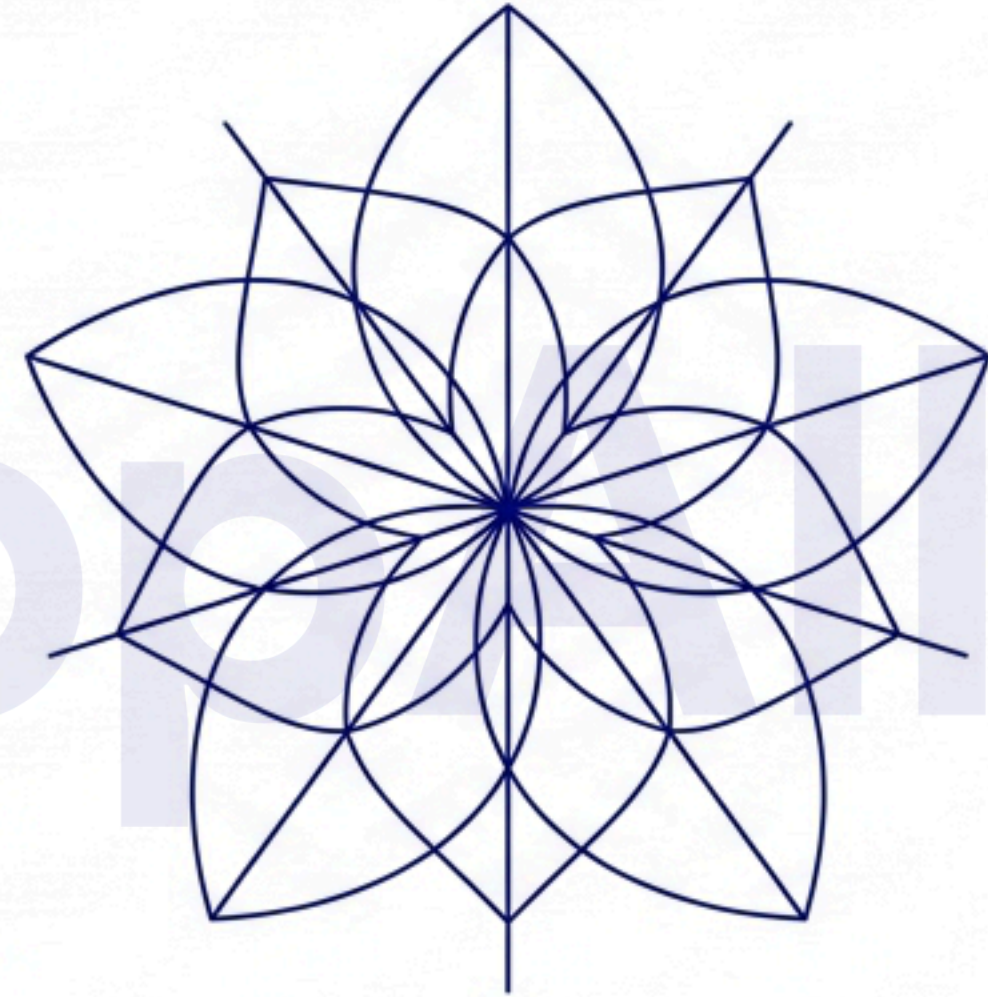


Solanaceae

The Potato Family

Angiospermae : Dicotyledonae



A foundational botanical family comprising major global food crops, spices, and medicinal plants.

Global Distribution and Habit



Widely distributed across tropical, subtropical, and temperate zones worldwide.



HERBS

dominant

SHRUBS

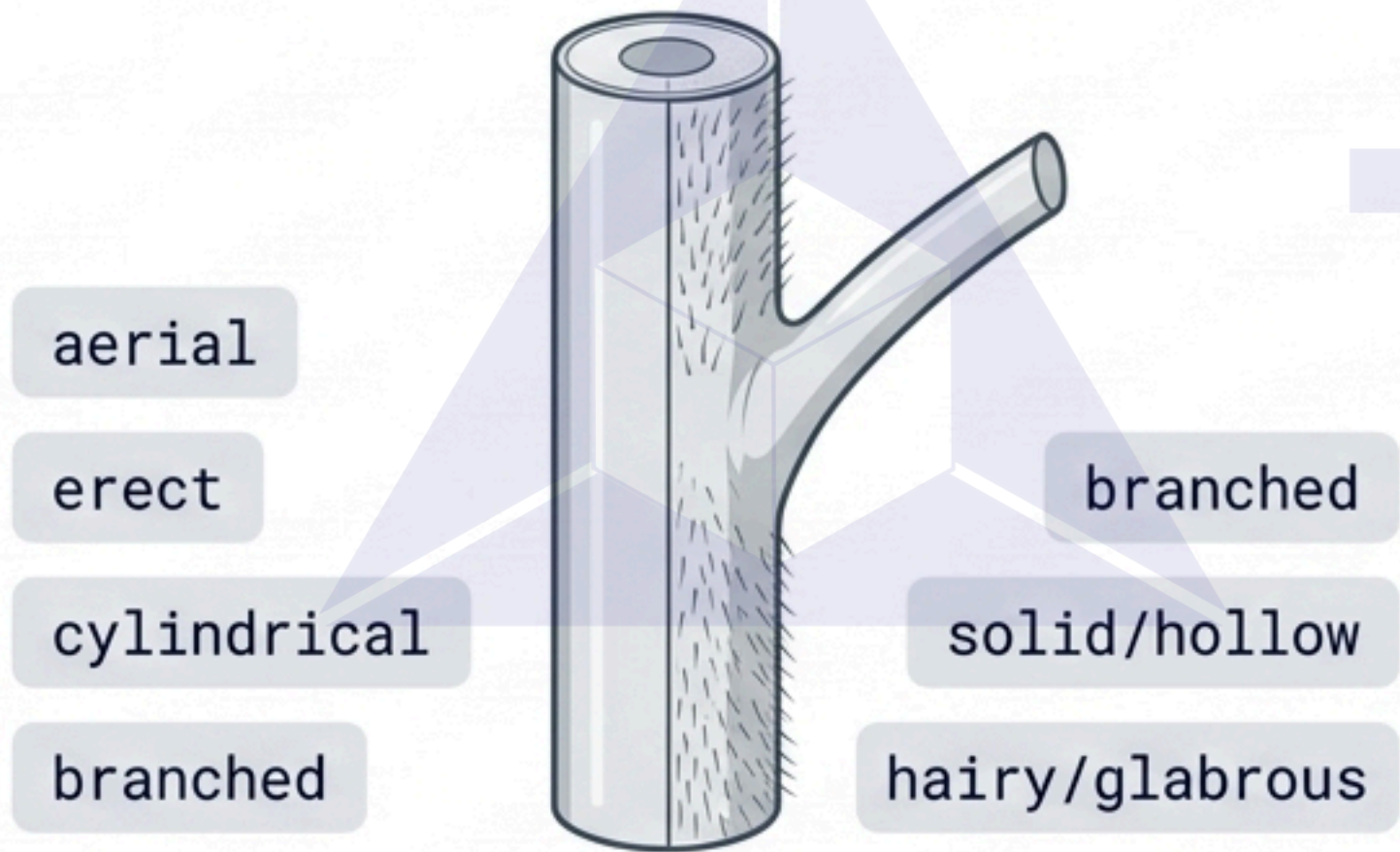
common

SMALL TREES

rare

Vegetative Characters: Stem and Leaves

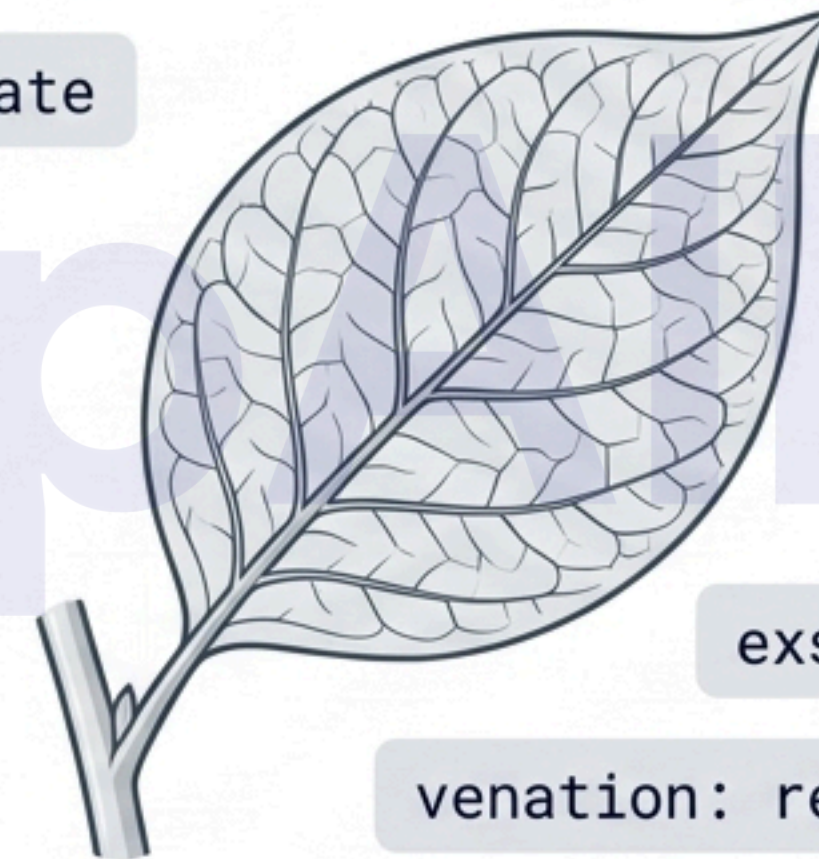
Stem Anatomy



Exception: Underground stem adaptation found in Potato (*Solanum tuberosum*).

Leaf Architecture

alternate



simple

exstipulate

venation: reticulate

pinnately compound (rarely)



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$$E=mc^2$$



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Reproductive Architecture: Inflorescence & Flower



Solitary

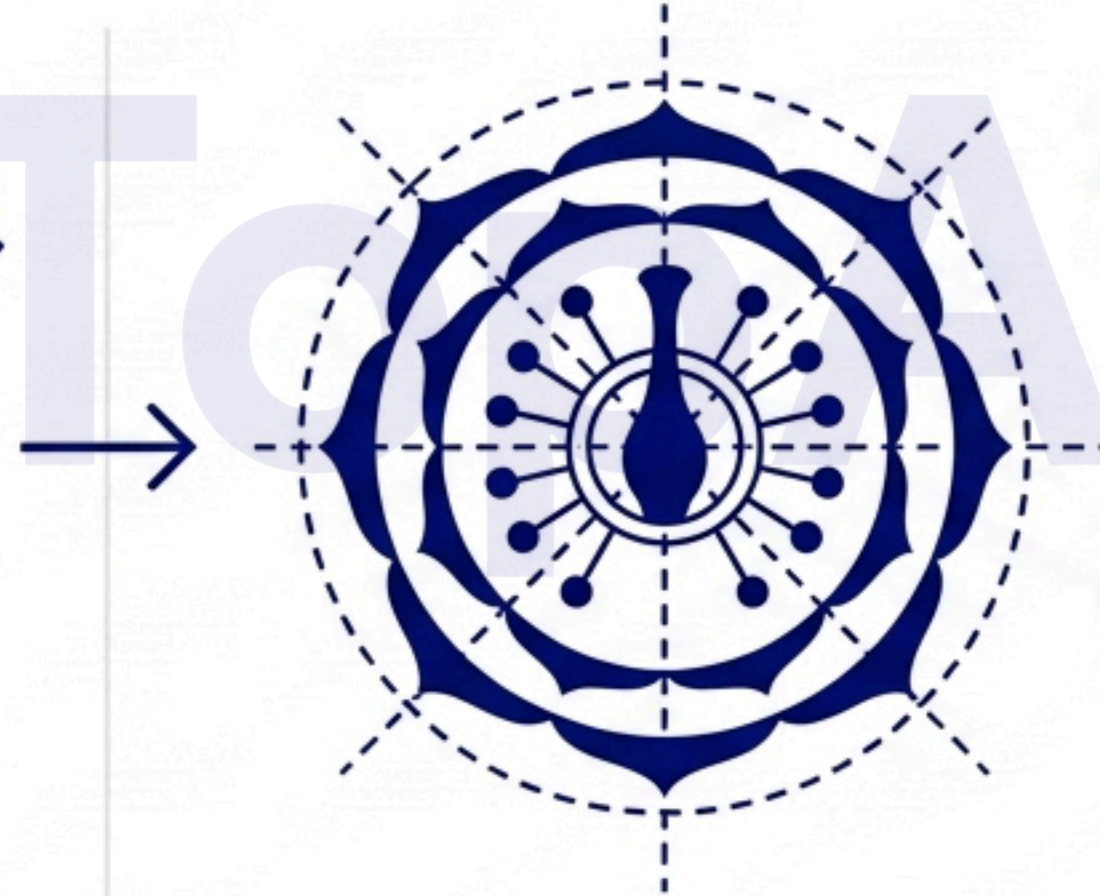


Axillary



Cymose

Flowers are arranged either solitary, axillary, or in a cymose pattern (as seen in Solanum).



Bisexual

containing both
androecium and
gynoecium

Actinomorphic

exhibiting perfect
radial symmetry

The Outer Whorls: Calyx, Corolla & Androecium

Calyx (Sepals)

5

sepals

united (gamosepalous)

persistent

valvate aestivation

Corolla (Petals)

5

petals

united (gamopetalous)

valvate aestivation

Androecium (Stamens)

5

stamens

epipetalous

attached to the petals



The Rule of 5: The Solanaceae family is consistently characterized by pentamerous outer whorls—5 sepals, 5 petals, and 5 stamens.

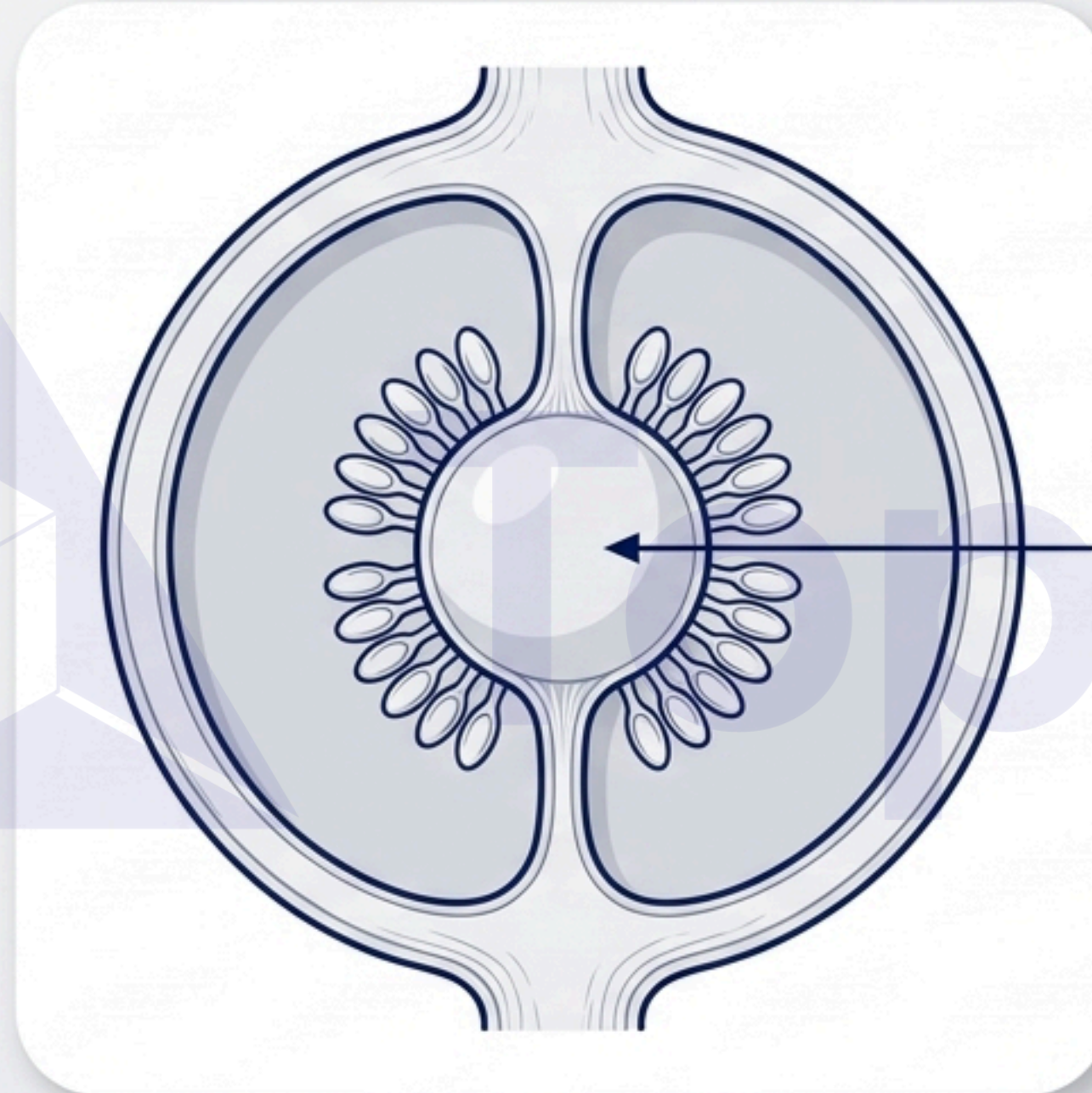
The Core: Gynoecium & Axile Placentation

Carpels: [Bicarpellary]
(obligately placed)

Fusion: [Syncarpous]
(fused carpels)

Position: [Ovary superior]

Chambers: [Bilocular]
(two chambers)



Arrangement:
[Placentation: Axile]
(swollen placenta with many ovules)

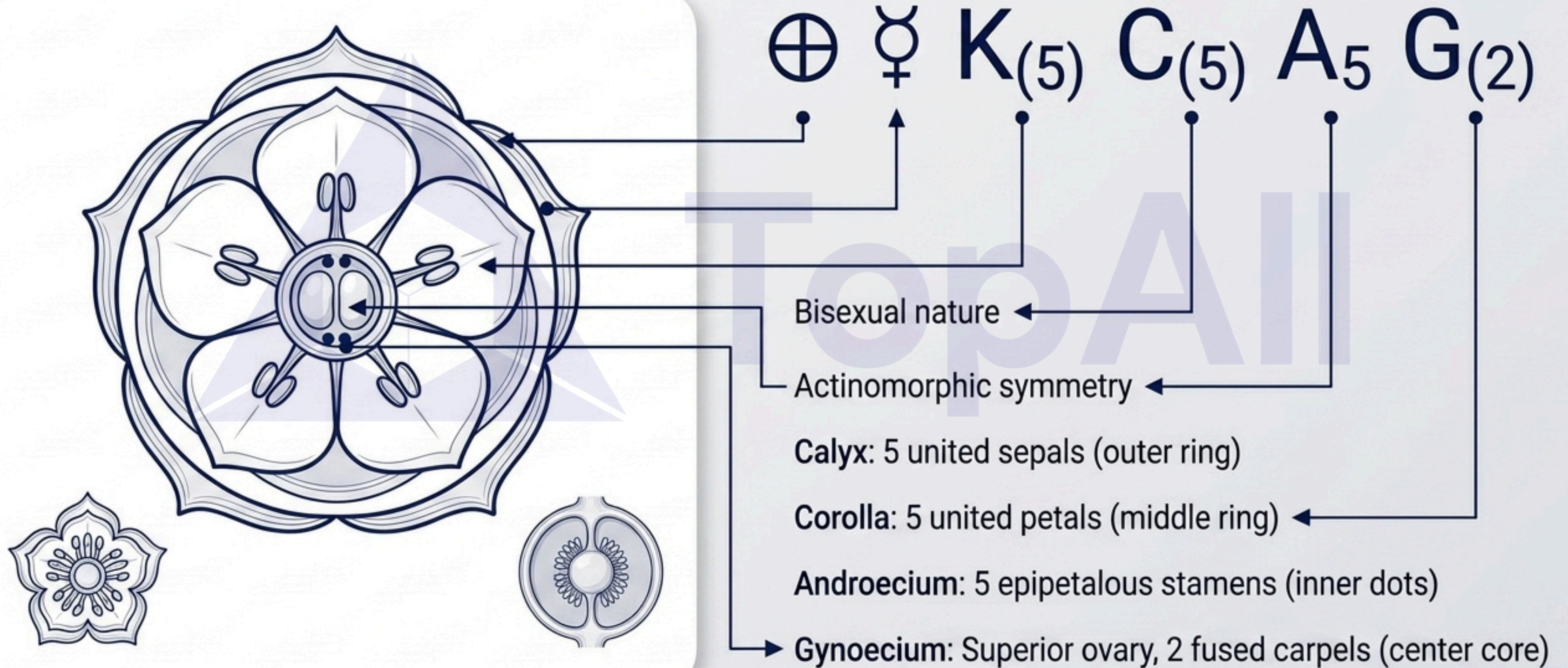
Develops into a **berry** or **capsule** containing many **endospermous** seeds.

Economic Matrix: Human Application



A highly versatile family driving global agriculture, traditional medicine, and commercial industries.

Botanical Blueprint: *Solanum nigrum* (Makoi)





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