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Role of trace elements in plant nutrition

by

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ABSTRACT.

Trace elements are known to be associated with certain essential role of growth and development in plants. More over it is belived that the disorders largely depend on the availability of these elements to plants in the soil.

This report presents a literature review on
- Source of trace elements in soil.
- Availability and factors affecting the availability of essential trace elements of the plants.
- Absorbtion and transport of essential trace elements in plants.
- Essential function, deficiency and toxicity of essenetial trace elements in plants..
- Remedical method adopted to overcome the deficienty and toxicity problem by fertilization or other management practices for purpose of plant cultivation.

From these study it is clear that there is a definite variation in role of trace element among plants. There is a relationship between the total content of trace element and deficiency and excess that occur in plants.

Based on the knowledge available and experiances gained in other countries it is suggested that some of these remedical methods could be adopted to grow plants without disorder prblems.

Fertilizer application is one of the main techniques used in agriculture to correct nutrient disorders. Thesese of fertilizer issdepend on the degrea of deficiency; soil condition; the crop fertilizer sources; method of application; the form in which they are applied and some instances interaction with other ions.

The important suggestion of fertilizer applications are follows,
- Application of trace element compounds to the soil or directly to the foliage in aqueous spraying.
- Soil application may done by broad casting, banding, seed dressing ect.
- Soil application may be uneconomical because large amount is required.

-Foliar application is often used since the compound does not come in contact with the soil, where it may precipated and has long residual effect.

When applied as foliar spray their effectiveness is greately increased.

- If some fertilizers are applied they generally remain with residual effect in soil for several years. For example under field condition Cu fertilizer application may last for atleast eight years.
- The fertilizer may be applied through the irrigation water.

Altering the soil coditions by certain management practices may correct the deficiency and toxicity. For example increasing the acidity of the soil generally increases the availablity of all trace elements except Mo. Mn toxicity can be remedied generally by liming and by using mulching to prevent through the exposure to wind and sun. B toxicity corrected by acid amendments.

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