By learning more, we can offer better protection

THIRTEEN SPECIES AT RISK ON OUR LAND

ALUS

UPA POUVOIR NOURRIR POUVOIR GRANDIR
Outaouais-Laurentides
L'Union des producteurs agricoles

PROJECT PRESENTATION

The Federation of the Union des producteurs agricoles (UPA) (Agricultural Producers Union) for Outaouais-Laurentides, supported by Environment and Climate Change Canada, is implementing a three-year project (2020-2023) to increase the quality and quantity of available habitats for certain species at risk living in agricultural fields in the Outaouais region. This approach is also part of the ALUS Outaouais program goals to create ecosystem goods and services. The species targeted by the project have legal protection status in Canada (i.e. they are found in appendix 1 of the Species at Risk Act) and these species are considered threatened or endangered throughout Canada. This document aims to make agricultural producers in the Outaouais region aware of good agricultural practices that can help to protect the thirteen species of at-risk animals living in their fields. The Canadian Wildlife Federation oversaw the production and contributed to the writing and editing of this report. If you are interested in learning more about these species and in obtaining personalized recommendations on ways to improve their habitat, please contact an agro-environmental adviser at the Federation of the UPA for Outaouais-Laurentides.

In partnership with :

CANADIAN WILDLIFE FEDERATION

FÉDÉRATION CANADIENNE DE LA FAUNE

THE THIRTEEN TARGETED SPECIES AT RISK

Grassland birds

- Eastern Meadowlark (*Sturnella magna*)
- Bobolink (*Dolichonyx oryzivorus*)
- Golden-winged Warbler (*Vermivora chrysoptera*)
- Eastern Grasshopper Sparrow (*Ammodramus savannarum pratensis*)
- Red-headed Woodpecker (*Melanerpes erythrocephalus*)
- Loggerhead Shrike (Eastern Sub-species) (*Lanius ludovicianus migrans*)
- Barn Swallow (*Hirundo rustica*)

Pollinating insects

- Yellow-banded Bumblebee (*Bombus terricola*)
- Monarch Butterfly (*Danaus plexippus*)

Amphibians and reptiles

- Western Chorus Frog, Great Lakes/St. Lawrence River and the Canadian Shield population (*Pseudacris triseriata)*
- Wood turtle (*Glyptemys insculpta*)
- Blanding's turtle, Great Lakes/St. Lawrence River population (*Emydoidea blandingii*)
- Milk snake (*Lampropeltis triangulum*)

Ce projet a été réalisé avec l'appui financier de :
This project was undertaken with the financial support of:

Environnement et Changement climatique Canada
Environment and Climate Change Canada

Eastern Meadowlark

Hay fields and herbaceous fallow land

Ecological role in the agricultural environment:

Natural predator of crop pest insects

Eastern Meadowlark © Suzanne Southon

HOW CAN WE HELP THEM?

- In plots of land where the species nests, **postpone the first hay mowing until at least July 1** to increase the survival of nests;
- If you must mow before July 1, **mow from the inside to the outside of the field and reduce the mowing speed to under 10 km/hr** to allow the birds to escape to non-mown areas rather than confining them to the middle or in mown sections without any protection;
- **Implement a pasture-rotation system;**
- **Maintain portions of marginal meadows of more than 5 ha;**
- **Create ungrazed reserves until July 1** to reduce the risk of nests being trampled on by livestock.

Bobolink


Bobolink © Carl Savignac

Forage crops, low-density-livestock pastures, herbaceous fallow land

Ecological role in the agricultural environment:

Natural predator of crop pest insects

HOW CAN WE HELP THEM?

- In hay fields where bobolinks nest in abundance, **postpone the first cut until after July 15** to reduce the accidental mortality rate;
- If you must mow before July 15, **cut from the inside to the outside of the field and reduce the mowing speed to under 10 km/hr** to allow the fledglings to escape to uncut areas;
- If you must mow before July 15, **install a flushing bar on the front of the tractor and use a low speed;**
- In pastures occupied by the species, **create non-grazed reserves between May 15 and July 1** to reduce the risk of trampling nests and **allow the herbaceous cover to reach 30 centimeters of growth.**

Golden-winged Warbler

Old fields dominated by shrubs, dense herbaceous and scattered trees.

Ecological role in the agricultural environment:

Natural predator of forests pest insects

Golden-winged Warbler © Mark Peck, PAAD CC BY-NC-SA 2.0

HOW CAN WE HELP THEM?

- **Maintain or restore existing shrubby habitats by at least 0.5 hectares** in fallow land such as marginal pastures, abandoned orchards, and shrubby wetlands on the edge of mature woods to increase nesting habitat area;
- **Create shrubby habitats on the edge of mature forests** by planting shrubs and native grasses to increase nesting habitat area;
- **Avoid livestock grazing within occupied habitats before July 1st** to reduce the risk of nests being stepped on.

Eastern Grasshopper Sparrow


Eastern Grasshopper Sparrow © Jacques Bouvier

Hay fields, pastures, and old fields with little to no shrubs and often with some bare ground in well-drained (often sandy) soil.

Ecological role in the agricultural environment:

Natural predator of crop pests

HOW CAN WE HELP THEM?

- **Maintain portions of marginal meadows (with poor soil) of at least 6 ha** where the species is present;
- In fields occupied by the species, **postpone the first hay cutting until July 15** to avoid destroying nests;
- In hay fields occupied by the species, **create non-grazed areas until July 1** to reduce the risk of nests being stepped on by livestock.

Red-headed woodpecker

Open mature deciduous forest and hedgerows with numerous dead or dying trees

Ecological role in the agricultural environment:

Predator of insects harmful to crops and forests; dispersion of tree nuts

Red-headed Woodpecker © Jacques Bouvier

HOW CAN WE HELP THEM?

- **Maintain mature** woodlands and **hedgerows of at least 3 hectares;**
- **Maintain a high density of dead and/or dying trees** in the existing woodlands and hedgerows;
- **Control invasive exotic plants,** especially buckthorn, in forests and hedgerows to maintain a grassy cover for feeding.

Loggerhead Shrike

(Eastern sub-species)


Loggerhead Shrike © Carl Savignac

Large active pastures with a high density of thorny shrubs (hawthorn).

Ecological role in the agricultural environment:

Predator of insects and rodents harmful to crops

HOW CAN WE HELP THEM?

- **Maintain a high density of thorny shrubs (particularly hawthorn) in active pastures of more than 50 hectares,** especially along hedgerows, forest edges and on old fields or marginal lands;
- **Restore nesting habitats by maintaining a grassy cover in abandoned pastures,** letting livestock graze there from time to time between May and August, and by planting thorny shrubs along hedgerows and forest buffers;
- **Reduce the use of pesticides near the habitat occupied by the species,** especially insecticides and herbicides, to increase insect density.

Barn Swallow

Nest under open structures (barns, sheds, garages, bridges). Feed above wetlands, waterways, hay fields and pastures.

Ecological role in the agricultural environment:

Natural predator of crop pests and biting insects

Barn Swallow © Jacques Bouvier

HOW CAN WE HELP THEM?

- **Keep livestock in pastures** to encourage the abundance of insects;
- **Restore farm buildings** sheltering colonies of barn swallows and maintain them as long as possible;
- **Maintain or restore the most productive habitats** for feeding such as riparian forests, wetlands and hedgerows;
- **Allow inside access to farm buildings** by leaving an opening (~20 centimeters) between April and September;
- **Reduce the use of insecticides in meadows.**

Barn Swallow © Sonia Van Wijk

Yellow-banded Bumblebee

Mixed forests, hedgerows, orchards, hay fields, pastures, field margins, and crops in which flowers are present.

Ecological role in the agricultural environment:

Essential for the reproduction of native plants, trees and varieties of crops.

Yellow-banded Bumblebee © Rob Foster

HOW CAN WE HELP THEM?

- **Enhance hedgerows** by sowing a mix of early-, middle- and late-flowering native plants;
- **Avoid mowing the edges of fields** more than once a year and during the period when the queens fly, i.e. April to June and the Fall;
- **Conserve mature, deciduous woodlands** to maintain feeding habitat;
- **Reduce the use of pesticides,** especially neonicotinoids, in this species' habitat;
- **Implement a rotational system in pasturelands** to increase flowering plant density;
- **Maintain flowering shrub understory in forests;**
- **Do not spray** herbicide or pesticide in cropland adjacent to pollinator strips or field edges while there is wind to reduce the risk of pesticide drift;
- **Create unmowed reserves in hay fields** to increase the availability of nectar-producing plants that flower at different times between May and October.

Monarch Butterfly


Monarch © Sonia Van Wijk

Pastures, hay fields, wetlands, grassy ditches, field margins, old fields and hedgerows where milkweed is abundant.

Ecological role in the agricultural environment:

Pollinates native plants

HOW CAN WE HELP THEM?

- **Reduce the use of pesticides,** especially neonicotinoids, near flowering field margins, wetland margins, fencerows, hay fields, and pastures to increase survival and reproduction;
- As much as possible, **retain less productive land for livestock or forage production;**
- **Create unmowed reserves in pasturelands** to increase the survival of milkweed but also the availability of nectar-producing plants;
- **Avoid mowing the edges of fields more than once a year.** The beginning of Spring would be the most appropriate period;
- **Restore the field margins** by sowing milkweed and a combination of native early-, middle- and late-flowering native plants;
- **Implement a rotational grazing system;**
- **Do not spray** herbicide or pesticide in cropland adjacent to pollinator strips or field edges while there is wind to reduce the risk of pesticide drift;
- **If possible, reduce the density of livestock in pastures** thereby maintaining a higher and more mature cover of nectar-producing plants.

Western Chorus Frog

Great Lakes/St. Lawrence River and the Canadian Shield population

Temporary and shrubby ponds on edge of forests, clearings, flooded pastures, old fields, marshes, swamps, drainage ditches and hay fields.

Ecological role in the agricultural environment:

Consumes a large quantity of insects. A good indicator of the health of habitats buffering agricultural areas

Western Chorus Frog © Nina Stavlund

HOW CAN WE HELP THEM?

- **Maintain known occupied temporary ponds;**
- **Raise mower blades near occupied habitats;**
- **Provide a grassy buffer strip** around known breeding ponds to reduce pesticide and herbicide exposure and protect the pond from higher temperatures;
- **Give preference to providing herbaceous riparian buffer strips** in sites frequented by the species to allow easier dispersal and movements;
- Near known colonies, **reduce or prevent the subterranean and surface drainage** to allow water to drain naturally from agricultural fields.

Wood turtle


Wood turtle © Brittany Crossman

Medium-sized, meandering streams with a mostly sandy bottom, wetlands, riparian forest, hay fields, pastures and old fields.

Ecological role in the agricultural environment:

It plays a role in controlling vegetation and populations of invertebrates.

HOW CAN WE HELP THEM?

- **When possible, avoid converting marginal lands into annual crops** and retain natural habitats within 300 meters of waterways;
- For mown meadows located less than 300 meters from waterways, **use a sickle-bar mower instead of a rotary disk mower;**
- For hay fields located less than 300 meters from waterways, **adjust the height of the disk mower blade to at least 10 centimeters above the ground and drive slowly** (to less than 10 kilometers per hour);
- To protect the turtles on the land, **maintain a non-mown buffer zone of 30 to 50 meters wide at the edge of mown meadows** at the closest point to the waterway or river;
- **Cut the hay fields parallel to the waterway,** starting with the edge farthest from the waterway and avoid work involving machinery in zones where waterways overflow;
- **Leave sandy and gravel banks at the edge of waterways** in their natural state because they are potential egg-laying sites.

Blanding's turtle

Swamps, marshes, beaver ponds, temporary ponds and peat bogs rich in nutrients.

Ecological role in the agricultural environment:

It plays a role in controlling vegetation and insects.

Blanding's turtle © FCF/CWF

HOW CAN WE HELP THEM?

- **When possible, avoid converting marginal lands into annual crops** and retain natural habitats within 300 meters of waterways;
- For mown meadows located less than 300 meters from waterways, **use a sickle-bar mower instead of a rotary disk mower;**
- For hay fields located less than 300 meters from waterways, **adjust the height of the disk mower blade to at least 10 centimeters above the ground and drive slowly** (to less than 10 kilometers per hour);
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- **Cut the hay fields parallel to the waterway,** starting with the edge farthest from the waterway and avoid work involving machinery in zones where waterways overflow;
- **Leave sandy and gravel banks at the edge of waterways** in their natural state because they are potential egg-laying sites.

Milk snake


Milk snake © Carl Savignac

Near agricultural buildings, edges of wooded areas, hay fields, pastures, fallow land and rocky knolls.

Ecological role in the agricultural environment:

Major predator of small rodents, reptiles, amphibians and insects.

HOW CAN WE HELP THEM?

- **Do not chase after them and avoid stepping on them** when they are on the path because this species is not harmful to humans;
- **Maintain and look after old barns and other farm buildings** for as long as possible to provide a habitat;
- **Create basking habitats** by creating piles of rocks on the edge of a field (at least 0.5 meter high and 2 meters in diameter) or piles of branches (1 x 2 meters);
- **Postpone hay cutting** so that it takes place during the hottest periods of the day when snakes are not in the fields;
- If you must cut hay fields between May and September, **adopt a centrifugal mowing pattern,** i.e. start from the middle of a field and work toward the edges and drive slowly, so that the snakes can escape to uncut areas.

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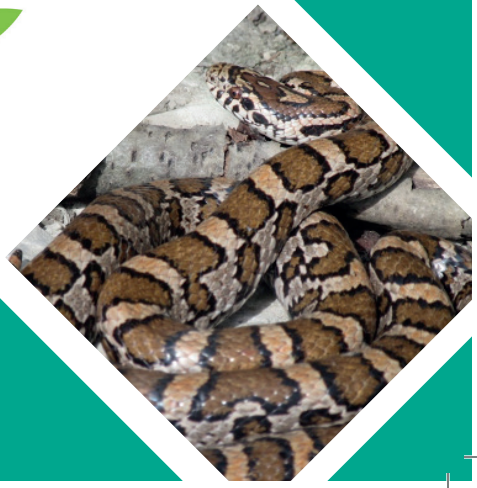

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