

Assessing Food Chain Vulnerability to Environmental Disturbances

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Abstract

This study evaluates the vulnerability of food supply chains to environmental disturbances. As ecosystems face increasing pressures from climate change, habitat destruction, and pollution, understanding the impacts on food chains is crucial for sustainable management. We examine the complex interactions between species within food webs, considering factors such as trophic levels, energy transfer efficiency, and resilience to disturbances. By analyzing ecological pyramids, including those of numbers, biomass, and energy, we assess the stability and vulnerability of food chains to environmental changes. Our findings highlight the need for proactive measures to mitigate risks and enhance the resilience of food supply systems in the face of environmental challenges.

Keywords:

Food supply chains; Environmental disturbances; Ecological pyramids; Resilience; Sustainability

Introduction

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