



Grassland: Row-crop

Description

Row-crop 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 Eastern Upper Peninsula is considered to be in fair or good condition (~95%). Row crop is an uncommon feature in the region.

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*)

BIRDS cont.

Purple Martin (*Progne subis*)
Savannah Sparrow (*Passerculus sandwichensis*)

MAMMALS

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

Associated Threats

HABITAT CONVERSION

- Industrial, residential and recreational development: Rising beef or milk prices may result in the conversion of row crop to pasture or hayland.
- Incompatible natural resource management: Limits on baiting of wildlife may induce some landowners to convert land under cultivation for bait crops to other uses.

POLLUTION

- Pesticides and herbicides

OTHER

- Historic status/current abundance: Row crops are uncommon in the Eastern Upper Peninsula and were not common historically.

Conservation Actions Needed [Threats addressed]

EDUCATION & AWARENESS

- Work with land managers to develop priorities for row crop cultivation. [Pesticides and herbicides; Incompatible natural resource management]
- Promote agricultural practices which minimize the use of chemical pesticides and herbicides. [Pesticides and herbicides]

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 where this has occurred?
- Study the effects of timing and method of harvest and cultivation on the value to wildlife of these systems. Are there other variables associated with harvest and cultivation that affect their value to wildlife? Are there differences in the value to wildlife between spring plowing, fall plowing, and no-till practices?
- Determine the impacts on wildlife of herbicide and pesticide use. Examine the impacts of genetically engineered crops. How do increased levels of fertilization impact these systems?
- Determine the effects of offsetting high impact tilling practices with higher herbicide use. Is there a combination of tilling and herbicide use which optimizes value to wildlife and economic value?
- Evaluate the impacts of crop rotation on value to wildlife. 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.
- Track fall tillage practices.
- Track economic incentives, locally and nationally, and their impact on crop selection.