Dry Deposition: A Major Pathway of Removal of Pollutants from the Atmosphere

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Acid deposition is one of the major irritants in the air pollutions. S N containing compounds get released in to the atmosphere from the industries and other human activities and from natural sources which undergo transportation and chemical transformation in the atmosphere and finally reach to the earth surfaces via dry deposition, wet deposition and occult deposition. Dry deposition is one of the important pathways of removal of pollutants from the atmosphere as dry conditions prevail while rain confined to monsoon period. Dry deposition is characterized by deposition velocity (Vd), which is defined as the ratio of the flux (F) of the spices (S) to the surface and concentration (c) of the species. The deposition velocity is inverse of the resistance ® which comprises aerodynamic resitance, quasilaminar resistance and surface resistance. Dry deposition depends upon physical and chemical properties of the spices as well as on the nature/characteristic of the surface and meterogical conditions of the atmosphere. Study is needed to specify the rate at which the atmosphere is being depleted and to determine the rate of delivery of materials to the underlying surface. Direct measurements of dry deposition of dry deposition of major ions to natural surface revel maximum deposition for Ca^{2+} followed by NH_4^+, Mg^{2+}, K^+, SO_4^{2-}, $C1^-$, NO_3^-, Na^+ and F^-. Deposition velocity varies from 0.38 to 4.71 cm s^{-1}. The annual input of S and N at Agra, India ranges between 401.5 to 438 mmol m^{-2} yr^{-1} and 310.5 to 365 mmol m^{-2} yr^{-1}, respectively.