

ENVIRONMENTAL ASPECTS OF PESTICIDES

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The most fascinating feature of an ecosystem is its tendency to a steady-state climax, being equilibrium a function of the magnitude and frequency of the variance of ecological factors. Aiming to increase the liquid production of ecosystems, man manage to simplify the whole systems, breaking down and excluding processes and interactions against natural evolutive tendency. Once equilibrium is disrupted, unbalances in energy flow and matter cycles lead to relief morphogenesis,(erosion and silting-up) and pollution. Pesticides are the main tool in ecological succession control, The employment of these chemicals brings new disbalances, with negative feedbacks on ecosystem structure and function. Studies on the effects of pesticides on decomposition rates and soil microarthropod communities have been developed in Brazil to assess these impacts in both natural and agricultural ecosystems. The results showed that decomposition rates and lowered in 36% due to pesticide effects on mesofauna in "Cerrado" ecosystem. In agroecosystems, chemical management had lower decomposition rates than organic farming. In this case, phytopatogenic soil microorganisms may be favored. Agroecological concepts are the emerging basis to manage agriculture as environmental protection and recovery measures,in a search for sustainability.