Future Prospects

The present study was conducted to assess phytotoxicity of Ni²⁺ and to explore its possible modes of action in terms of various physiological, biochemical, anatomical and ultrastructural changes in higher plants, particularly in context of *Triticum aestivum* and *Zea mays* seedlings. Various observations were made during these studies which accomplish phytotoxic nature of Ni²⁺. However, there are still some aspects that need to be investigated further. Future prospects for research in this area can be outlined as follows:

- The exact sequence of reactions at the molecular level and the genes, which are activated to bring about response against Ni-induced toxicity, can be explored to better understand the cellular mechanism of its regulation.

- Amelioration of Nickel toxicity by using plant secondary metabolites (mainly monoterpenes) can be explored.

- Phytotoxic effect of Nickel through soil and its persistence in soil can be explored.

- Phytoremediation using different plants (cultivated and wild) for enhanced heavy metal (Ni) accumulation can be explored.