



Grassland: Row-crop

Description

Row-cropped areas are agricultural fields that are planted with a single species (usually corn or soybeans) in evenly spaced rows and harvested annually.

General Condition of Feature

Most of the row crop in the Northern Lower Peninsula is considered to be in fair or good condition (~90%) as wildlife habitat. However, row crop is generally not important habitat to most SGCN.

Associated Natural Communities

N/A – no native natural communities

Associated Species of Greatest Conservation Need

BIRDS

Northern Bobwhite (*Colinus virginianus*)
Northern Harrier (*Circus cyaneus*)
Killdeer (*Charadrius vociferus*)
Common Nighthawk (*Chordeiles minor*)
Red-headed Woodpecker (*Melanerpes erythrocephalus*)
Migrant Loggerhead Shrike (*Lanius ludovicianus migrans*)

BIRDS cont.

Purple Martin (*Progne subis*)
Vesper Sparrow (*Pooecetes gramineus*)
Savannah Sparrow (*Passerculus sandwichensis*)

MAMMALS

red bat (*Lasiurus borealis*)
deer mouse (*Peromyscus maniculatus gracilis*)

Associated Threats

HABITAT CONVERSION

- Industrial, residential and recreational development: Conversion pressure leads to residential development.
- Conversion to agriculture: Tillage and harvest practices may contribute to erosion. More intensive farming practices and the growth in commercial farming tend to increase field size, increase disturbance, and alter the value to wildlife.

POLLUTION

- Pesticides and herbicides: Use of insecticides may alter community composition.

EDUCATION

- Social attitudes: There is a cultural shift away from farming and a subsequent loss of family farms.

Conservation Actions Needed [Threats addressed]

LAW & POLICY

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

EDUCATION & AWARENESS

- Promote agricultural practices that minimize the use of chemical pest control and intensive tillage practices that exacerbate erosion. [Pesticides and herbicides]
- Provide training on developing agricultural strategies to support retention of family farms. [Conversion to agriculture; Social attitudes]

Research and Survey Needs

- Determine the impact of soil homogenization on wildlife species diversity.
- Determine the impact on microtopography on wildlife species diversity. Agricultural practices tend to level land, flattening hills and filling potholes, resulting in relocation of topsoil and exposure of soil substrates. How great is this effect across the landscape? What are the implications for restoration of natural features where this has occurred?
- Study the effects of timing and method of harvest and cultivation on the wildlife value of these systems. Are there other variables associated with harvest and cultivation that affect their wildlife value? Are there differences in wildlife value between spring plowing, fall plowing, and no-till practices?
- Determine the impacts of herbicide and pesticide use on wildlife. Examine the impacts of genetically engineered crops.
- Determine the effects of offsetting high impact tilling practices with higher herbicide use. Is there a combination of tilling and herbicide use which optimizes wildlife value and economic value?
- Evaluate the impacts on wildlife value of crop rotation. How prevalent is crop rotation? Is the type of crop planted significant?
- Determine the value of these systems to migrating wildlife. How is value affected by farm management practices?

Monitoring

- Track changes in agricultural practices across the landscape.

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- Track fall tillage practices.
- Track economic incentives, locally and nationally, and their impact on crop selection.