

The Cause and Treatment of Chlorosis and Dieback of Apple Trees in Ardabil Region .

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A research was conducted from 1994 to 1996 investigating the causes and treatment of chlorosis and dieback of apple trees in Ardabil region In this research, besides of studing, in different parts of the the region, observing soils of orchards and also recording the percentage of the affected trees , the affected and unaffected orchards were selected for study in Ardabil region (Bassij Square , Shahrak Sabalan , Hassan Barouq,Erdi Chai) Meshkin Shahr Plains , Pars Abad , Khalkhal(Qarah Qeshlagh , Neilagh), Namin,Nir and Hir.These orchards were sampled from the canopy limit at the depths of 0-30 , 30-60 , 60-90 centimerers .

For the careful recognition of the causes , appearing symptoms , and pathogenic organisms were examined and soil analysis and physiological study were conducted . The results were as follow :

1. The examination established that pathogenic organisms were not the main cause of Chlorosis and it was concluded that the problem was due to the *deficiency of usable iron and this cause is called " Iron Chlorosis "* .
- 2 . In orchards where the soil has no lime with light texture such as sandy loam and with no hard pan of the Gypsun lime and clay , chlorosis was not observed in sample orchards.
- 3 . In gardens where the soil with light texture conditioned moderate lime like loam and sandy loam and without any counteractediause in subsoil parts,either chlorosis observed or the percentage of affected trees was very low (3-4 percentage sample gardens can be found in Namin, Hir and Qarah