

Research Article

STUDY OF SOIL AFFECTED BY THE WASTE PRODUCT OF MARBLE INDUSTRIES

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ABSTRACT

In the present study marble slurry was taken from the industrial site situated in Kishangarh. Soil texture is determined by the size of constituent particles which have been named differently by the international society of soil science. From these industries slurry powder is come out from the earth and mixed with soil. Slowly soils upper strata become destroy from this slurry.

Key Words: *Marble Slurry, Normal Soil*

INTRODUCTON

Soil is an important part of environment. Soil originates from rocks. It develops gradually by the fragmentation and corrosion of rocks and with the accumulation of organic matter. Soil formation may require 2,000 to 20,000 years but soil differentiation from the parent material may take place in a short time of 30-50 years. Many kind of soil present on the earth and earlier that was pure but due to urbanization and industrializations in India so many chemical contents mixed with these soils from atmosphere. One example of this is marble industries in India. Kishangarh in Ajmer Distt. (Rajasthan) is the main area of marble industries. From these industries slurry powder (A by product of marble) is comes out and mixed with soil. Slowly soil upper strata get destroyed with this slurry. Soil is an important habitat for a large number of terrestrial organisms, either borrowing or living on its surface. These organisms exhibit a complete food chain with herbivores, carnivores, and the predators and prey.

MATERIALS AND METHOD

The soil texture is determined by the size of constituent particles which have been named differently by the international society of soil science.

Soil texture

Since soil influence the flora and fauna of the area its texture is of considerable ecological interest.

Soil formed with various integration of soil particles of the following main type:

Sandy soils

Mainly consist of sand particles. These are loose dry and poor in nutrients. The water holding capacity of such soil is poor.

Table: 1

S. No.	Name of Particles	Diameter of particles
1.	Gravel	2.00 mm and more
2.	Coarse sand	2.00 mm to 0.2 mm
3.	Fine sand	0.02 mm to 0.02 mm
4.	Slit	0.02 mm to 0.002 mm
5.	Clay	below 0.002 mm

Clay soil

Chiefly consist of clay particles. The clay particles are of colloidal dimensions. They have high plasticity and posse's high water holding capacity. Clay particles have very small interspaces between them so that neither water nor air can circulate freely. Such soils on getting water become water logged. Thus they are not suitable for plant growth.

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Loam soils

Loam soils have sand, silt and clay particles in more or less equal proportions. Such soils are the most suitable for plant growth.

Sand loam soil

Sand loam soils are those soils in which sand particles predominate.

Table: 2 List of slurry mix particles

S. No.	Name of Particles	Diameters of Particle
1.	Gravel with slurry	.1 mm to 2.00 mm.
2.	Coarse sand with slurry	.1 mm to 0.2 mm.
3.	Fine sand	0.20 mm to 0.02 mm.
4.	Slit	0.02 mm to 0.002mm.
5.	Clay	below 0.002 mm.

Clay loam soil

Clay loam soils have a predominance of clay particles. Both sandy and clay loam soils are suitable for plant growth

Silt loam soil

Have predominant of silt. On getting water, silt loam becomes water logged with poor air circulation. Such soils are not suitable for plant growth.

RESULTS AND DISCUSSION

Soil contains a variety of elements, chemical compounds and mineral, oxygen, aluminium, silicon, calcium, magnesium, sodium, potassium and iron, chlorides, sulphates and oxides are usually present in the soil. Certain trace elements like cobalt, iodine, cadmium, arsenic, zinc and barium are also present in the soil. Soils of different places vary in their pH value, soil with pH 7.0 are neutral while the pH above 7.0 indicates alkalinity and that below 7.0 indicates acidity. Generally the pH value of soil lies between 2.2 and 9.6 depending upon the pH values. Soil may be neutral acidic or alkaline. For example, the soils are alkaline in acid area and acidic in rainy tropic. The soil poor in calcium and magnesium are acidic in nature. From these industries slurry powder is come out from the earth and mixed with soil. Slowly soil's upper strata become destroy from this slurry. From these industries slurry powder is come out from the earth and mixed with soil. Slowly soil's upper strata become destroy from this slurry. After a long time when this slurry became dry, the powder of marble had been spread over the edge of nala or pond. The dust spread over the atmosphere due to this marble powder is very injurious of health as it is a main cause of Asthma and other lung infections in that area.

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