

Wildlife and Agriculture

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Agriculture-Wildlife Issues

- Impacts of agriculture on wildlife
 - farming practices affect habitat
 - crops as food & cover
 - effects of agrichemicals
- Impacts of wildlife on agriculture
 - crop damage

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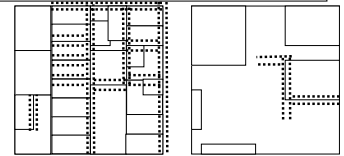
Agricultural Impacts on Wildlife

- Draining wetlands
- Prior to WWII
 - small plot size
 - high degree of edge
 - fence rows
 - more animal power
 - hay fields & pastures needed
 - slower pace
- WWII and after
 - monocultures
 - increased field size
 - clean farming (no fence rows)
 - more mechanical power
 - less need for hay & pasture
 - direct killing of wildlife

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Changes in Illinois Farms

- Row crop
- Fallow, etc.
- Grasses
- ⋯ Fence row



- Vance (1976): Illinois 1939 -1974
 - loss of 84% of grasslands and brushy fence rows
 - greater prairie chicken nearly extirpated
 - other wildlife impacted
 - bobwhite quail, -78%
 - cottontail rabbit, -96%
 - song bird populations, -90%

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Some Problems With Modern “Clean” Farming

- Tilling soil & removing fencerows increase soil erosion
 - *Currently soil loss is estimated at 1 inch per 30 years, while soil replacement is 1 inch per 1000 years!!!*
- High production leads to low crop prices, forcing small farmers out of business
- Reduction in wildlife habitat
 - hayfields/pastures
 - woodlots
 - fencerows
 - unplowed strips

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Land set-aside programs

- **Soil Bank Program** (1956 - 1969)
 - farmers agree to idle cropland (with plant cover) for 5 0yrs
 - pheasant population doubled in S. Dakota
- **Crop Land Adjustment Program** (1965 - 1977)
 - farmers agree to plant grasses & legumes for 5 0yrs
 - nesting & concealment cover for waterfowl

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Managing Farmland for Wildlife

- **Conservation Tillage-**
 - leave protective amount of crop residue to prevent soil erosion.
 - **Reduced till, No till**
 - plant directly through residue
 - Benefits to farmer = reduces soil loss, reduces fuel costs.
 - Benefits to wildlife
 - cover and food
 - lower nest destruction

Tillage and Waterfowl

- Reduced winter tilling leaves more waste grain available for wildlife
 - Blamed for “short-stopping” – when waterfowl remain further north than traditional wintering grounds

Managing Farmland for Wildlife

- **Field Borders**
 - plant or leave narrow strips of vegetation around perimeter
 - should be ≥ 5 m wide
- **Fence rows and Shelter rows**
 - fence rows are remnants of natural habitat
 - retain or create snags
 - protect from grazing
 - shelter rows
 - used as wind breaks.
 - reduce transpiration water loss & soil erosion
 - both should be managed to maximize vertical stratification

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Managing Farmland for Wildlife

- **Food plots**
 - crops grown for animals
 - useful if food is limiting around farms
 - “lure” wildlife away from crops to be harvested

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Things To Remember

- Clean farming, & its impact on wildlife habitat
- Set-aside programs to retain habitat & reduce crop surpluses
- Croplands as food & cover (+,-)
- Techniques for improving farmlands as habitat

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