

Vegetative Propagation (Natural)

Sub-aerial stem	Underground stem	Leaf Buds	Bulbil
→ Runners	→ Tubers	→ Bryophylls	→ Axil buds
→ Stolons (strawberry)	→ Rhizome	→ L. buds	e.g. Agave, Cacti
→ Suckers (Apple & Citrus)	→ Bulb (Onion)		

Rhizome - Horizontal growth
 → Turmeric, ginger, banana.
 → Strawberry, grasses

Offset → Water hyacinth (Tropica of Bengal) & Water lettuce (Pistia)

Invasive species (Taro, water hyacinth)
 all O₂ from water → aquatic animals

Tubers → Eye of potato (axillary buds)
 → Underground stem

Artificial Vegetative Propagation

Cutting

Layering

Micropropagation/Tissue culture

Grafting: It is the technique of joining the parts of two different plants in such a way that they unite & continue their growth as one plant. Cambium plays important role in grafting. The cambium of both stock (the plant rooted in the soil & on which the part of other plant is inserted) & scion (plant which is inserted on stock) fuse together & make the union of these two plants successful.

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Oogamous - If the egg is large & immotile while sperm is motile & small.
e.g., Humans

Types of Body $\Rightarrow$

Homothallic (Monoecious) $\Rightarrow$ Both male & female are present in same body.

e.g., Venusian, Lycopodium, Equisetum.

Bisexual (or Hermaphrodite) $\Rightarrow$ Both male & female are present in same body.

Heterothallic (Dioecious) $\Rightarrow$ Both male & female body are present in different body, e.g., papaya, date palm.

Unisexual (Cockroach).

$\downarrow$
Staminate

$\Rightarrow$ Male flower

$\Rightarrow$ Staminate (unfertile σ^7)

$\downarrow$
Pistillate

$\Rightarrow$ Female flower.

Meiosis (2n) $\Rightarrow$

Apple $\Rightarrow$ 34

Housefly $\Rightarrow$ 12

Fruit fly $\Rightarrow$ 8

Maize $\Rightarrow$ 20

Gamete Transfer

Pollination $\Rightarrow$ Transfer of pollen to stigma.

Aquatic animals $\Rightarrow$ By water.

Insects $\Rightarrow$ [Pombyol. Volatile chemical substance]

By *Pombyx mori* to attract male.

$\Rightarrow$ Species-specific.

30/07/2024 10:04