INFOSHEET #23

WOODLANDS AND WILDLIFE

How to address concerns identified in your Environmental Farm Plan Worksheet #23

environmental farm plan
sustainably farmed

Based on Environmental Farm Plan Workbook, 4th ed. 2013

This infosheet outlines options to address concerns identified in your Environmental Farm Plan (EFP) as they relate to woodlands and wildlife.

All options are classed as **Actions** or **Compensating Factors**.

- **Actions** address the identified concern, and will change the EFP rating to (3) or Best (4).
- **Compensating Factors** are alternatives that will adequately address the concern, but will not change the rating in the EFP worksheet.

In most cases, you'll need more information before choosing and implementing options. Sources for more information are noted at the end of this infosheet.

For help with technical terms, please see the full glossary in your EFP Workbook.

Sustainable Canadian Agricultural Partnership
Ontario
Canada

WOODLOTS

23–1. Management

BACKGROUND

A woodlot offers environmental and economic benefits.

A woodlot benefits the environment in several ways, including oxygen production, transference of carbon to wood, water table maintenance, and reduction of soil and water runoff.

Clearing a woodlot for intensive agriculture can put the fragile land at risk from wind and water erosion. In dry areas, woodlot removal may cause soil loss and water tables to drop. In wet areas, water tables may rise to the surface.

In a well-managed woodlot, trees can be incorporated into the farm operation (agroforestry), offering value on and off the farm. Trees can be used for veneer, timber, fuel wood, posts, poles, sugar products, nuts, etc.

Having trees marked by a forestry professional is an important part of a woodlot management plan. The dot indicates a timber tree to be harvested.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Develop and follow a forest management plan for profit:

- include wildlife habitat and environmental protection as integral parts of the plan
- determine the potential of all woodlands as woodlots, conifer plantations, treed swamps and mixed bush, and match these with your needs and expectations
- target the desirable tree species and establish the overall purpose for the woodlot management plan – e.g. timber, maple syrup or speciality woods
  - protect species at risk; it is illegal to harm or kill them as stated in the Species at Risk Act, 2007
- follow your management plan with consideration for tree stand condition and intensity of previous harvests
- use a standing timber sale agreement when marketing wood for sale in order to receive full value for the trees harvested
- use the skills of a registered professional forester (RPF) to assist with:
  - hiring reputable contractors
  - marking and selection of wood for sale
  - arranging what is for sale
  - monitoring the setting up of timber sale agreements
  - overseeing harvest operations
  - reviewing and updating your forest management plan often (minimum of every 10 years).

Don't forget to select the trees for harvest based on your management plan objectives. Take some valuable, mature or defective trees, but not more than 30% of trees as they increase in value rapidly as they mature.

OPTION 2 – ACTION

Minimize the damage to the woodlot environment and the standing timber by:

- designing your access roads, stream crossings, landings and skid trails to minimize damage from soil erosion and compaction
- follow contours where possible to minimize damage to the remaining growing stock and rehabilitate damaged areas caused by skidding and hauling
- prevent water from flowing directly into a stream
- avoid steep areas of no more than 12% slope for roads and 20% for skid trails
- maintain buffers of natural vegetation between the cut areas, or establish timber sale landings between the cut areas and surface water.

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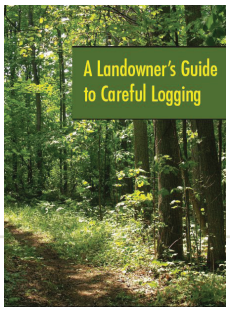
23–1. Management (continued)

BACKGROUND	WHAT CAN YOU DO?
(See previous page.)  A Landowner's Guide to Careful Logging **by the Ontario Woodlot Association addresses best practices such as planning harvest operations, including working around water (stream crossings), forest access roads, skid trails, logging operations, as well as post-harvest activities.**	**OPTION 3 – COMPENSATING FACTOR** **Acquire a greater understanding of the value of your woodlands:** • join a woodlot association or forestry certification group in your area • take forestry courses, including a tree-marking course. **Contact the municipality in which your forest is situated to obtain a copy of the tree-cutting bylaw:** • note that non-compliance could result in a replanting order, fines, etc. • ensure your forestry professional is aware of pertinent tree-cutting bylaws.

23–2. Stand structure (multi-layered canopies)

BACKGROUND	WHAT CAN YOU DO?
A woodland that has several levels of vegetation with forest floor plants and shrubs under tree species of differing heights and age usually provides opportunities for a variety of income sources. This kind of woodland also presents diverse wildlife habitat opportunities.	**OPTION 1 – ACTION** **Manage your woodland stand structure for long-term harvest potential:** • use a management system that creates opportunities for harvesting multiple products over time, e.g. fuel wood, lumber and maple syrup. **OPTION 2 – ACTION** **Develop a forest management plan with a registered professional forester (RPF) who pre-evaluates soil and site conditions to determine:** • the most suitable tree species for planting and stocking rates per hectare (e.g. 2,400 trees/ha) • tree growth • tree survival • average time between thinning.

Existing farm woodlots brim with potential: for timber, fuel wood, specialty products, income in kind, as well as important environmental and wildlife benefits.

A diversity of tree sizes and stages will provide excellent value for future timber harvests and good habitat for a diversity of wildlife species.

23–3. Timing and impact of forest harvest operations

BACKGROUND

Stick to the goals and objectives of your management plan, minimize environmental damage, maintain species diversity, and retain significant wildlife habitats.

Any damage reduces future economic value and growth rate of the injured trees.

This timber harvest was done during an April thaw – resulting in rutted trails, compacted forest soils, and increased damage to remaining trees.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Limit the damage caused by harvesting on remaining standing tree stems and wildlife:

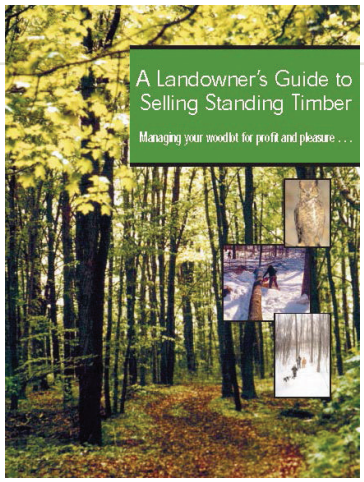
- conduct forest harvests so that damage is limited to 5–10%, and the remaining and acceptable growing stock is free of major damage
- aim for 0% damage to remaining trees with reference in the agreement (contract) to a levying of financial damages for specific trees that are significantly damaged
- specify that no more than two logs will be skidded together at any time and that logs will be winched to the skidder rather than backing the skidder to the log
- harvest with due consideration for wildlife breeding seasons.

Reduce root and stem damage as well as soil compaction significantly by hiring a logger who works with horses or smaller equipment rather than wider and larger equipment.

Minimize the impact of forest harvest operations, and protect your woodland investment and personal liability:

- obtain fair prices for woodland products by knowing timber volumes for sale
- host a viewing period whereby harvesting contractors may visit, view and offer in writing bids on products for sale
- ensure that all forest harvest operators offer proof of liability insurance
- refuse to start or continue a harvest during spring breakup, abnormal thaws or when operations are causing damage, despite pressure to get the job done
- inspect the woodlot during and after harvest for damage to the remaining trees
- meet early and often with the logging contractor during the harvest to make them aware of your interest in their forest harvest operations.

This fuel wood harvest was done in March when there was snow cover and frozen ground. These conditions resulted in little impact on trails or forest soils and minimal damage to remaining trees.



This publication and other resources, including a directory of forestry services for landowners, are available through the Ontario Woodlot Association's website:

www.ontariowoodlot.com

23–4. Woodlot health

BACKGROUND

Woodlot health cannot be thoroughly evaluated without actually going through the woodlot to observe conditions. Things like pests, disease, weather damage or unauthorized use can be missed unless scouting occurs on a regular basis.

Woodlot visits several times a year can also reveal the benefits of a management harvest to remove damaged, deformed, diseased, crowded or lower-value species. You should be able to see the progress of crop trees due to improved growing conditions for them.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Create a healthy woodland ready for regular harvest and/or enjoyment by:

- managing for a diversity of tree species and age classes
- checking for forest pests or disease and the presence of invasive species
- scouting (three or four times per year) for unauthorized use/recreational activities
- looking for the presence of weather-related effects of drought, ice storms, flooding, wind damage and fire
- monitoring, and marking/re-marking woodland property lines to reduce the chances of trespassing and illegal harvesting activities.

OPTION 2 – ACTION

Inspect your woodlands after each harvest for:

- damage to the remaining forest
- harvest wounds on trees, which can allow the entry of diseases and increase the chance of decay by more than 50% within 20 years of the harvest.

Consult the Ontario Woodlot Association (www.ontariowoodlot.com) or your local office of the Ontario Ministry of Natural Resources and Forestry for contractors using appropriate equipment for southern Ontario woodlots.

This line fence tree (as evidenced by old fence wire) was marked with paint and plastic tape to show the boundary between two woodlots when the landowner was advised that the neighbour was planning to harvest their woodlot.

BMP publications offer background, options, tips and practical advice for managing on-farm natural resources to meet your goals. Most BMPs in one facet of your operation will complement efforts in other areas.

23–5. Woodlot and livestock access

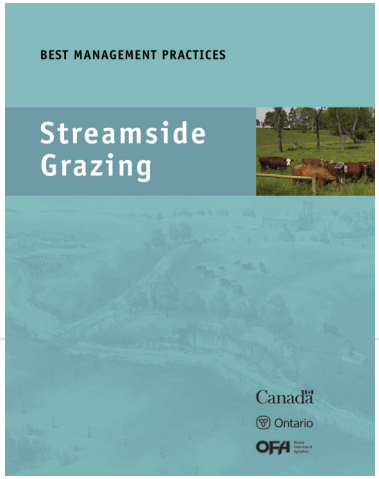
BACKGROUND

Intensive livestock grazing in woodlands over long periods of time (10–20 years) causes irreparable damage. Grazing destroys tree seedlings, undergrowth vegetation, and wildlife habitat.

Livestock compact the soil and damage tree roots, tree trunks and foliage by trampling and constant rubbing. Cattle grazing in woodlots eliminate the forest understory (seedlings and shrubs) and potential wildlife habitat.

This previously grazed woodlot is slowly starting to regenerate undergrowth after the livestock were removed.

This BMP publication offers options for diverting grazing livestock from sensitive areas. It can help you develop a workable grazing management plan for your property to balance production and environmental goals.



WHAT CAN YOU DO?

OPTION 1 – ACTION

Establish a grazing management plan (e.g. Rotational Grazing Management Plan) that eliminates livestock access and outdoor confinement areas from your woodlot.

If elimination of livestock access is not possible:

Restrict cattle access to less than 10% of the whole woodlot or permit access to 20% or less of the outer edge of the woodlot.

Other plan actions include:

- remove livestock from woodlots when the soil is thawing
- discourage cattle from grazing in swampy areas by providing alternative shade
- plant shade trees in pastures and fence the woodlands to restrict access
- place water, mineral and feed well away from woodland areas
- install tree guards and fencing that offer adequate protection for trees from livestock.

OPTION 2 – COMPENSATING FACTOR

If shelter is otherwise unavailable:

Provide winter livestock access for low-density grazing systems such as cow-calf operations – with the following precautions:

- allow access only when the soil is frozen
- remove livestock prior to the soil thawing
- restrict access to purpose-built tree plantings.

OPTION 3 – COMPENSATING FACTOR

If shelter is otherwise unavailable:

Create designated shelter areas for livestock in forested situations:

- plant marginal lands to conifers and/or hardwoods
- plant treed shelter bands around the pasture lands
- delay livestock access until the trees are well-established at 2 m (5 ft) or more
- control the grazing density to reduce damage.

Be aware of the sacrifices caused by provision of shelter:

- compaction of forest soils
- lost opportunities to create a forest condition, harvest forest products and grow mature trees with merchantable value.

23–6. Woodland invasive species control

BACKGROUND

Most invasive plants and insects have a very detrimental effect on woodlands. Some invasive plants, if allowed to establish and proliferate, will form a dense canopy that does not permit other woodland plants and trees to establish.

The result is very little regeneration of the desired woodland trees and decreased biodiversity. Over time as the trees mature and die or are harvested, there will be very few desirable trees to replace them.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Be knowledgeable about invasive woodland plant species:

- learn how to identify them
- become knowledgeable about methods to control them or know who to contact for recommendations
- plant native rather than horticultural varieties of trees and shrubs when practical
- check the farm woodlands and wildlife habitat connections (fencerows, stream corridors etc.) preferably once a year or at least every three years, to determine if invasive species are present (e.g. Buckthorn/garlic mustard).

Emerald ash borer larvae feed on the tree beneath the bark, leaving meandering tunnels that eventually girdle the tree and kill it.

The emerald ash borer is an invasive insect species that was first found in North America in June 2002 and is now found throughout much of Essex County and part of Chatham-Kent in Ontario.

Researchers, regulators, and urban foresters are in a race to halt the spread of the insect long enough to develop effective control measures to save native ash trees, an important hardwood species in North America.

23–7. Wildlife habitat planning/farm and woodlot

BACKGROUND

Many species of wildlife depend on the forest. Incorporate their habitats into your woodland management plan.

Occasionally wildlife may cause conflicts with crop or livestock production or become a nuisance. When this happens, it is important to be able to manage them, e.g. predator fencing, guard animals, hunting, trapping.

A healthy woodlot will provide support for numerous species of wildlife, like this red-tailed hawk nesting in a maple woodlot.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Incorporate wildlife objectives in your forest management plan. This will help ensure your forest is managed with diversity in mind. Consider the following:

- consult a biologist who can suggest measures to support numerous wildlife and plant species
- recognize the importance of a large variety of habitat features such as woodland ponds, wetlands, downed woody debris, mast-producing trees and cavity trees, as well as woodland stream edges and woodland springs
- use logging access roads and skidding trails for multi-purpose activities such as hiking and recreational trails
- where possible, maintain wildlife viewing features (e.g. vernal pools and treed swamps).

Remember not to drastically alter the plant and animal habitats and species that are protected by legislation such as the federal Species at Risk Act and the provincial Endangered Species Act.

OPTION 2 – ACTION

Manage nuisance wildlife issues:

- allow controlled hunting to mitigate excessive and unwanted wildlife damage in agricultural and woodland areas
- plan your crop rotation to discourage crop predation where fields are close to your woodlot, and encourage your neighbours to do the same.

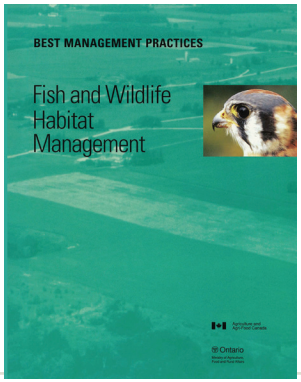
For more information, see 23–10 on page 9 of this infosheet.

23–8 corridors, fencerows, windbreaks and grasslands

BACKGROUND

Wildlife tend to travel along farm field edges (fencerows), woodlands and wetlands. They require protected corridors of permanent vegetation of varying widths.

Features such as forested ravines, treed fencerows, shelterbelts, windbreaks, buffer strips, and treed farm lanes are corridors that permit wildlife to move with protection.



Without these corridors, animals are forced to travel unprotected between large natural areas or remain isolated within smaller ones. Smaller natural areas increase the chances for disease, predation, and potential for wildlife conflicts and nuisance problems.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Create corridors with a range of diversified habitats for wildlife through a network of windbreaks and buffer strips (which will also assist with controlling farmland pests, e.g. rodents):

- interconnect existing corridors of natural areas, fencerows, windbreaks or buffers to woodlands
- ensure that connected corridors contain native vegetation that is similar to the areas being connected
- practise effective weed control particularly in the first year, and use tree guards where needed to help trees and shrubs establish and grow quickly
- leave rock piles alone or create them by stone picking and use them for snakes to help control rodents and other farm pests
- create brush piles from tree tops and fallen logs of woodlot harvest materials for additional habitat
- install nesting platforms and leave 4–6 snag trees per hectare (10–15 per ac) to attract birds of prey
- create openings or plant nut trees (e.g. beech, oak, hickory) and catkin-producing trees (e.g. birch) in upland areas.

Don't forget to water new plantings in dry weather, particularly in the first year of establishment. Monitor corridors for invasive species such as buckthorn, Norway maple and garlic mustard.

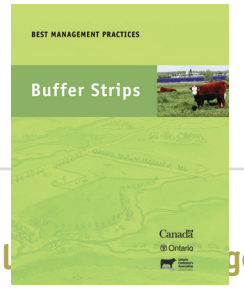
Wildlife such as these wild turkeys use treed fencerows for cover while moving from one woodlot to another.

23–9. Wildlife habitats in buffers

BACKGROUND

Well-planned buffer strips can be excellent wildlife corridors. Buffers adjacent to watercourses trap and treat sediments (greater buffer width is better), provide shade (water temperature regulator), create nesting for waterfowl, help prevent erosion, increase the soil's water-holding capacity, and improve water quality.

Next to cropland, buffers provide habitat for pollinating insects (valuable for crop production), birds and mammals, and also create food and shelter.



This BMP book explains how to establish, maintain, and improve buffer strips.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Establish extensive or medium-sized buffers beside wet areas and farm fields for a variety of functions:

- implement a wide, treed buffer strip wherever feasible – multiple tree rows are more effective than single rows
- plant rapidly growing tree species that offer shade sooner rather than later
- select the most appropriate species for the soil type and moisture conditions.

Remember to protect buffer areas when doing field operations (such as pesticide or nutrient application,) especially beside surface water. Refer to Infosheet #22 Wetlands and Wildlife Ponds for more information, including pertinent regulations (e.g. municipal drains).

The extensive buffers between the river and farm fields provide a range of wildlife habitat, and also filter surface water before it reaches the river.

23–10. Problem (nuisance) wil ges

BACKGROUND

When habitat requirements aren't met, certain wildlife species may turn to crops, livestock, or farmstead buildings to satisfy their needs. They can cause direct losses in yields by consumption, but also indirect losses by spreading disease (e.g. rabies) and destroying habitat.

These Great Pyrenees guard dog pups are part of a strategic plan to control death loss from coyotes on a commercial sheep farm.

Ensure that plant and animal habitats and species protected by federal and provincial species-at-risk legislation are not unwittingly destroyed. Use hunting and trapping in accordance with the Fish and Wildlife Conservation Act.

Before taking any action, call the Ministry of Natural Resources and Forestry to ensure your plans are legal.

WHAT CAN YOU DO?

OPTION 1 – ACTION

Prepare for possible nuisance wildlife damages and losses:

- establish a strategic plan by consulting with a biologist
- update and fine–tune the strategic plan on a regular basis
- maintain an up-to-date list of qualified professionals able to deal with (e.g. trap/remove, exterminate) nuisance wildlife.

Ensure that the correct permits are obtained to remove or kill nuisance wildlife, or when modifying on-farm structures that may house species-at-risk.

Interactions among wildlife species are complex. For example, if lambs are lost to coyotes and all coyotes are subsequently killed, rodent problems such as groundhogs in crop fields may become a problem. Often, new coyotes will re-colonize areas left vacant when others are removed.

OPTION 2 – ACTION

Before undertaking measures to reduce wildlife nuisance issues, take the following important steps:

- establish a comprehensive wildlife management program for nuisance species (e.g. fencing, guard animals)
- implement preventative measures (e.g. deterring geese from crops by allowing grassed buffers to grow tall) prior to problems developing
- assess and remove, when possible, sources of food and habitat for nuisance wildlife.

After creating a wildlife management program, take these steps towards actively resolving the particular nuisance problem:

- verify the problem – try to find the animal itself by looking for dens, burrows, roosting areas, tracks, droppings, evidence of feeding, tooth/claw marks and patterns of pecking
- determine whether the problem is tolerable
  - tolerable – assess how much the damage is costing, determine the cost of a preventative measure, and assess the potential for the problem to worsen, lessen, or disappear
  - intolerable – consider removal and preventative measures to help control and balance the presence of nuisance wildlife
- identify solutions – e.g. encourage needed predators, use irritants (sprays, lights, sound), fix entry holes into buildings, use scare and lure crop techniques (sometimes only effective in the short term), fencing
  - successful solutions – continue implementing wildlife management program
  - unsuccessful solutions – if preventative measures don't work, use non-lethal and lethal control measures that adhere to the Fish and Wildlife Conservation Act
- consider the big picture – re-evaluate the scope of the problem
  - assess the problem on a landscape scale (neighbouring farms), as complex relationships exist between wildlife, agriculture, and biological components.

Discouraging nuisance wildlife requires that you stay current with habitats and control measures. Review and update your strategic plan regularly – preferably every two years.

FARMSTEAD AREAS

23–11. Shelterbelts and farmstead plantings

BACKGROUND	WHAT CAN YOU DO?
Farmsteads and structures (barns) with sufficient shelterbelts and windbreaks offer energy savings, crop protection, odour control, decreased snow buildup, and habitat for diverse species. Farmstead plantings help increase real estate values by creating esthetically pleasing landscapes.	**OPTION 1 – ACTION** **When creating efficient farmstead plantings and habitats, use native species where possible. Also:** • plan for shaded areas on the south and west sides of buildings or around livestock facilities for odour control • plant shelterbelts (3–6 rows) to protect the farmstead from prevailing winds and reduce energy costs – they also reduce wind chill in winter, lower snow-removal costs, and increase shade in summer • plant in this sequence: 1) shelterbelts; 2) shade trees and shrubs; 3) ground-covering plants and the other smaller perennials • plant multi-row field windbreaks when possible, or a single row on 50–80% of crop field sites with a mixture of native species (hardwoods, conifers and shrubs) to provide excellent wind erosion protection • ensure garden and non-native species (invasive species) such as Norway maple or garlic mustard do not escape into fencerows and wooded areas • attract feeding birds by choosing from a selection of wildlife shrubs like red osier dogwood, elderberry, highbush cranberry, nannyberry, serviceberry, pin cherry and choke cherry etc. • plant at an appropriate distance around the house to allow for unhindered growth and prevent conflicts with the foundation and walls • plant evergreen trees and hardwoods as yard trees along with shrubs to offer wind protection, cover and food for wildlife.

Farmstead shelterbelts will reduce wind speed near farm buildings – sheltering livestock and homes from storms and cold winds, while also providing habitat for wildlife such as songbirds.

23–12. Resources for wildlife

Bird feeders strategically placed around the farmstead will help attract feeding birds. Do not place bird feeders near windows.

BACKGROUND

Encourage birds that help to control garden insects by building habitat structures in strategic locations. The provision of fresh water year-round such as garden ponds and bird baths (heated throughout winter months) are especially appreciated by songbirds.

A nest box placed away from buildings will draw smaller wildlife and help to avoid conflict with farming activities.

WHAT CAN YOU DO?

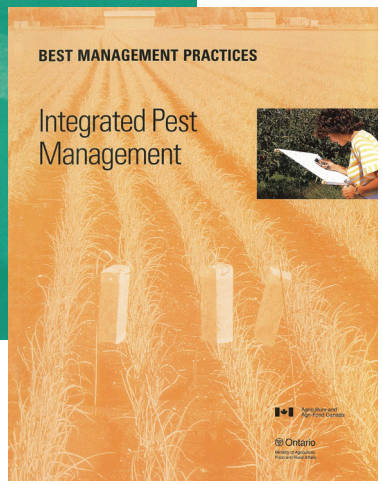
OPTION 1 – ACTION

Increase wildlife viewing opportunities around the farmstead:

- prevent domestic animals from accessing bird feeders and birdhouses – one cat kills at least 12 birds annually
- strategically place perches and nest boxes for cavity-nesting birds such as bluebirds, tree swallows and owls, which consume large quantities of insects and mice
- create water sources that are self-sustaining (e.g. garden or farm pond available for songbirds and other species)
- erect nest boxes, feeding stations, and bird baths at sufficient distances from human activities
- place a pond near the farmstead wherever feasible
- prevent domestic dogs and cats from killing songbirds and small beneficial mammals
- repair small cracks and openings with caulking, metal screening, or flashing to exclude wildlife from buildings
- keep the farmstead area free of food and feed waste materials that might be attractive to nuisance animals.

Encourage farmstead wildlife and birds by applying integrated pest management techniques not only to your fields, but to your lawn and garden areas as well.

Healthy fish and wildlife habitat on rural property has many benefits, and BMPs for improving habitat are compatible with cropland BMPs. This publication has many practical suggestions for farmlands, woodlands, wetlands and other transitional areas, and aquatic areas. Prevention and control of nuisance wildlife are also addressed.



This introduction to IPM explains the basics, including pest monitoring, identification, and thresholds. Control measures, including site and crop options, biological control, crop rotation, pest removal, trap crops, and pesticide timing and application, are described.

FOR MORE INFORMATION

Ontario Ministry of Agriculture, Food and Rural Affairs

Many sources of supplementary information are available. Most can be found online at www.ontario.ca/omafra or ordered through ServiceOntario.

BEST MANAGEMENT PRACTICES

BMP publications are excellent sources to better understand on-farm environmental issues and discover a range of proven, practical options to address them. They are available at no charge to Ontario farmers. Below are a few sample titles.
To order, see ServiceOntario information.

Buffer Strips
Controlling Soil Erosion on the Farm
Cropland Drainage
Establishing Tree Cover
Field Crop Production
Fish and Wildlife Habitat Management
Irrigation Management
No-Till: Making it Work
Soil Management
Streamside Grazing
Water Management
Water Wells
Woodlot Management

Inquiries to the Ontario Ministry of Agriculture, Food and Rural Affairs

Agricultural Information Contact Centre
Ph: 1-877-424-1300
Email: ag.info.omafra@ontario.ca
Web: www.ontario.ca/omafra

Ontario Ministry of Natural Resources and Forestry

www.ontario.ca/mnr

Order through ServiceOntario

Online at ServiceOntario Publications –
www.ontario.ca/publications

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416-326-5300
416-325-3408 TTY
1-800-668-9938 Toll-free across Ontario
1-800-268-7095 TTY Toll-free across Ontario

Additional Resources

Conservation Ontario
www.conservationontario.ca
Contact your local Conservation Authority

Ducks Unlimited Canada
www.ducks.ca

Eastern Ontario Model Forest
www.eomf.on.ca

LandOwner Resource Centre
www.lrconline.com

Ontario Soil and Crop Improvement Association
www.ontariosoilcrop.org

Probing Problem Wildlife: An Update on the Wildlife Action Project

Wildlife Wise – a collection of articles about wildlife on the farm, prepared for farm media under OSCIA's direction as part of a communication initiative funded by the Ontario Ministry of Natural Resources and Forestry

Tree Marker Program
www.treemarking.com

Ontario Woodlot Association
www.ontariowoodlot.com

A Landowner's Guide to Careful Logging, 1st edition, 2009

A Landowner's Guide to Selling Standing Timber, Managing your Woodlot for Profit and Pleasure, 2nd edition, 2004

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