

Internal Structure of Monocot Stem

Transverse section at maize stem shows the following structures or zones. Eg: Maize Stem

Epidermis:

- Made up of single layer of cells with thick cuticle.
- Stomata are present.
- Multicellular hairs are absent

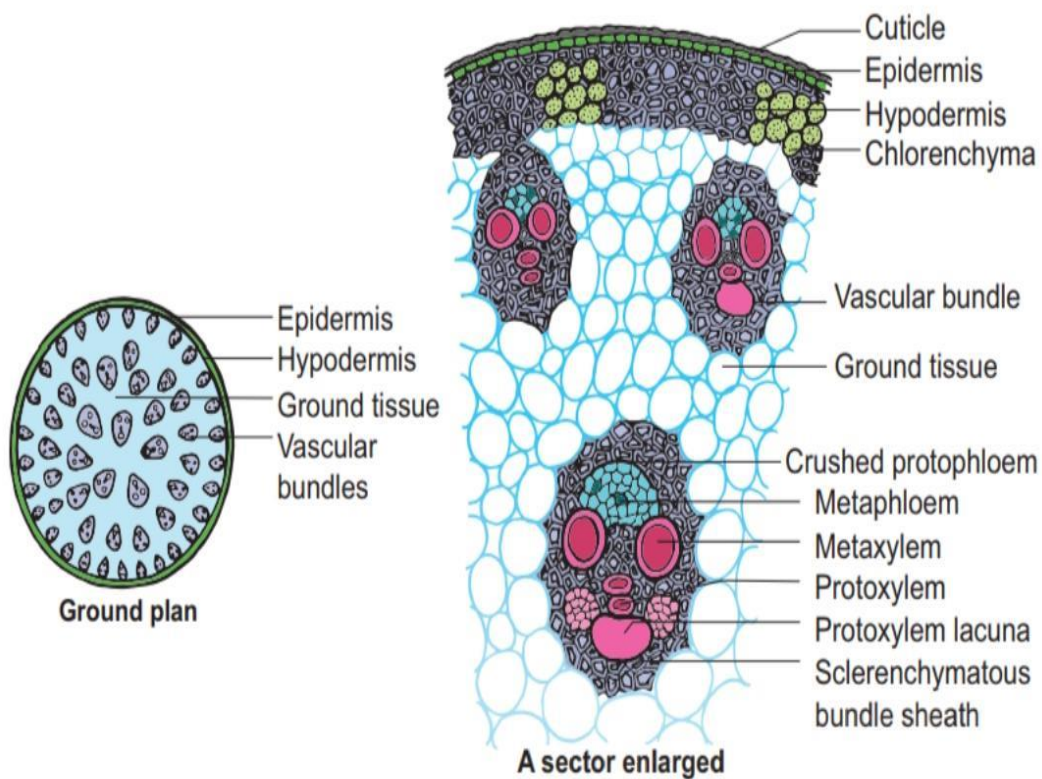


Figure 9.22: T.S. Monocot stem (Maize stem)

Hypodermis:

- Two-Four layer of sclerenchyma present below the epidermis and intercellular spaces are absent.

Ground tissue:

- Entire mass of parenchymatous cells next to hypodermis from ground tissue.
- No differentiation between cortex, endodermis and pericycle.

- In the periphery ground tissue cells are smaller and compactly arranged and towards the centre the cells are bigger and loosely arranged.
- Vascular Bundles are present in this tissue.

Vascular bundles:

- Many vascular bundles are scattered in the ground tissue. Each vascular bundle is parenchymatous surrounded by a sheath of sclerenchymatous fibre.
- The sheath is extensively developed at the upper and lower faces of vascular bundles.

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