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**Section 7**

**EFFECT OF NANO-PESTICIDES ON BIODIVERSITY AND TOXICOLOGICAL PERSPECTIVE**

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The protection of plant life against environmental problems, biotic and abiotic factors paves the way for implementing nanoparticles and pesticides. In recent years, nanopesticides have been introduced as valuable substitutes for conventional pesticides. The widespread use in the agricultural sector results in the deposition of nanoparticles and their residuals in our surroundings. The application of nanopesticides is an important challenge for biodiversity, nevertheless, not as originally observed and had raised many concerns.

Nanoparticles synthesized from different biological sources or plant extracts can be easily applied in agricultural systems. Among biological sources such as fungus etc, plant extracts from leaves, stems, fruits, and roots are used from a diverse range of plant species and successfully used to synthesize NPs. Biomolecules of plant extracts such as alkaloids, terpenoids, phenolic compounds, and co-enzymes reduce metal ions to NPs in a single step in the green synthesis.

Nanopesticides might induce risks for biodiversity to a lower extent since these risks have been shown only in high and unrealistic doses. Geographers, ecologists, environmentalists, and urban planners are aware of the damage done more than any scientist else in the world.