



Grassland: Orchard

Source: IFMAP Michigan Land Cover dataset. Orchard/Vineyards/Nursery includes woody trees not grown for Christmas trees.

Grassland: Orchard

Description

Orchards are agricultural lands with fruit-bearing trees or vines or linear rows of early harvested trees (e.g., tree nurseries) within a managed (usually well-mowed) grassland.

General Condition of Feature

Much of the orchard in the Northern Lower Peninsula is considered to be in fair or good condition as wildlife habitat (~60%). Most of the remaining areas are considered degraded or very degraded (~40%).

Associated Natural Communities

N/A – no native natural communities

Associated Species of Greatest Conservation Need

REPTILES

eastern hognose snake (*Heterodon platirhinos*)

BIRDS

Yellow-billed Cuckoo (*Coccyzus americanus*)

Northern Flicker (*Colaptes auratus*)

Least Flycatcher (*Empidonax minimus*)

Eastern Kingbird (*Tyrannus tyrannus*)

BIRDS cont.

Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*)

Northern Mockingbird (*Mimus polyglottos*)

Vesper Sparrow (*Pooecetes gramineus*)

MAMMALS

woodland vole (*Microtus pinetorum*)

Associated Threats

MODIFICATION OF NATURAL PROCESSES

- Grazing and mowing patterns: Intensive mowing may reduce an orchard's value for wildlife.
- Fragmentation

HABITAT CONVERSION

- Industrial, residential, and recreational development: Orchards are attractive areas to developers and may be converted to golf courses and residential developments.
- Conversion to agriculture: Remaining orchards tend to be intensively managed (e.g., intensive rotation, loss of older trees, loss of potential cavities, less grass) and are less attractive to wildlife.

POLLUTION

- Pesticides and herbicides

BIOLOGICAL INTERACTIONS

- Invasive plants and animals: House cats and other pets from nearby residential areas may predate native wildlife.

Conservation Actions Needed [Threats addressed]

LAND, WATER & SPECIES MANAGEMENT

- Institute invasive species monitoring, prevention and control programs. [Invasive plants and animals]

LAW & POLICY

- Work with municipalities to promote planning and zoning insuring adequate protection for active and abandoned orchards or their conversion to features that have greater wildlife value. [Fragmentation; Industrial, residential and recreational development]

EDUCATION & AWARENESS

- Promote orchard maintenance practices that reduce mowing and favor less intensive management. [Grazing and mowing patterns; Pesticides and herbicides]

Research and Survey Needs

- An inventory needs to be conducted to determine the location, condition, and size of orchards.
- Study the effects of timing and intensity of orchard management on the wildlife value of these systems. Are there other variables associated with orchard management that affect their wildlife value?
- Examine economic and wildlife impacts of changes in management techniques.
- Compare the impacts of mowing (cutting without biomass removal) with haying (cutting with biomass removal).
- Determine how orchard management has changed since its inception in the Northern Lower Peninsula. Have the species planted or management techniques changed? How has this altered the value of orchards for wildlife?
- Evaluate the impact of wildlife depredation on orchard plants. Develop techniques to reduce depredation and quantify their effectiveness.
- Assess the importance of orchards as wildlife habitat.
- Evaluate the fate of orchards after establishment. How often do Christmas tree plantings get neglected, remain unharvested, and transition to forested feature types? How does the wildlife value of orchards change as they age?

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TERRESTRIAL SYSTEMS: NORTHERN LOWER PENINSULA

- What is the impact of Destructive Insects and Plant Disease Act No. 72, Public Acts 1945 on the value of orchards to wildlife?

Monitoring

- Track acreage and distribution of orchards using collected county agriculture statistics.
- Track changes in species selected for cultivation. Changes to dwarf varieties may affect the wildlife benefits of orchards.
- Track changes in timing and method of harvest.