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Nota di contenuto	; 1. Weed management: a need for ecological approaches / Matt Liebman -- ; 2. Weed life history: identifying vulnerabilities / Charles L. Mohler -- ; 3. Knowledge, science, and practice in ecological weed management: farmer-extensionist-scientist interactions / Charles P. Staver -- ; 4. Mechanical management of weeds / Charles L. Mohler -- ; 5. Weeds and the soil environment / Matt Liebman and Charles L. Mohler -- ; 6. Enhancing the competitive ability of crops / Charles L. Mohler -- ; 7. Crop diversification for weed management / Matt Liebman and Charles P. Staver -- ; 8. Managing weeds with insects and

pathogens / Matt Liebman -- ; 9. Livestock grazing for weed management / Charles P. Staver.

Sommario/riassunto

Concerns over environmental and human health impacts of conventional weed management practices, herbicide resistance in weeds, and rising costs of crop production and protection have led agricultural producers and scientists in many countries to seek strategies that take greater advantage of ecological processes and thereby allow a reduction in herbicide use. This book provides principles and practices for ecologically based weed management in a wide range of temperate and tropical farming systems. After examining weed life histories and processes determining the assembly of weed communities, the authors describe how tillage and cultivation practices, manipulations of soil conditions, competitive cultivars, crop diversification, grazing livestock, arthropod and microbial biocontrol agents, and other factors can be used to reduce weed germination, growth, competitive ability, reproduction and dispersal. Special attention is given to the evolutionary challenges that weeds pose and the roles that farmers can play in the development of new weed-management strategies.
