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Author: Mr. Vikrant Boora  
University of Petroleum and Energy Studies, India

## ANALYSIS OF MARTIAN SOIL AND VEGETATION ON MARS

**Abstract**

Determination of MARTIAN soil and its properties will improve future lander mission success and can provide narrower constraints for growing vegetation on Mars. As we know it will not take so long for humans to reach Mars and to start Colonizing it and make it a habitable for Living, this paper gives a brief analysis of the martian soil and to research about the vegetation that can be grown on the Red Planet and how it can be done by the available resources, minerals and nutrients etc. The artificial atmosphere/environment will be the key focus considering the weather scenarios on Mars to have a sustainable growth of the vegetation. The essential resources will be used to achieve the plantation and basic vegetation keeping in mind the availability and getting most out of it. By keeping in mind about the research that has been done on it, A deep analysis of the regolith will be done and its properties, chemical and organic composition will be found and according to it we will find out what kind of plants can be grown on the planet. How we can use the available resources for our mission and how mars can become habitable for humans and making ourself ready for the future Mars missions.