

Effect of Cement Dust Deposition on Heavy Metal Content of Soil Around Cement Industry in Guntur District of Andhra Pradesh

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ABSTRACT

A study was conducted to investigate the concentration of heavy metals in soil around the cement industry in Satrasala village, near Macherla in Guntur district. A total of 160 soil samples were collected during the months of August (Before sowing of crop) and December (After harvest of crop) 2017 at various distances from cement industry viz., 250, 500, 1000, 2000 m and at the distance of 2250, 2500, 3000 and 4000 m away as check area. The results revealed that the mean concentration of heavy metals like chromium, cadmium and lead before sowing of crop ranged from 14.83 to 7.68, 7.97 to 1.36 and 8.95 to 4.76 mg kg⁻¹ respectively and after harvest of crop ranged from 14.73 to 7.69, 7.97 to 1.35 and 8.90 to 4.73 mg kg⁻¹ respectively from 250 to 2000 m from cement industry. The heavy metal content in the soil samples did not differ much before sowing and after harvest of crop and were found to decrease as the distance from the cement industry increases. The present investigation revealed that study area soils were affected by dust emissions from the cement industry as indicated by very high concentration of heavy metals in soils of near the cement industry (250 m) and very low concentration in check area.

Key words: *Heavy metals, cement dust, chromium, cadmium, lead.*