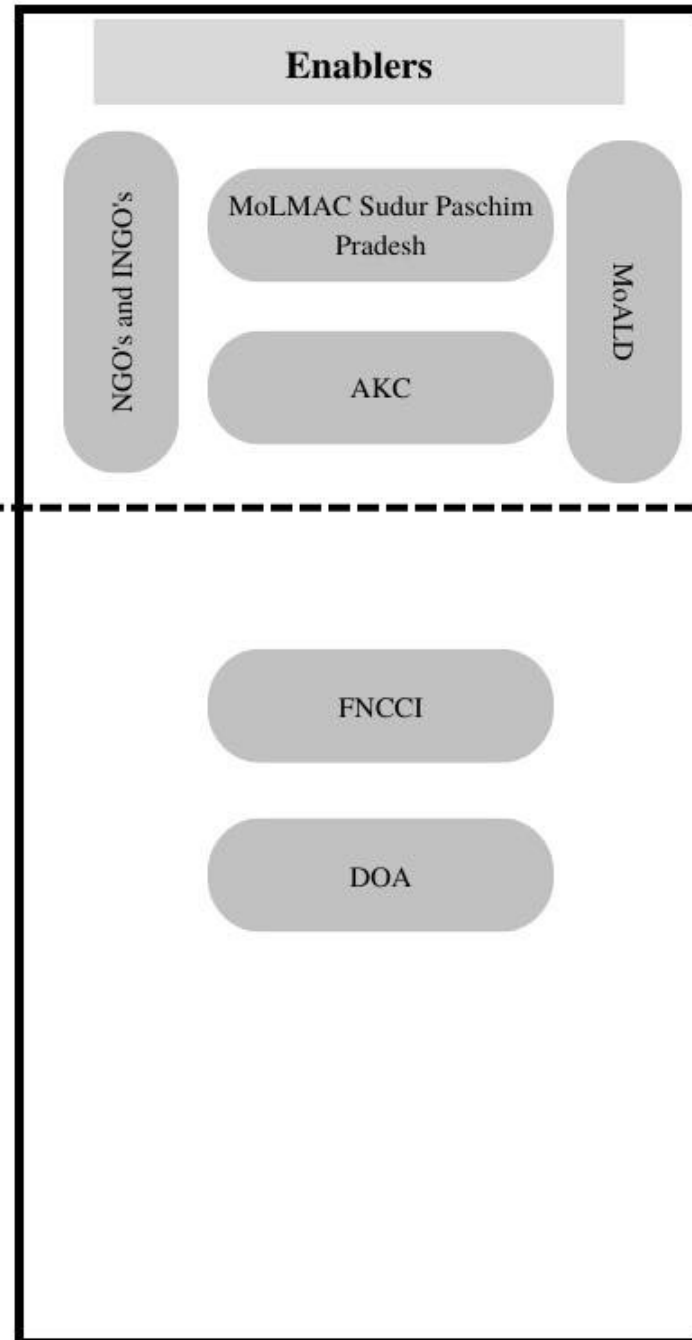
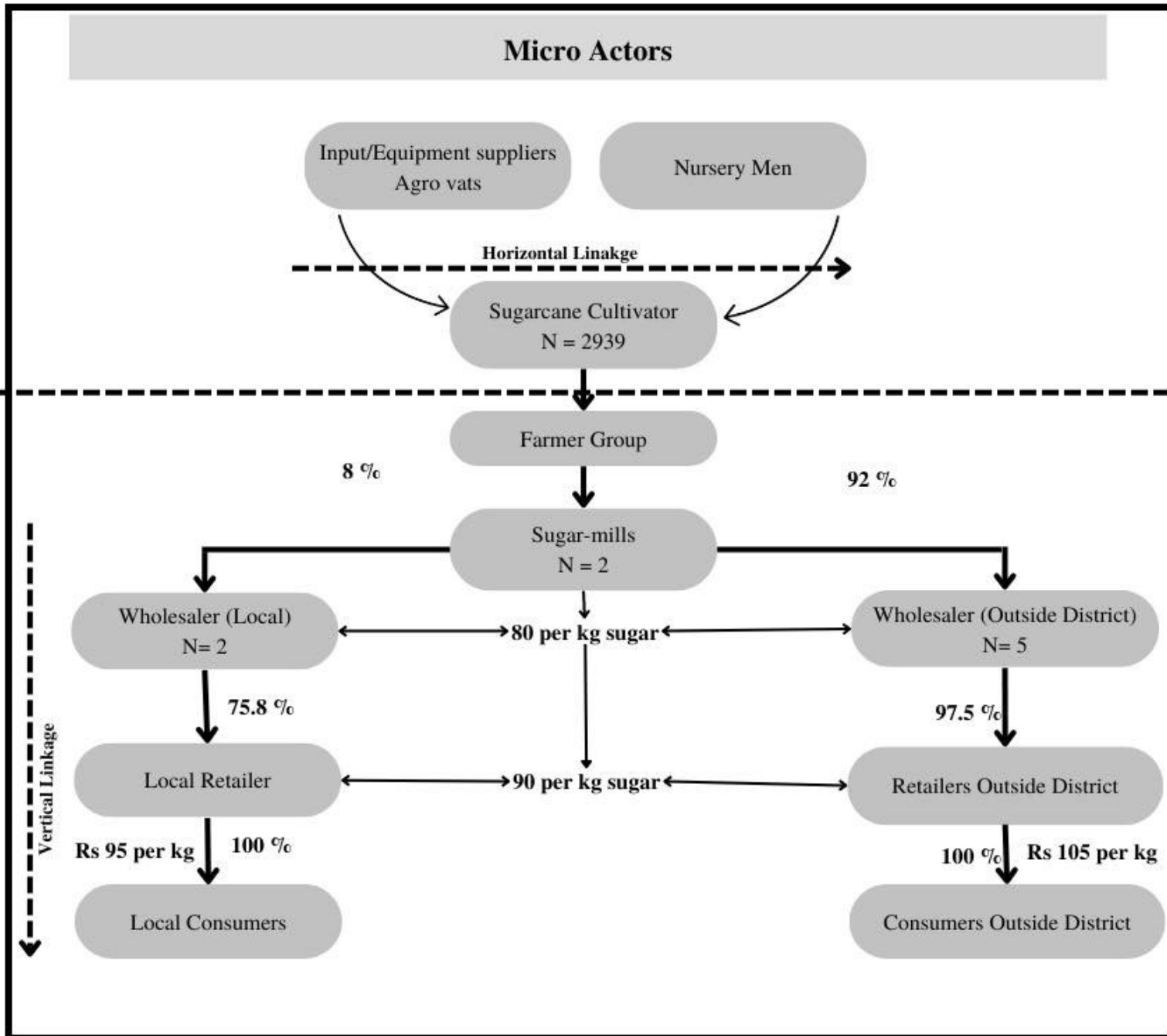
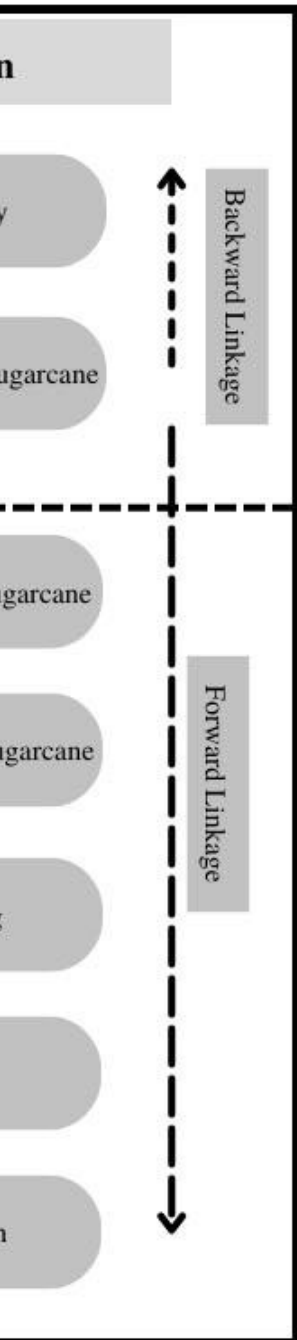


Fig: Vegetable value chain of Nepal



- **Value Chain Stages for Fruit Crop Production in Nepal**
- **1. Input Supply**
- Key Actors: Seed suppliers, agro-vet shops, nurseries, fertilizer companies, irrigation equipment suppliers, government agencies, and cooperatives.
- Inputs: High-quality seeds, grafted plants, fertilizers, pesticides, irrigation systems, and farming tools.
- **2. Production**
- **Key Actors:** Farmers (smallholder, medium-scale, and commercial), extension service providers, and cooperatives.
- **Activities:**
- Land preparation
- Planting
- Fertilizing and irrigating
- Pest and disease management
- Harvesting

3. Post-Harvest Handling

Key Actors: Farmers, traders, and cooperatives.

Activities: Sorting, grading, washing, and basic packaging.

4. Processing and Value Addition

Key Actors: Food processing industries, SMEs, and cooperatives.

Activities: Drying, juicing, canning, freezing, and making jams, jellies, or pickles.

5. Marketing and Distribution

Key Actors: Wholesalers, retailers, exporters, cooperatives, and online platforms.

Markets: Local markets, urban centers, international export markets.

6. Consumption

Key Consumers: Households, food industries, and export buyers.

Value Chain Map Description

1. Core Chain Activities:

Input → Production → Post-harvest → Processing → Distribution → Consumption

2. Supporting Services:

Extension services, financial institutions (loans, insurance), research centers (developing resilient varieties), transport/logistics companies, and government programs.

3. Enabling Environment:

Government policies, subsidies, export regulations, and international trade agreements.

The value chain maps of different crops vary based on the unique characteristics of each crop, including their production requirements, processing potential, market demand, and value addition opportunities. Here are key differences across value chain maps for various crops:

1. Input Supply

Cereal Crops (e.g., rice, wheat):

Inputs: High-yield seeds, fertilizers, irrigation systems.

Emphasis on large-scale mechanization and water-intensive inputs.

Fruit Crops (e.g., apples, mangoes):

Inputs: Grafted plants, saplings, organic fertilizers, and pest control.

More reliance on manual labor and horticultural expertise.

Vegetable Crops (e.g., tomatoes, leafy greens):

Inputs: High-turnover seeds, greenhouse materials, frequent use of pest management tools.

Requires short-cycle production materials.

2. Production

Cereal Crops:

Mechanized farming for large-scale production.

Uniform planting and harvesting processes.

Fruit Crops:

Long gestation periods, perennial management.

Specialized care for orchard development and pruning.

Vegetable Crops:

Intensive, high-frequency planting.

Smaller land areas with quicker harvest cycles.

3. Post-Harvest Handling

Cereal Crops:

Focus on drying, storage, and bulk transportation.

Fruit Crops:

Emphasis on sorting, grading, ripening chambers, and cold storage.

Vegetable Crops:

Sorting and packaging to preserve freshness, with quick delivery to markets.

4. Processing and Value Addition

Cereal Crops:

Milling, polishing, and packaging are the primary processing steps.
Limited diversification beyond staples like flour or rice.

Fruit Crops:

High potential for value addition through juicing, drying, canning, and making jams.

Vegetable Crops:

Minimal processing (fresh packs), with some focus on frozen or pickled products.

5. Marketing and Distribution

Cereal Crops:

Large-scale wholesale markets or government procurement.

Fruit Crops:

Domestic and export markets; higher dependence on cold chains and niche markets.

Vegetable Crops:

Direct market access, local markets, or online platforms due to perishability.

6. Supporting Services

Cereal Crops:

Heavy reliance on agricultural subsidies and storage infrastructure.

Fruit Crops:

Requires advanced horticulture research, cold storage, and export facilitation.

Vegetable Crops:

Focus on drip irrigation, high-tech greenhouses, and pest management support.

7. Environmental Impact

Cereal Crops:

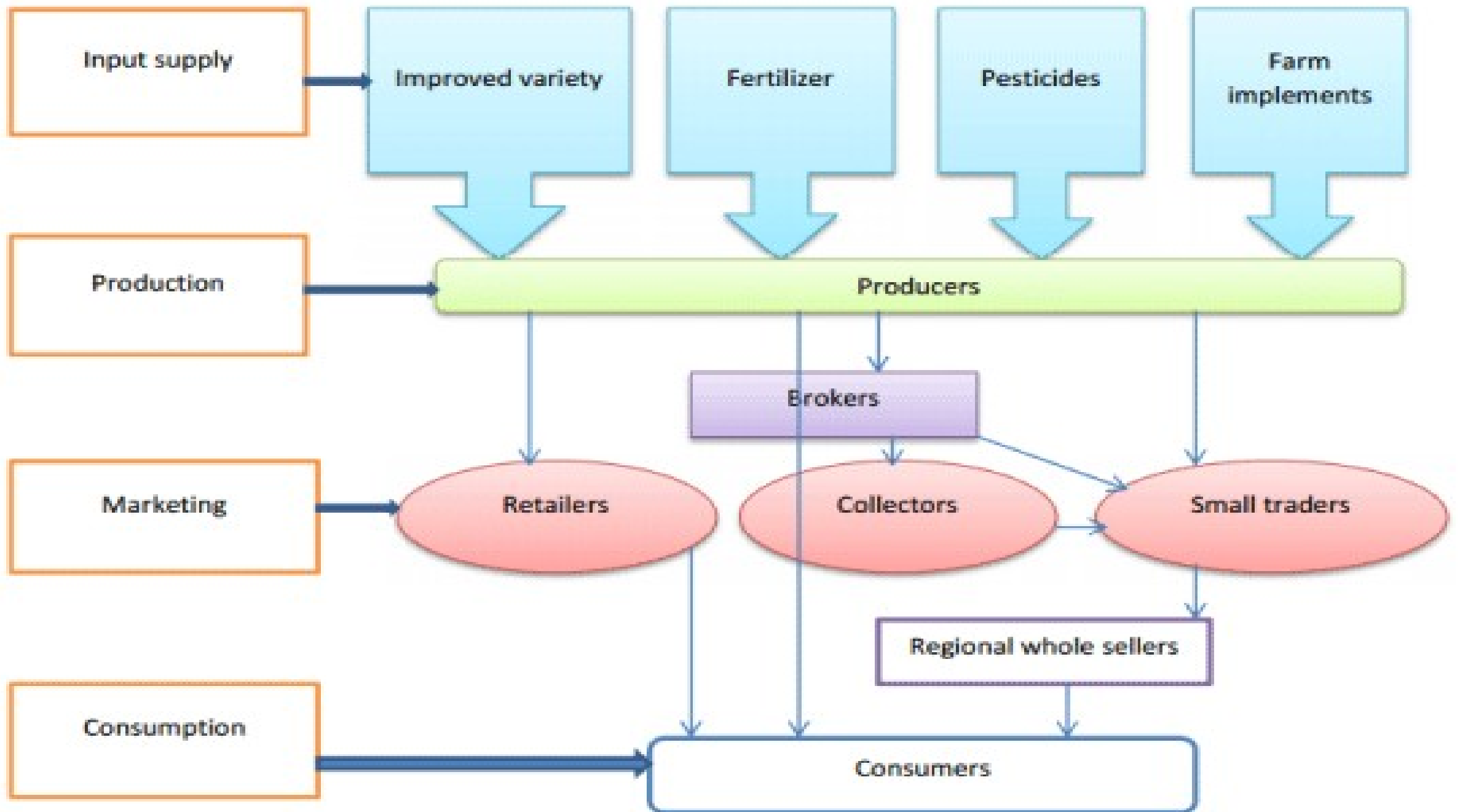
High water and energy consumption; mechanization emissions.

Fruit Crops:

Land-intensive but less water-intensive if managed organically.

Vegetable Crops:

Moderate water use but high demand for quick inputs and short turnover cycles.



Act and Actors of value chain

- **Suppliers** : AKC , Agrovets,Nursery man
- **Producer**: Farmers or Farmer groups
- **Collector**: Farmer group and cooperatives
- **Processing**: Factory
- **Wholesaling** : Wholesalers
- **Retailing** : Retailers
- **Consumption**: Local,Provincial,International Consumer
- **Backward Linkage** : Between Input Suppliers and Producers
- **Forward Linkage** : Collector to Consumer

