



Find out more about Mark's activities at: www.markcullen.com

Here I have outlined some environmentally friendly tips from farmers that can help you keep your backyard "green" in every way.

Gardeners want to contribute to a sustainable, productive environment too. You may be surprised to learn that many of the stewardship practices used by farmers can be applied with the same objectives in mind in your own gardens. The scale of the projects may differ, but the environmental benefits are evident in both situations.

Farmers have the opportunity to enhance their environmental knowledge through the Environmental Farm Plan (EFP), a voluntary educational program. Through the EFP process, farmers highlight environmental strengths on their farm, identify potential areas of environmental concerns, and set realistic goals and timetables for improvements.



Since moving to the country, I've learned a lot from Ontario farmers and their approach to stewardship. To remain productive, profitable and environmentally sustainable is no

easy task for farm families. Successfully managing the soil, water and air to meet the needs of today, while safeguarding the resource for the needs of future generations, is truly a balancing act that relies on a deep understanding of the science of agriculture.



Since the EFP was introduced in 1993, more than 2/3 of Ontario farm families have participated. These families make daily management decisions affecting several million hectares of land. Hundreds of millions of dollars invested in beneficial management practices by governments and supporting organizations through environmental cost share programs, have been matched by committed farm families. The outstanding success experienced in Ontario has led to similar EFP programs all across Canada.

The Canada-Ontario EFP and the associated cost share programs are supported by Agriculture and Agri-Food Canada, and the Ontario Ministry of Agriculture, Food and Rural Affairs through the Agricultural Policy Framework (APF), a federal, provincial, territorial initiative that aims to make Canada's agricultural sector a world leader in environmentally sustainable production. Farm organizations contribute to the initiative through the Ontario Farm Environmental Coalition. The programs are delivered to farmers by the Ontario Soil and Crop Improvement Association.



Find out more about the EFP at:
Ontario Soil and Crop Improvement Association

1 Stone Road West, 1st Floor
Guelph, Ontario N1G 4Y2
www.ontariosoilcrop.org

The Agricultural Policy Framework (APF)
A FEDERAL - PROVINCIAL - TERRITORIAL INITIATIVE
www.agr.gc.ca/efp

Mark Cullen

On the Farm
and in the Garden



What Farmers Do...

FOR A BETTER ENVIRONMENT

What You Can Do...

Farmers have their soil type tested in labs to determine sand, silt and clay content, and determine available crop nutrients. Clay soil can inhibit plant growth because it compacts easily and drains poorly. Sandy soil has relatively large particles allowing water, air and plant roots to move freely. It warms up quicker in the spring, however plants may become thirsty and hungry for nutrients. Farmers plant crops appropriate to the soil type and manage field operations very carefully.

KNOW YOUR SOIL TYPE

Gardeners can determine their soil type simply by gathering a ball of soil in their hand after a rainy day. If the soil is sandy, it will form a ball with difficulty. Silty soil forms a ball quite easily and feels powdery. Predominantly clay soils form a sticky ball easily, and if the ball is dropped, it will generally retain its shape. If you drop the ball on the ground and it crumbles, the soil has a balanced texture. Once you know your soil texture, choose plants that are appropriate; Daylilies and Purple Coneflower thrive in clay, Butterfly Bush and Mock Orange prefer sandier soils.

Leaving the previous year's crop residue on the surface of the soil cushions the force of falling rain, and creates mini-dams that hold the rain, giving it more time to soak in. This layer of mulch helps conserve moisture through the growing season and contributes to healthy soil structure.

MULCH

Mulches help keep soil cool in summer months, and help insulate plant roots from the freeze/thaw cycle during winter. It also reduces the amount of weeding necessary by about 90 per cent! Water your garden well, then place an 8 cm. thick layer (3 inches) of finely ground up softwood bark mulch. A good layer of mulch will help to retain moisture in the soil and reduce the amount lost to evaporation. Apply mulch when plants are established and the soil is warm, in May or June.

All crops require nutrients to grow. Different kinds of plants have very different nutritional needs, and return different amounts of nutrients to the surrounding soil. Farmers are careful not to over-fertilize. Excessive applications of fertilizer could leach through the soil and end up in groundwater, or run off into streams and lakes, posing a serious risk to water resources. Carefully applied composted organic matter is an excellent source of crop nutrient.

ADD COMPOSTED ORGANIC MATERIAL

Compost will provide all the nutrients your garden needs, adds structure and workability to the soil, and saves you money. You can purchase a composter or build your own; either way make sure air is allowed to circulate, and turn the material with a garden fork every couple of weeks. The compost should be ready in 10-12 weeks. Add a 5 cm. thick layer (2 inches) on top of the beds in early spring. If starting a new garden bed, dig the compost into the soil prior to planting. If you are working with an existing garden, leave the compost on top and let the earthworms pull the organic matter into the soil for you!

For tips on how to build your own composter, visit www.compost.org

Irrigation systems are often used to allow watering at key points in the crop's development, or during dry periods. Today's systems are extremely efficient, accounting for every single litre of water. Irrigation is done early in the morning (preferably) or early evening to reduce evaporation. Trickle irrigation systems deliver water directly to the plant roots and reduces the amount of water needed to do the job effectively.

CONSERVE WATER

Group plants according to their water requirements to take better advantage of water that you apply to the garden. Choose drought-tolerant plants in the dry, hot, south and west-facing gardens, and moisture-loving plants along north and east-facing slopes and walls. Install a rain barrel to collect free, natural rain water from your roof. Hand-watering uses only about 17 per cent of the water normally used when watering with a garden hose. Keep a cover on your rain barrel to keep out insects and reduce evaporation. Invest in a soaker hose to deliver water directly at soil level and reduce the chances for evaporation.

Farmers practice integrated pest management (IPM) by monitoring crops to determine pest pressure before deciding on which controls are best suited, and use a variety of techniques such as crop rotation, natural enemies, or mechanical weed control (e.g. tillage). Government-approved pesticides are used according to label instructions by licensed individuals. Modern sprayers ensure application is targeted and minimized. Farmers have reduced their use of pesticides in Ontario by 52 per cent in the past 20 years and the trend continues in a positive direction.

CONTROL PESTS RESPONSIBLY

Practice integrated pest management (IPM) in your garden by monitoring your lawns and gardens for pests; it is easier to prevent an outbreak when you catch the problem at an early stage. Try hand-weeding, or removing insect pests manually. Prune and remove all material suspected to be infected, and place it in the garbage; do not add it to the composter. Before using a pesticide to control insects, consider a sticky trap or insecticidal soap. Some of the most destructive garden pests are also among the easiest to control. Choose disease-resistant plant varieties, and rotate crops in your vegetable gardens to reduce the risk of over-wintering insects and diseases in the soil.

Farmers create and enhance wildlife habitat in their woodlots, fencerows, ponds, streams and wetlands. They plant trees, create buffer strips of permanent vegetation between fields and watercourses, and post bird boxes. Farmers are instrumental in providing critical habitat for species at risk such as Loggerhead Shrike and Eastern Hog-nosed Snake. The benefits go beyond simple enjoyment; often a healthy and balanced wildlife population assists in controlling pests such as insects that feed on crops.

ENCOURAGE BENEFICIAL WILDLIFE

Install nesting boxes and feeding stations to attract a variety of birds to your yard year-round. Consider a bat-box. Bats have a huge appetite for insects such as moths, aphids and mosquitoes. Plants that provide nectar and pollen will attract beneficial insects. Yarrow, Honeysuckle, Columbine, Heliotrope, all members of the mint family, Sunflowers and Thyme are all plants which provide nectar and pollen. Birds are attracted to flowers that provide seeds such as Snapdragon, Cosmos, Sunflower, and Forget-Me-Not.

For more on the needs of wildlife, visit www.hww.ca