



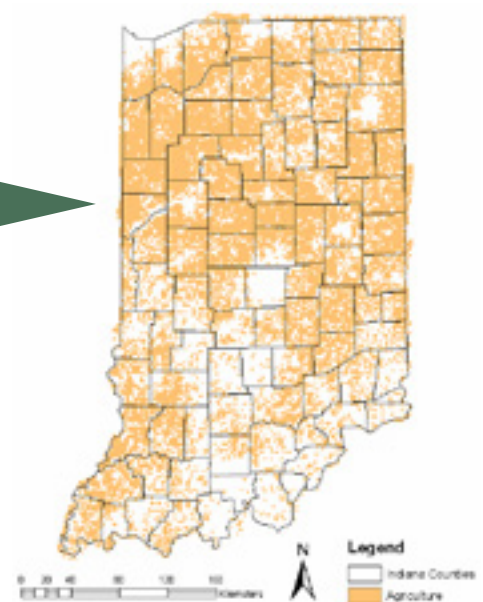
AGRICULTURE HABITAT SUMMARY



Agricultural habitat is defined as lands devoted to commodity production, including intensively managed non-native grasses, row crops, fruit and nut-bearing trees. Nearly 55% of Indiana is agriculture.



More than half of Indiana's land area is classified as agriculture. Agricultural areas are represented at right by the dots throughout the state.



Indiana's State Wildlife Action Plan

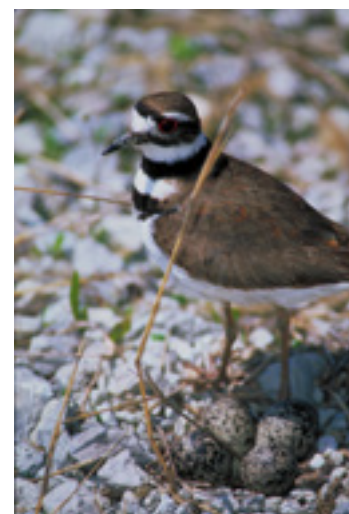
Representative Species of Agriculture

The agricultural habitat guild is represented by several species. These representative species “paint a reasonable mental picture” of agriculture.

Western Harvest Mouse
Brown-headed Cowbird
Horned Lark

Killdeer
Tiger Salamander
European Starling

Eastern Bluebird
Eastern Milksnake
Common (Black) Kingsnake



From left to right: *Eastern Bluebird, Eastern Milksnake, and Killdeer*

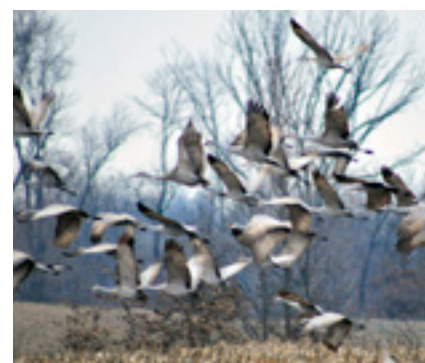
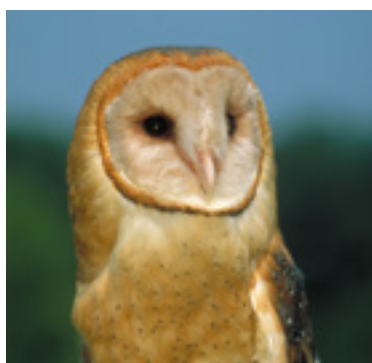
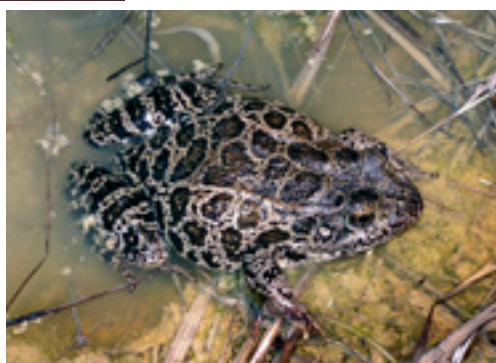
Species of Greatest Conservation Need (SGCN) in Agriculture

SGCN are animal species whose populations are rare, declining, or vulnerable.

Crawfish Frog
Eastern Spadefoot

Northern Leopard Frog
Plains Leopard Frog
Barn Owl

Sandhill Crane
Ornate Box Turtle



From left to right: *Crawfish Frog, Barn Owl, and Sandhill Cranes*

Threats to Agriculture

- Habitat fragmentation
- Habitat degradation
- Commercial or residential development (sprawl)
- Agricultural/forestry practices
- Successional change
- Mining/acidification
- Drainage practices (stormwater runoff)
- Invasive/non-native species
- Counterproductive financial incentives or regulations
- Point source pollution (continuing)

High-Priority Conservation Actions for Agriculture

Habitat protection through regulation

- Work with the State Chemist Office and others to develop herbicide and pesticide label directions that are protective of SGCN.
- Support compliance with all state and federal environmental regulations relative to agricultural lands.

Habitat protection on public lands

- Support the use of agricultural/environmental BMPs on public lands to support the conservation of SGCN as a demonstration for private agricultural interest.
- Ensure herbicides and pesticides are applied according to label directions and to avoid contaminating the aquatic environments in which all amphibians and the species that depend upon them.

Habitat restoration on public lands

- Encourage the use of restoration programs such as Farm Bill programs on public agricultural lands.

Habitat protection incentives (financial)

- Support programs and practices, such as the Farm Bill Programs, that promote the use of soil and wildlife conservation BMPs for the benefit of SGCN.

Habitat restoration incentives (financial)

- Promote programs to encourage diversified agriculture, especially pasture, hay fields, and idle areas, to benefit barn owls and other grassland birds.
- Discourage fall tilling of row-crop fields in order to provide fall and winter foods (waste grain, weed seeds) for sandhill cranes and other wildlife species.

Artificial habitat creation (artificial reefs, nesting platforms)

- Support the creation and protection of riparian habitat and vernal pools for the crawfish frog, Eastern spadefoot toad, Northern leopard frog and plains leopard frog. The crawfish frog, Eastern spadefoot toad, Northern leopard frog, and plains leopard frog could be conserved in this environment by protecting vernal pools and riparian corridors. Additionally, amphibian species can be better conserved if herbicides and pesticides are applied in the correct doses and not allowed to enter nearby aquatic environments.
- Re-vegetate sandy hills near farmland with native grasses to provide hibernation sites and refuges from farm equipment for ornate box turtles.
- Provide nest boxes in areas with adequate grasslands to encourage nesting by barn owls and American kestrels.

Cooperative land management agreements (conservation easements)

- Promote the use of conservation easements to provide for the protection of significant habitat types, patches or corridors (riparian, wetland, travel corridors, etc.) in farmlands for all SGCN.

Adaptive Management

- Modify survey and monitoring plans, research, and other conservation actions and activities in response to new information to improve habitat conservation efficiency for SGCN.

Threats to SGCN in Agriculture

- Habitat loss (breeding range)
- Dependence on irregular resources (cyclical annual variations) (e.g., food, water, habitat limited due to annual variations in availability)
- Habitat loss (feeding/foraging areas)
- Predators (native or domesticated)
- Invasive/non-native species
- Bioaccumulation of contaminants
- Small native range (high endemism)
- Near limits of natural geographic range
- High sensitivity to pollution
- Dependence on other species (mutualism, pollinators)

High-Priority Conservation Actions for SGCN in Agriculture

Habitat Protection

- Provide technical support to rural planning efforts to retain wildlife values of rural landscapes.

Exotic/invasive species control

- Work with the agricultural industry to avoid and minimize the use and spread of exotic invasive species to conserve more natural habitats for SGCN.

Adaptive Management

- Modify survey and monitoring, research and other conservation actions and activities in response to new information to improve conservation efficiency for SGCN.

