UNIVERSITY of GUELPH

The Centre for Land and Water Stewardship

EQUINE GUELPH

Trees and Wildlife in the Equine Landscape

Horse farms are rapidly becoming a more common site in the Southern Ontarian landscape, taking up many more acres of land each year. In 2006, it was estimated that there were approximately 379,412 horses living on 62,000 horse facilities. The number of horses in Ontario increased by 17% between 2001 and 2006. While increasing urbanization in Southern Ontario continues to threaten wildlife habitat and biodiversity, the equine community can help to mitigate this trend. Recently, 68% of horse farm owners reported an interest in doing so by providing more wildlife habitat on their property. There are some easy and economically beneficial conservation practices that can improve the environmental health of your property for your horses and for local wildlife.

Here are some of the aspects of your property that can be enhanced:

1. **Quality of your waterways.**
2. **Comfort of your horses.**
3. **Habitat for song birds, butterflies, and other wildlife.**

1. How do I Improve the Quality of my Waterways?

Having clean water is essential, not only to the health of the ecosystem on your property, but also to your personal health. The pollutants and toxins that reach your waterways don't stop there; they continue on to contaminate your groundwater. This can be quite dangerous to you and your neighbours, especially if well water is used for drinking water. As stated by Conservation Ontario,

"Drinking water sources can be easily contaminated and have a limited tolerance for stress. Long terms problems can develop that are costly or even impossible to correct".

Conservation Ontario, 2005.

It is not difficult to improve the quality of your waterway in order to ensure that groundwater contamination will not occur. Here are some inexpensive and simple hints to improve the quality of your waterways:

- Plant buffer strips of vegetation along streams.
- Plant tree and shrub species that are known to be successful along waterways, including: Willow, Staghorn Sumac, Red-Osier Dogwood and White Birch.
- Fence off waterways to keep out livestock and prevent trampling and mud.
- Store your manure in a closed area: far enough away from your waterways that runoff from the manure will not reach and contaminate them.
- Plant a vegetated buffer strip down slope of your manure piles, in between the manure and any waterways, to filter out any pollutants coming from the manure.

Why will this improve the water quality?

- Trees prevent erosion by stabilizing stream banks. When soil erodes into streams, it clogs fish gills and smothers fish eggs.
- Tree roots filter out sediments, nutrients and manure. Nutrients promote algae growth, reducing the oxygen available to aquatic species.
- Buffer strips shade the water, reducing solar heating. This will significantly cool down the water, creating ideal conditions for species such as Northern Pike, Brook Trout and Brown Trout.
- Vegetation enhances aquatic habitat by reducing the amount of silt that reaches the waterway. Having less silt will expose the floor of the waterway, whether its gravel or other materials, thereby creating prime fish-nesting areas.
- Fences prevent horses from trampling the bank and the streamside vegetation, thereby reducing mud.
- Fences keep out horses, reducing the amount of manure that reaches the water.
- Vegetation provides food, nesting and hiding places for fish and wildlife such as Turtles, Eagles, Herons, Kingfishers and Waterfowl.

2. How do I Increase the Comfort of my Horses

- Plant buffer strips of trees and shrubs around your pastures and paddocks.
- Choose the right native tree species for your pastures as each species differs in their water and soil requirements:

  -For wet soils choose species such as: White Cedar, Black Spruce, Tamarack, Willow, Green Ash, Black Ash, Silver Maple, Black Maple, Honey-Locust and Speckled Alder.

  -For dry soils choose species such as: Sugar Maple, Silver Maple, White Ash, Green Ash, Elm, Trembling Aspen, Large-Tooth Aspen, Beech, Honey-Locust, Balsam Fir, White Spruce, Red Spruce, White Cedar, Eastern Hemlock, Hawthorn, Chestnut, and Staghorn Sumac.
- Consider planting Sugar Maple as it is a commonly used hardwood that grows wide-spreading branches that will extend over the fences and into the fields.
- Build fences around young trees to prevent animals from trampling the trees, crushing roots, and browsing on trunks and branches.
- Plant the trees just outside the fence around the pasture perimeter.

Why do I want to plant trees?

- They provide shelter for horses from cold winter winds.
- They supply shade for horses, thereby increasing their comfort.
- They provide more comfortable living conditions for livestock as trees reduce heat loss from horses in winter and reduce radiant heat off the ground during the summer.
- Buffer strips Consume significant amounts of water, reducing the amount of infection-causing mud on your property.
- Vegetation increases biodiversity by providing great habitat for wildlife and bird species such as Woodpeckers, Chickadees, and Nuthatches.
- Buffer strips filter out pollutants that would normally reach waterways.

Avoid these species that are toxic to horses

~Walnuts (wood shavings)
~Butternuts (wood shavings)
~Poison and White Sumac (fruit)
~Horse Chestnuts (leaves, flowers, nuts)
~White, Red, Black Oak (leaves and acorns)
~Kentucky Coffee Tree (seeds, fruit pulp, leaves)
~Black locust (seeds, leaves, bark, twigs)
~Cherry Species (leaves and twigs)
~Yew (leaves, seeds, twigs)
~Red maples (leaves)
~Pines (needles)

Todd Leuty and Bob Wright. Trees for Horse Pastures. 2007. OMAFRA.

3. How do I Improve Habitat for Songbirds and Butterflies?

Create a variety of habitats to increase biodiversity, including:

1. Grasslands:

- Plant native grasses to provide habitat for bird species such as: Eastern Meadowlark, Song Sparrow, Savannah Sparrow, Barn Swallow, Eastern Bluebird and Bobolink.
- Plant grasses that are native to Ontario, including: Big Bluestem, Broom Sedge, Kalm's Brome Grass, Canada Wild Rye, Scribner's Panic Grass, Switchgrass, Little Bluestem, Indian Grass, Black Oatgrass.
- Plant milkweed to attract the endangered monarch butterfly. Milkweed is the only plant that monarchs will lay their eggs on as it is the only plant that their larvae can eat.
- Provide nest boxes for birds such as Eastern Bluebirds and Barn Swallows and for Bats as well.
- Avoid plants that may be toxic to horses such as Thistles, Buttercup, Burdock, Bristly Foxtail and Wild Mustard.

Did you know?

There are estimated to be only 3 mating pairs of Henslow's Sparrows left in Ontario. They can be reestablished by converting wastelands back into grasslands.

2. Forests:

- Leave cavity trees which can be used as nests by birds such as: Woodpeckers, Owls, Chickadees, Nuthatches and Swallows.
- Leave downed trees to provide habitat for species such as: Salamanders and beneficial Insects.
- Plant trees such as: Black Cherry, Serviceberry, Hawthorn, and Red-Osier Dogwood that will provide berries for interesting species such as Robins and Cedar Waxwings.

3. Fallow Areas:

- Plant rows of trees and shrubs along fence lines, corners of pastures, and along driveways.
- Plant native shrubs that attract birds, including: Red Elderberry and Red Osier Dogwood.
- Leave grasses alongside the hedgerows to increase biodiversity.
- Collect branches, brush and rocks and then stack them to make a pile in a pasture. They provide excellent homes for species such as: Salamanders, Grouse, Toads and Snakes.

Rural areas are under threat from urbanization, resulting in the loss of both agricultural and natural landscapes.

Why do I want to create habitat for these species?

Did you know?

*One bat can eat up to **600** mosquitoes an hour, totaling more than **5000** insects in **ONE** night!*

- Insect-eating birds such as swallows will consume many pest species, including mosquitoes and moths.
- Birds and butterflies are aesthetically pleasing and important to the biodiversity of an area; overall they are a welcomed addition to any farm.
- Predator species such as hawks and owls will provide a natural form of rodent control.
- Hedgerows provide connecting corridors of habitat that protect species from predators as they travel.
- Grasslands are being converted to pastures, resulting in the loss of habitat for many grassland species of birds.

For More Information…

The Centre for Land and Water Stewardship.

Website: http://www.uoguelph.ca/~claws/newsite/index.html

Equine Guelph:

Website: www.equineguelph.ca

Conservation Authorities:

Provide programs and monetary aid to landowners that plan to protect natural resources. They offer grants to help landowners protect natural resources and improve the health and productivity of their lands.

Website: http://conservation-ontario.on.ca/find/index.html

Ontario Ministry of Agriculture, Food & Rural Affairs (OMAFRA):

Offers numerous fact sheets regarding best management practices for farms and how to protect and improve our natural resources. On their website they have a section of fact sheets dedicated to just horse farms.

Websites: - **http://www.omafra.gov.on.ca/english/environment/bmp_books.htm**

-**http://www.omafra.gov.on.ca/english/livestock/index.html#horses**

Ministry of Natural Resources (MNR):

Offers programs such as the Conservation Land Tax Incentive Program (CLTIP) and the Managed Forest Tax Incentive Program (MFTIP) that provide monetary aid to landowners.

Website: http://www.mnr.gov.on.ca/en/STEL02_168319.html

Stewardship Councils:

Website: http://www.ontariostewardship.org/ontarioStewardship/home/osIndex.asp

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