AGRICULTURAL CROPS PRODUCTION

AFA-1E

CROPS CLASSIFICATION

A crop is a plant that can be grown and harvested extensively for profit or subsistence.

CROP

Classification of Crops

Classification of species is important for these reasons:

- To get acquainted with crops.
- To understand the requirement of soil & water different crops.
- To know adaptability of crops
- To know the growing habit of crops.
- To understand climatic requirement of different crops.
- To know the economic produce of the crop plant & its use.
- To know the growing season of the crop
- Overall to know the actual condition required to the cultivation of plant.

GENERAL CLASSIFICATIONS

ACCORDING TO GROWTH HABIT

HERBS

VINES

SHRUBS

TREES

Succulent plants with soft stems.

HERBS

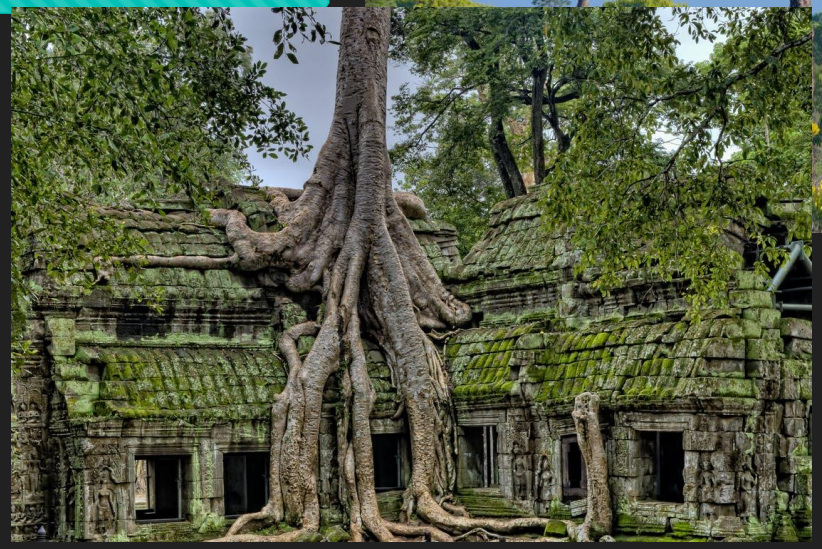
Succulent or woody plants without self-supporting stems.

VINES

May have several main branches with no trunk and rarely grows higher than 5m.

SHRUBS

With single central stem to which branches are attached, usually higher than shrubs.



TREES

ACCORDING TO LIFE CYCLE

ANNUALS

BIENNIALS

PERENNIALS

Complete their cycle in 1 year or less.

ANNUALS

Plants ordinarily require two years or at least 2 growing seasons with a dormant period between growth stages to complete their life cycles.

BIENNIALS

Plants that do not die after flowering but live from year to year.

PERENNIALS

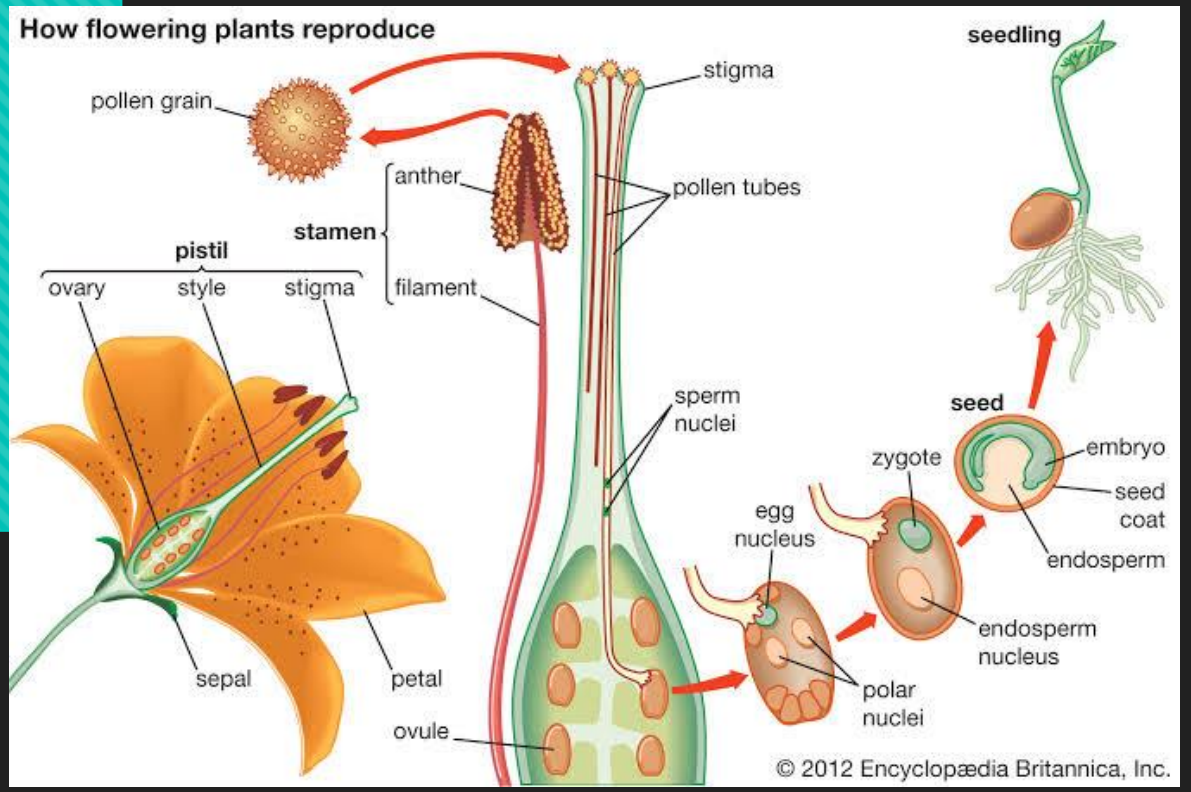
ACCORDING TO MODE OF REPRODUCTION

SEXUAL

ASEXUAL

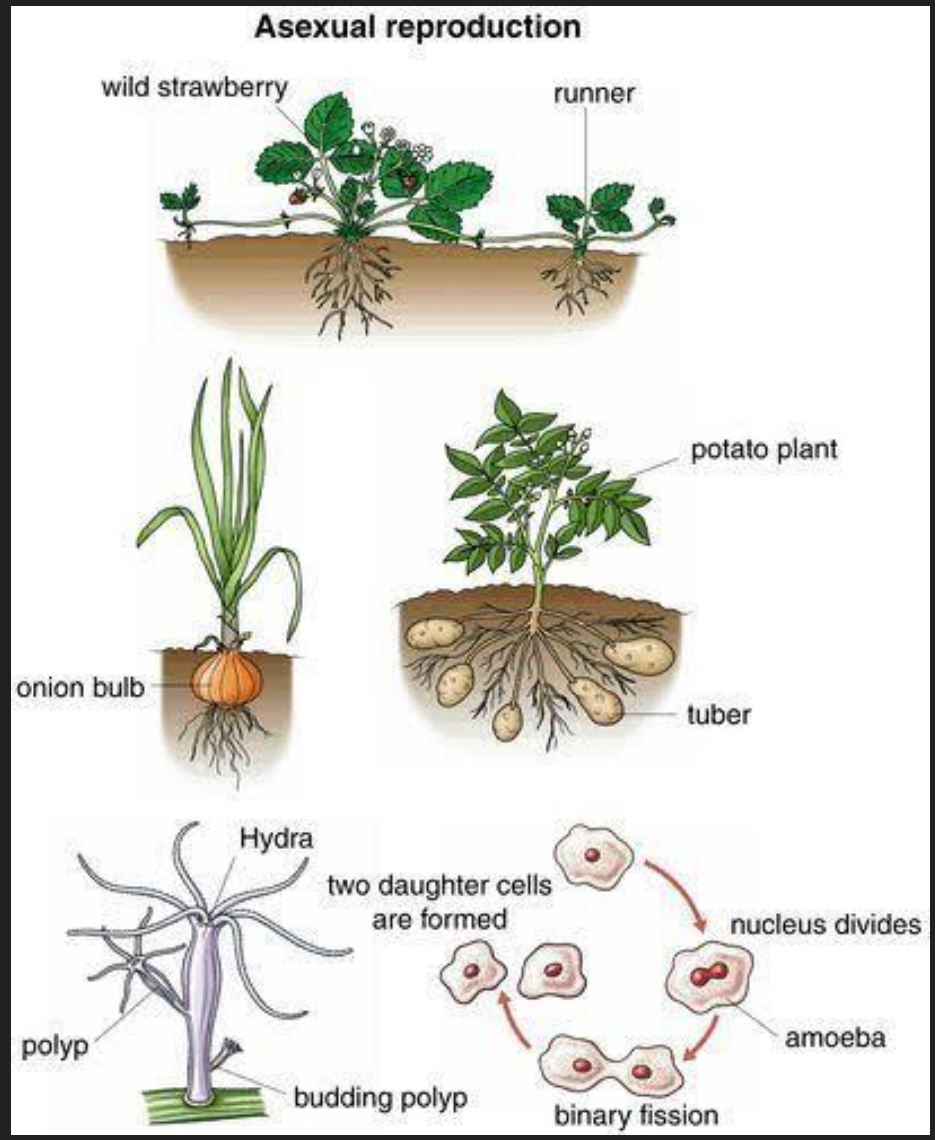
produces offspring by the fusion of gametes, resulting in offspring genetically different from the parent or parents.

SEXUAL



Plants that are produced by any vegetative means not involving meiosis and the union of gametes.

ASEXUAL



ACCORDING TO ROOT DEPTH

- Shallow root crops
- Intermediate crops
- Deep root crops

Shallow rooted crops

the root system of these crops extends in the soil to a depth of one meter.

Intermediate crops

- the depth of the root system of these crops ranges from 1- 1.5 meter.

Deep root crops

- the root system of these plants extends in the soil to a depth more than 1.5 meter.

Crop Rooting Depth

Crop	Depth in feet	Crop	Depth in feet
Alfalfa	4 to 6	Grapes	3 to 5
Almonds	2 to 4	Hops	3to 5
Apricots	2 to 4.5	Ladino clover and grass mix	2
Artichokes	2 to 3	Lettuce	1 to 2
Asparagus	6	Melons	3 to 4
Beans (dry)	2	Milo	4
Beans (green)	2	Oats	2-3
Beans (lima)	4	Olives	3-4
Beets (sugar)	3 to 5	Onions	1 to 2
Beets (table)	2 to 3	Pasture grasses (annual)	2
Broccoli	2	Pasture grasses (perennial)	2 to 3
Bush berries	3 to 5	Peas	1 to 2
Cabbage	2	Peaches	2 to 4
Cantaloupes	2 to 4	Pears	3 to 4
Carrots	2 to 3	Prunes	3 to 4
Cauliflower	2	Peppers	2 to 3
Celery	2	Potatoes (Irish)	2 to 3
Chard	3	Potatoes (sweet)	2 to 3
Cherries	2.5 to 4	Pumpkins	3 to 4
Citrus	2 to 4	Radishes	1
Corn (sweet)	3	Spinach	1
Corn (field)	2 to 4	Squash (summer)	1 to 2
Cotton	3.5	Strawberries	1 to 2
Cucumber	2	Sudan grass	3 to 4
Eggplant	2	Tomatoes	2 to 4
Figs	2 to 4	Turnips	1.5 to 2.5
Garlic	1 to 2	Walnut	5 to 7
Grain and flax	2 to 3	Watermelons	2 to 3

Source: Chapter 11, "Sprinkler Irrigation," Section 15, Natural Resources Conservation Service National Engineering Handbook

SPECIAL TYPES

PARASITES

EPIPHYTES

SAPROPHYTES

Parasitic, sucking roots.

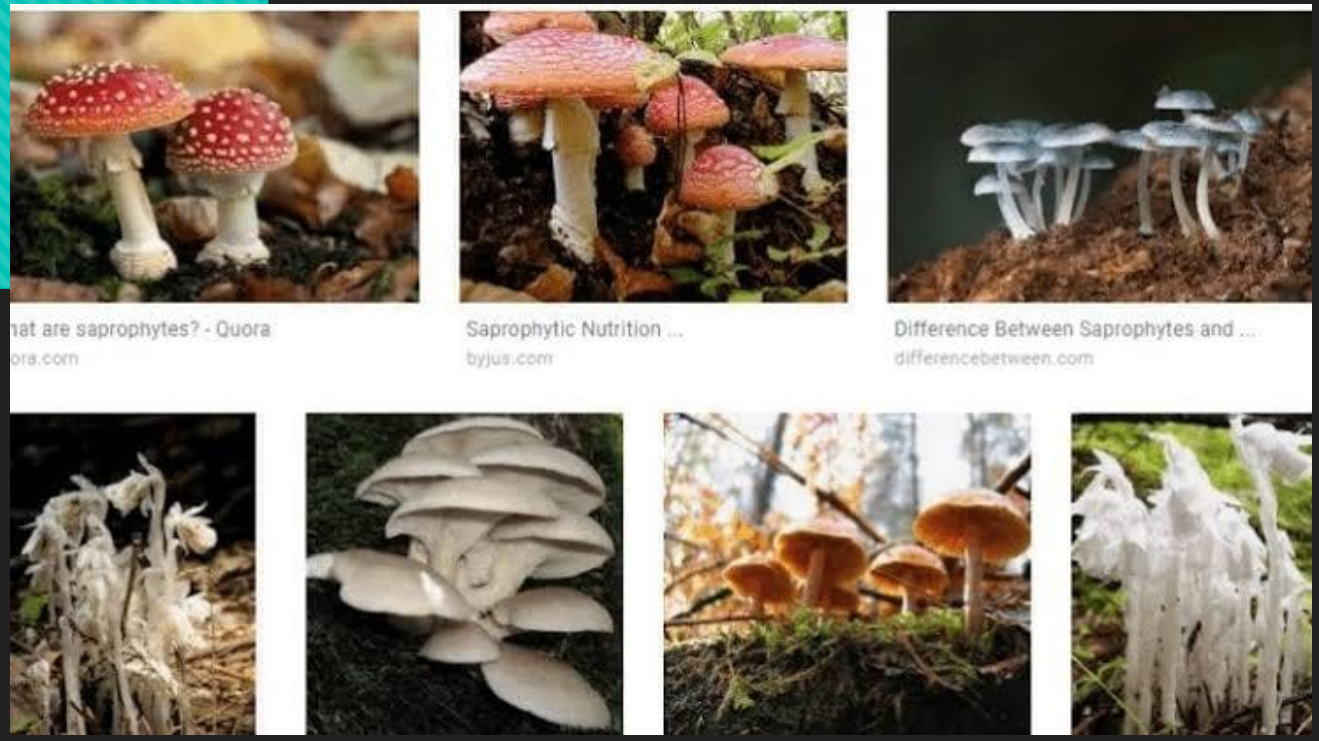
PARASITES

Grow upon other plants but not parasitic.

EPIPHYTES

Grow in places rich in decaying organic substances.

SAPROPHYTES

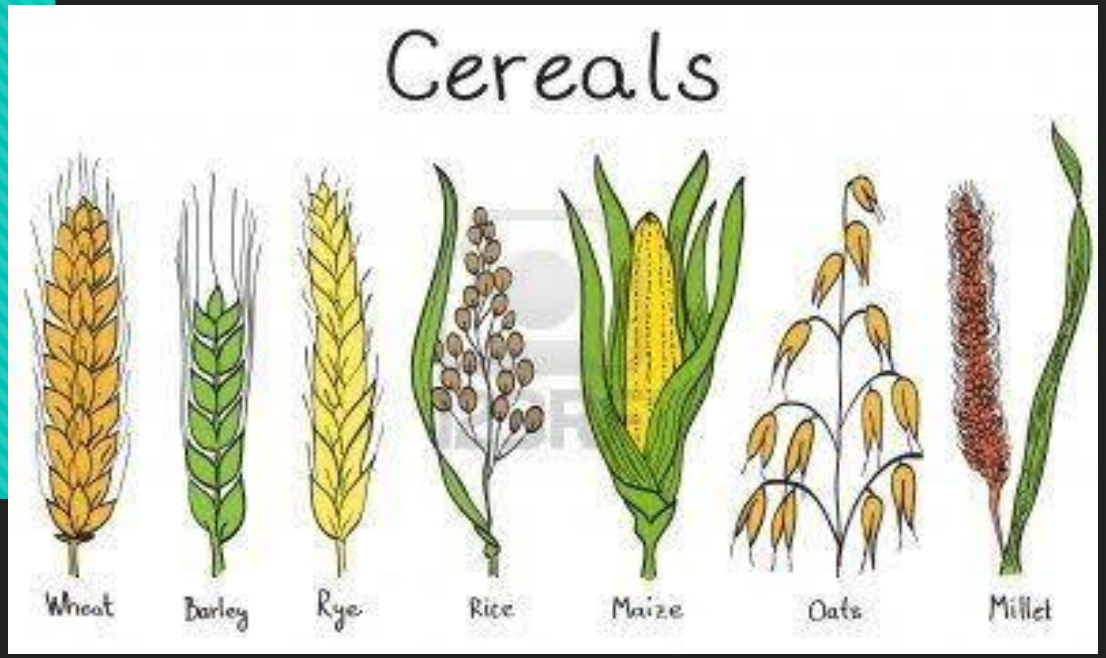


BASED ON PURPOSE

- Cereals
- Legumes
- Root crops
- Fiber crops
- Oil crops
- Sugar crops
- Pasture/forage crops
- Beverage crops
- Spices, condiments, essences
- Latex and resins
- Medicinal and poison crops
- Vegetables
- Fruits
- Ornamentals

Grown for their grains

CERIALS/GRAIN CROPS



For pods and seeds

LEGUMES

For enlarged roots/ tuberous roots

ROOT CROPS

Grown for their fibers used in textile, twines, cordage, sacks, bags, etc.

FIBER CROPS

Grown for their oil content

OIL CROPS

Grown for their sugar content.

SUGAR CROPS

Used for roughage source of animals.

PASTURE/FORAGE CROPS

Used for brewing non-alcoholic drinks.

BEVERAGE CROPS

Used to provide specials scent, flavor, color to food, soaps, and body dressing

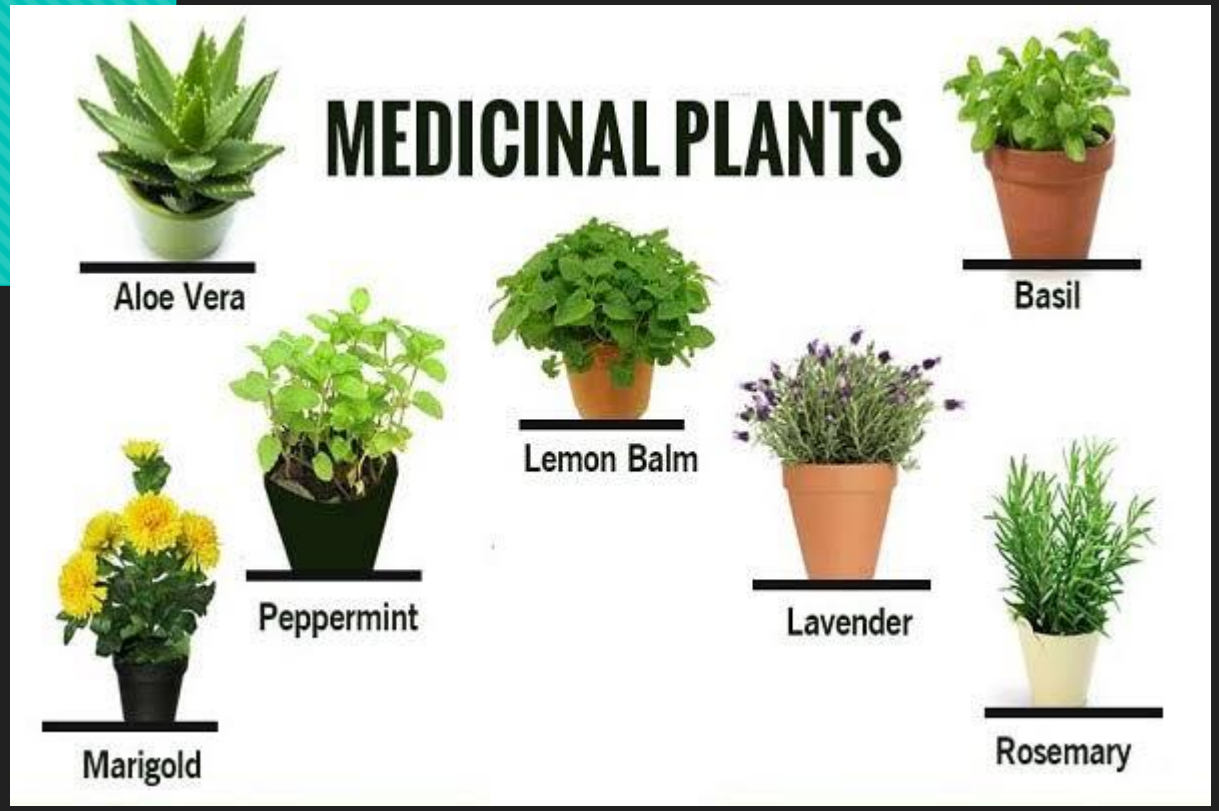
SPICES, CONDIMENTS, ESSENCES

Used for extracting sap from trunk/stem.

LATEX AND RESINS

With curative, laxative and pesticidal properties.

MEDICINAL AND POISON CROPS



Usually eaten with staple crops, further classified according to similarities in the method of culture.

VEGETABLES

ROOT

Radish, carrot

LEAFY

Spinach, lettuce

STEM

Celery, asparagus

FLOWERS

Squash, katuray

FRUIT

Okra, tomato, eggplant

Edible botanical fruits usually used for dessert which may be eaten raw, cooked or in processed form.

FRUITS

Plants cultivated mainly for their aesthetic value, further classified according to their special uses.

ORNAMENTALS

- CUTFLOWERS
- CUT-FOLIAGE
- FLOWERING POT PLANTS
- LANDSCAPE PLANTS
- TURF

Grown for its flowers

CUTFLOWERS

Provides background in floral arrangement

CUT-FOLIAGE

Plants grown in containers for their flowers usually used for display.

FLOWERING POT PLANTS

For landscaping purposes

LANDSCAPE PLANTS

Used in lawns or greens

TURF

SPECIAL-PURPOSE

Green manure

Cover crop

Companion crop

Catch crop

Soilage

silage

A crop is plowed under while still green and growing to improve the soil.

GREEN MANURE

Any crop grown to provide soil cover, prevent soil erosion by wind, or water, improve soil and control weeds.

COVER CROP

Crop sown with another crop and harvested separately.

COMPANION CROP

A short-seasoned crop grown immediately after the failure of the main crop to utilize residual resources.

CATCH CROP

Grasses that are grown, cut and directly fed to animals.

SOILAGE

Grasses grown, cut, fermented, and preserved before being fed to animals.

SILAGE

Botanical Classification

- is based upon similarity of plant parts and flower structure.

4 Divisions of phyla

Thallophyte

Spermatophyte

Pteridophyte

Bryophyte

Thallophyte

- Lower forms of plants
- Do not have roots, stems or leaves
- This include algae, bacteria and fungi

Bryophyte

- Small green plants higher in scale than thallophyte
- Grown in wet places and widely distributed worldwide.
- None of them are cultivated for human use.
- They include mosses, liverworts and hornworts

Pteridophyte

- Green plants with vascular tissues, roots, leaves and stems.
- They do not have flowers and seeds.
- They reproduce themselves by spores.
- They do not have agronomic value except ornamental.
- They include ferns.

Spermatophyte

- Most highly developed forms of plant life.
- Produce seeds and bear true fruits.
- Further divided into two subdivisions:
  - Gymnosperms
  - Angiosperms
    - Monocotyledons
    - Dicotyledons

Gymnosperms

- Plants reproduced by a complex structure known as seed, an embryo plant provided with a supply of food and covered with a protective coat.
- Have high economic value

Angiosperms

- Highly specialized pants reproducing by seed within the ovary.
- Include major cultivated crops for economic importance as food, feed and fiber.
- Examples are wheat and corn.

Monocotyledons

- These plants have a single cotyledon in the seed.
- This belongs to the grass family Gramineae.
- Examples are Maize, wheat, sorghum and barley.

Dicotyledons

- These plants have two cotyledons in the seed.
- These plants are usually broad leaved.
- Examples are soybean, cotton and tobacco

Plant Kingdom

Division → Spermatophyte

Subdivision → Angiosperms

Class → monocotyledons

Order → Herbaceous

Family → Gramineae

Genus → Zea

Species → mays

Variety → S.C. 10

Binomial System

Triticum aestivum L.

Glycine max (L), Merr.

Allium cepa

Allium sativum

THANK YOU!
GOD BLESS!

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