

=====

PREFACE

=====

PREFACE

It is well established that Lead is a toxic heavy metal. The chief source of lead pollution is from human activities. It is most ancient industrial poison known to man. Metallic Lead is used in manufacture of pipes, pottery and in the preparation of alloys, batteries, paints, pesticides. Organic forms of lead especially tetraalkyl Lead are used as gasoline antiknock agents. The excessive use of Lead has created a pollution problem and has crossed the permissible limit. It is highly probable that it will create a biological hazard if its excessive use is not decreased.

Lead reaches in our body through air, water and food chain and causes several diseases as well as inhibits numerous enzymatic reactions in our body cells. There occurs uptake of this toxic heavy metal by the crop plants if it is present in soil, water and air.

Since it has toxic effect on plants and animals therefore it was of interest to study the ecophysiological studies of lead on some crop plants widely cultivated in eastern part of Uttar Pradesh.

To study the impact of Lead on germination, growth and development of test plants various concentrations of Lead as its acetate were used. The experiments were performed to

assess the effect of Lead acetate on various physiological processes e.g. germination and growth.

Various types of treatments were given to seeds i.e. Pre-radicle emergence treatment, Post-radicle emergence treatment and Pre-germination treatment. Beside these treatments seeds were also treated with polluted water to study the germination and growth effects.

The effects of lead amended soil on germination and growth were also studied. The thesis has been divided into eight chapters. Several tables, graphs, figures and histograms have been given for supplementation.

Rita Singh
(Rita Singh)
Dept. of Botany
T.D. College, Jaunpur