

Harvesting *Echinacea angustifolia*: Demographic Models and Implications for Sustainability

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Echinacea angustifolia DC. (Asteraceae), a medicinal plant native to North American prairies, has a 100-year history of commercial harvest in Kansas. This study combines ethnobotanical information with demographic modeling to assess *E. angustifolia* populations' potential to sustain harvest. Projections using size-structured transition matrices predict that the sustainable rate of annual harvest is low. Harvesters' practice of digging a higher proportion of plants and allowing the stand to recover for two or more years appears to be economically and ecologically viable. However, unregulated commercial harvest over long periods of high demand cannot be sustained.