

# EFFECT OF LEAD NITRATE-PB (NO<sub>3</sub>)<sub>2</sub> ON PLANT NUTRITION, AS WELL AS PHYSICAL AND CHEMICAL PARAMETERS ON LOBIA (VIGNA UNGUICULATA LINN. WALP.)

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**Abstract:** Lead is a major pollutant in both terrestrial and aquatic ecosystem wherein it may adversely affect the faunal and floral health. When accumulated in plants, it is necessary to know the tolerance to lead by plants/parts and Pb-detoxification, phytoremediation and rhizofiltration in polluted soils is the remedy. In the present communication, the effect of lead nitrate on the growth, biomass and plant nutrition of lobiya has been reported and tolerance dose of plants have been found.

## REFERENCE

- ATSDR** (Agency for Toxic Substances and Disease Registry, 1993). U.S.P. H.S., Atlanta, GA.
- Buck, W.B.** (1970). Lead and organic pesticide poisoning in cattle. *J. Amer. Vet. Med. Ass.* **156**: 1468.
- Cooper, W.C., Wong, O and Kheifets, L.** (1985). Mortality among employees of lead battery plants and lead-producing plants. *Scand. J. Work Environ. Health* **11**:331-345.
- Datta, N.P.; Khara, M.S. and Saini T.R.** (1962). A rapid colorimetric procedure for the determination of the organic carbon in soils. *J. Indian Soc. Soil Sci.* **10**: 67-74.
- Ehle, A.L. and McKee, D.C.** (1990). Neuropsychological effect of lead in occupationally exposed workers. *Crit. Rev. Toxicol.* **20**:237-255.
- U.S. Environmental protection agency (EPA)** (1986). An addendum to EPA Air Quality Criteria for Lead (1986). In: *Air Quality Criteria for Lead*, Vol. I. Environmental Criteria and Assessment Office, Research Triangle Park.
- Defang, H.F.; Teguio, A.; Awah-Ndukum, Kenfack, A.; Ngoula, F and Mehuge, F.** (2008). Performana and carcas characteristics of broilers fed boiled cow-pee meal diet. *African J. Biotech.* **7**(9):1351-1356.
- Duruibe, J.O., Ogwuegbu, Moc and Egwurugwu, JN** (2007). Heavy metal pollution and human biotoxic effects. *International J. Physical Sciences*, **2**(5): 112-118.
- Goyer, R.A.** (1988) Lead. In: *Handbook on Toxicity of Inorganic Compounds*. H.G. Seiler and H.Sigel, eds. Marcel Dekker, Inc.: New York, pp. 359-382.
- Hanway, J.J. and Heidel, H.** (1952) Soil analyses methods as used in Iowa State College Soil Testing Laboratory. *Iowa Agric.* **57**:1-31.
- Lane, S.D. and Martin, E.S.** (1997). A histochemical investigation of lead uptake in *Raphanus sativus*. *New Phytol.* **79**:281-286.
- Liu, Donghua, A, Wusheng Jianga; Changjun Liua; Changhong, Xina and Wenqiang Hou** (1999). Uptake and accumulation of lead by roots, hypocotyls and shoots of Indian mustard [*Brassica juncea*(L.)] Depart. of Biol., College of Chemistry and Life Sci., Tianjin Normal University, Tianjin 300074, Vol-71, ISSUE3, 2000, 273-2777.
- Miller R.J. and Koeppe DE** (1971). Acculation and physiological effect of lead in corn. In: *Proceeding of University of Missouri, Columbia* pp. 186-193.
- Olsen, S.R. Cole.; Watanabe, F.S. and Dean, L.A.** (1954). Estimatio of available phosphorous in soils by extraction with sodium bicarbonate. *Circ. U.S. Dept. Agric.* 939.
- Palaskar, M.S., Babrekar, P.G. and Ghosh, A.B.** (1981). A rapid analytical technique to estimate sulphur in soil and plant extracts. *J.Indian Soc. Soil Sci.* **29**:249-256.
- Pracheta** (2008). To evaluate the effet of lead nitrate on plant nutrition as well as physical and chemical parameters on Lobiya (*V. unguiculata*). M.Sc. Dissertation in Biotechnology M.I.E.T., Meerut.
- Singh, Lokendra and Vats, Preeti** (2006). An update of Aeromycological research in India. *Plant Archives* **6**(2):399-421.
- Walkley, A.J. and Black, I.A.** (1934) Estimation of soil organic carbon by the chromic acid titration method. *Soil sci.* **37**:29-38.