

SUMMARY OF THE EXPERIMENTAL DESIGN:

Experiment No.I: Effect of seed pretreatment with **leaf extracts** of *Desmostachya bipinnata*, *Parthenium hysterophorus* and *Alternanthera sessilis* on germination behavior, TTC stainability and metabolic changes of green gram -*Vigna radiata* seeds.

Experiment No II:

Effect of seed pretreatment with **leaf leachates** of *Desmostachya bipinnata*, *Parthenium hysterophorus* and *Alternanthera sessilis* on germination behavior, TTC stainability and metabolic changes of green gram -*Vigna radiata* seeds.

Experiment No. III:

Effect of seed pretreatment with **leaf extracts** of *Desmostachya bipinnata*, *Parthenium hysterophorus* and *Alternanthera sessilis* on germination behavior, TTC stainability and metabolic changes of *Senna occidentalis* seeds.

Experiment No. IV:

Effect of seed pretreatment with **leaf leachates** of *Desmostachya bipinnata*, *Parthenium hysterophorus* and *Alternanthera sessilis* on germination behaviour, TTC stainability and metabolic changes of *Senna occidentalis* seeds.

Experiment No.V:

Prediction of similar putative allelochemicals analogous to anthraquinone, β -sitosterol and quercetin found commonly in *D. bipinnata*, *P. hysterophorus* and *A. sessilis*, by using ChemID *plus*.

Experiment No. VI:

Effect of *Desmostachya bipinnata*, *Parthenium hysterophorus* and *Alternanthera sessilis* **leaf extracts and leachates** on mitotic behaviour of root tip cells of *Allium cepa*.

Experiment No.VII:

Effect of *Desmostachya bipinnata*, *Parthenium hysterophorus* and *Alternanthera sessilis* **extracts and leaf leachates** on mitotic behaviour of root tip cells of *Vigna radiata*.