

NITROGEN CYCLE

Nitrogen cycle is a gaseous cycle. It is an essential element of all forms of life. It is present in the atmosphere as nitrogen gas. Nitrogen is an important constituent of all living matter. It is directly from atmosphere. The chief source of nitrogen for plants are nitrates in the soil. The atmospheric nitrogen is fixed by a variety of microorganisms. Some proportion of atmospheric nitrogen is fixed during lightning also. The chief nitrogen fixers are bacteria belonging to the genus *Rhizobium* found in the root nodules of legumes. Symbiotic nitrogen fixers are some blue green algae and species of *Agrobacterium* and *Clostridium*. These are a source of fixable, atmospheric nitrogen. These are taken up plants to soil as nitrates. These are taken up plants for manufacture of complex nitrogenous compounds. Plants in turn are eaten by animals. The dead organic matter formed due to death of plants, animals, plants and other organisms, during which nitrogen is released either in free state to atmosphere, or as ammonia gas. Ammonia gas may also reach to soil as nitrates. Hence through the activity of inhibiting

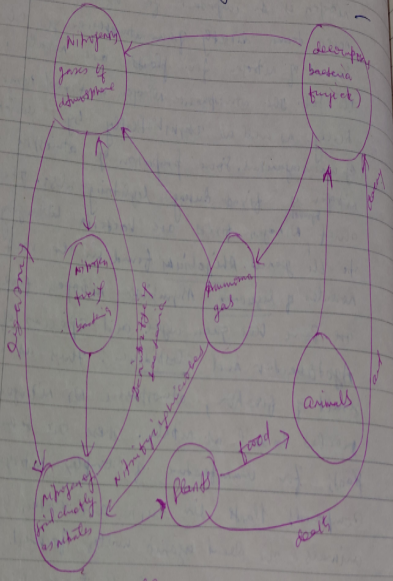
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microbes. Some nitrate of soil, due to activity of denitrifying microbes may also be converted to free nitrogen gas returning to the atmosphere



The nitrogen cycle