Neem and Azolla as Biopesticide & Biofertilizer

CHAPTER 14

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ABSTRACT

Microbes are an integral part of soil and contribute to soil and plant health. Microorganisms have the ability to fix atmospheric nitrogen, solubilize and mobilize phosphorus, produce antibiotics and disease suppressing molecules. They clean up the environment by degradation of several pollutants like pesticides, hydrocarbons, dyes and paints. They also help in the enhanced recovery of oil and metals from low grade ores or aqueous streams. Pesticides that are naturally pesticides and have been attracting interest because they are an alternative to synthetic pesticide

Microorganisms are an indispensable part of the soil and contribute to the health of the soil and plants. Microorganisms have the ability to fix nitrogen in the air, solubilize and absorb phosphorus, and produce antibiotics and inhibit disease molecules. They clean up the environment by destroying various pollutants (such as pesticides, hydrocarbons, dyes and paints). They also help increase the recovery rate of oil and metals in lowgrade ore or water streams. Most biological fertilizers fall into one of the following categories: nitrogen fixers, phosphate solubilizers and mobilizers, and rhizobia that promote plant growth. Nitrogenfixing biological fertilizers, such as rhizobia, Azospirillum, nitrogenfixing bacteria, cyanobacteria, and nitrogenfixing bacteria, all combine with the nitrogen in the soil Organic and inorganic fertilizers are widely used in fish farming to increase nutrient levels in the water and improve fish production. However, excessive use will cause changes in water quality indicator