

## SUMMARY

This study was carried out in 6 districts of Ankara province. The aim of this study is to determine Fe, Cu, Zn, Se status of blood serum and those of wool in Akkaraman sheep grazing on natural pastures and the same trace mineral content of soil and pastures in different seasons for two years. A further aim was to gain information about trace mineral insufficiency of Akkaraman sheep which are fed only pastures without any supplementation and to advise sheep breeders about supplementation of insufficient mineral in the region.

We found differences in serum trace mineral levels in ewes from various districts. The average values of serum Cu levels were 0,6213 mg/L and 0,7379 mg/L for two years. Average Serum Fe concentrations for two years were 1,3534 ve 1,1368 mg/L which are normal levels. Serum Zn levels from the lowest to highest were 0,3182 mg/L to 0,8147 mg/L which are low from normal values.

In this study, soil Cu and Fe contents were sufficient in all districts with only exception in soil Fe content in Polatlı for the first year. Soil Zn contents were found under normal level in the districts of Haymana, Polatlı, Kızılcahamam and Kalecik.

Particularly serum Zn levels of ewes in all districts are under the normal level (<1,00 mg/L) for two years. At the same time the most insufficient mineral in the soil was Zn. Therefore there is need to supplement Zn mineral for Ewes grazing in Ankara region, as free choice.