



Glossaries

Includes the definitions of various terms and parameters associated with the plant growth, physiology, and pathogen defense-related that are mentioned in this SCIP-database.

1. **Transpiration rate-** Is the amount of water transpired by plant per unit leaf area per unit time.
2. **Electrolyte/Membrane leakage-** Solute leaked from cytosol due to membrane damage. Quantification of this reflects the extent of damage to the membrane.
3. **Electron transport rate (ETR)-** Is a light-adapted parameter which directly related to an amount of energy used in photochemistry by photosystem II under steady-state photosynthetic lighting conditions.
4. **Ci content-** Is the intercellular carbon dioxide concentration.
5. **Relative water content (RWC)-** Is the actual water content of the sampled leaf tissue in relation to the maximal water content it can hold at full turgidity.
6. **Stomatal conductance (gs)-** Is a measure of the rate of CO₂ taken in or water transpired through stomata.
7. **Water use efficiency (WUE)-** Amount of water transpired to produce a gram of biomass.
8. **Mesophyll conductance (gm)-** Is the transfer of carbon dioxide from a sub-stomatal cavity/intercellular airspace of the leaf into the chloroplast.
9. **Water potential (Ψ_w)-** A measure of the free energy associated with water per unit volume.
10. **Hydraulic conductivity-** Is a property of vascular plants, soils, and rocks that, describes the ease with which a fluid (usual water) can move through pore spaces or fractures.
11. **Embolism-** When the tension in the xylem conduits becomes too high, xylem cavitation will occur (water column breakage). This results in the hydraulic disconnection of leaves and above-ground parts from roots because xylem conduits are filled with air and water vapor, and this phenomenon is called embolism.
12. **Isotope discrimination-** The uptake by plants of a particular isotope in preference to another isotope of the same element. E.g. Plants prefer ¹²C (lighter-fast diffusive) over ¹³C (heavier-slow diffusive).



13. **Wilt index**- Is the percentage of wilted leaves to that of non-wilted leaves in a plant.

14. **Photosynthetic rate/ Assimilation rate (A)**- Is the amount photosynthetic products (glucose) produced per unit time.

References:

List of plant species

Includes the list of various plant species and their cultivars/varieties/genotypes which are listed in the SCIP database under combined, sequential and multiple individual stress studies.

1. Thale cress- *Arabidopsis thaliana* ecotype Columbia-0
2. Rice- *Oryza sativa* L.
3. Wheat- *Triticum aestivum* cultivar 'JD'
4. Maize- *Zea mays* L. 'Hy X C103'
5. Grapevine- *Vitis vinifera* L. cv. Malvasia de Banyalbufar
6. Beetroot- *Beta vulgaris*
7. Tomato- *Solanum lycopersicum*
8. Tobacco- *Nicotiana tobacum*
9. *Nicotiana benthamiana*
10. Cucumber- *Cucumis sativus*
11. Cowpea- *Vigna unguiculata* L. genotype CE-31
12. Watermelon- *Cucumis lanatus*
13. Zucchini- *Cucurbita pepo*
14. Pepper- *Capsicum annuum*
15. *Chenopodium amaranticolor*

List of pathogens

Includes the list of various plant pathogenic bacteria, fungi, virus, and nematodes which are listed in the SCIP database under combined, sequential and multiple individual stress studies.

1. Virus

- a) Turnip mosaic virus
- b) Maize dwarf mosaic virus
- c) Cowpea severe mosaic virus
- d) Grapevine leafroll-associated virus 3



- e) *Barley yellow dwarf virus–Padi-avenae virus*
- f) *Brome mosaic virus*
- g) *Cucumber mosaic virus*
- h) *Tobacco mosaic virus*
- i) *Tobacco rattle virus*

2. Bacterial pathogens

3. Fungi

4. Nematodes

List of organisms

Includes the list of various plant disease-causing insects which are listed in the SCIP database under combined, sequential and multiple individual stress studies.

