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COPPER IN THE SOIL AS ESSENTIAL FOR THE HOST-PLANT OF LAC INSECT

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Ween lac is found growing naturally on a tree it could be concluded that the same further inocculated with brood-lac should be able to yield a large crop. Experiments carried out based on this experience however do not always give the expected result. In the first instance we do not know the nutrient requirements of the insect and what constituents of plant-sap really go to support it. Incidentally one factor did reveal itself as essential to the lac insect as an organism.

The lac insect contains symbiotic yeast-like micro organism. I sent a culture for proper classification to Prof. Pribram [1], then at Vienna, who was a specialist in yeast-like micro organisms. As result he wrote an article entitled. "black-yeasts: *Torula variabilis*, of Mahdihassan". On hearing from him earlier I could surmise that the germ produces tyrosinase, which imparts its colony the dark colour and Tyrosinase is a copper compound. It was easy to turn some lac insects to produce ash and this did give the test for copper as trace element. The conclusion was obvious that the lac insect grows on a host plant which prefers soil with copper as a trace element. As I had to do the work single handed I did not proceed to analyse the ash of the twig on which lac had grown, nor the soil where the tree had produced the lac. The positive presence of copper in the ash of the lac insect needed no further confirmatory tests.

To day we are well informed on the importance of trace elements particularly that of copper. But it is not generally known that there are soils which contain little or no trace of copper. Naturally such soils produce fodder which does not give the animals feeding on it proper nutrition. It is necessary here only to refer to the fact that soils can be wanting in traces of copper. Among others, Beeson *et. al* [2] have pointed this fact. The conclusion to be drawn is that where lac is to be cultivated it is best to test the soil for its content of copper as trace element.

Key words: Copper, Lac insect, Soil.

References

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