STEWARDS OF THE EARTH: HOW AGRICULTURE WORKS TO ENSURE A SUSTAINABLE FUTURE

Environmental Education Symposium
2009
CHANGE IN ATTITUDE AND UNDERSTANDING – NOT YOUR GRANDFATHER’S FARM...

- http://www.streamingdigitalmedia.com/agvisio.ntv/show_815/01-vid.htm
Farmers have a vested interest in sustainability. A safe, sustainable, affordable food supply that is environmentally sound is the goal of Ontario’s agricultural community.
STRATEGIES FOR ENVIRONMENTAL SUSTAINABILITY

- Environmental Farm Plans
- Protecting our water
- Soil conservation
- Crop protection
- Feeding crops
ENVIRONMENTAL FARM PLANS

This farm has an ONTARIO ENVIRONMENTAL FARM PLAN
ENVIRONMENTAL FARM PLANS

- In Ontario, nearly 70% of farmers have voluntarily evaluated their farm practices with an Environmental Farm Plan (EFP).
- This evaluation highlights environmental strengths on the farm, identifies potential areas of environmental concerns, and sets realistic goals and timetables for improvements.
We had been planting windbreaks, thousands of Blue Spruce, Cedar, Douglas fir and other trees since 1970 as a way to help combat wind erosion. Since doing the Environmental Farm Plan, we’ve also switched to no-till farming practices, wherever possible, on corn and soybean fields; and some of our lighter lands have been sown to grass crops to further discourage wind erosion while providing feed for the animals.

Larry Chanda, farmer
WATER
PROTECTING OUR WATER

Our most precious resource - protecting our water

- A 2006 study by the Ministry of Environment (MOE) found that Ontario’s groundwater resources are "excellent with abundant supply of good quality groundwater in most parts of Ontario"
Farmers are protecting water by:

- creating buffer strips along streams
  - A buffer zone is an undeveloped grassy area directly adjacent to a body of water
  - Benefits include:
    - Reduced soil erosion from livestock’s hooves
    - Cooler water temperatures that attract desirable fish species
    - Increased biodiversity
Farmers are protecting water by:
- fencing livestock out of streams and ponds
- storing manure, fertilizers, fuel and pesticides properly
- upgrading their wells.
A few years ago we made a decision to fence our cattle out of our river and plant 10,000 trees. Now it’s exciting to see this healthy ecosystem growing along the banks of the river. We see trout re-emerging and kids coming back to fish.

Diane Peckitt, farmer
PROTECTING OUR SOIL
Soil is the beginning of life on a farm. Without healthy soil we can’t grow a productive crop and without crops, we can’t feed livestock.
PROTECTING OUR SOIL

Farmers used to work their soil every spring and fall in order to control weeds and prepare the fields for planting crops. This was called "tilling" the land.
Now many farmers are tilling less, or not at all, resulting in:

- Reduction of soil erosion
- Reduction of soil compaction
- Preservation of organic matter
- Promotion the growth of earth worms and other soil-dwelling creatures.
PROTECTING OUR SOIL

- “No-tilling" also means farmers use less fuel, therefore reducing greenhouse gas emissions.
- In fact, between 1991 and 2001, the use of these environmental practices by Ontario farmers jumped from 27% to 63%.
- The reduction in greenhouse gas emissions is equal to taking 125,000 cars off of the road.
Crop Rotation

- Farmers also keep their soils healthy through crop rotation, a process by which they plant different crops each year in the same field.
Rotating crops helps to:

- improve or maintain soil fertility
- reduce erosion
- reduce the build-up of insects, weeds and other pests
- minimize their need to use pesticides.
PROTECTING OUR CROPS

Pests on farm? When you think of a pest do you think of
PROTECTING OUR CROPS

OR?
PROTECTING OUR CROPS

Did you know that there are good bugs and bad bugs?
Integrated Pest Management

- Farmers work hard to protect their crops by using a management process known as Integrated Pest Management or IPM.
- IPM focuses on preventing pest or insect problems by growing healthy plants in healthy soil.
- If pests do occur, pesticides are used only as a last resort after all other methods of control have been considered.
PROTECTING OUR CROPS

- All farmers in Ontario must take a course and pass an exam before they are allowed to purchase and apply pesticides.
- The course teaches them about integrated pest management and other land stewardship methods as well as how to apply and store pesticides safely, how to maintain the application equipment, and the importance of record-keeping.
- Farmers must retake this course and exam every five years to ensure they remain updated on new technologies.
PROTECTING OUR CROPS

Did you know? Over the last twenty years, farmers have reduced their use of pesticides by 52%
PROTECTING OUR SOIL AND CROPS
Plants need food too!
FEEDING OUR CROPS

- When a crop is harvested from a field, some of the nutrients are also removed.
- This means that farmers need to replace these lost nutrients by adding manure and/or fertilizers each year in order to keep their soil productive and healthy.
FEEDING OUR CROPS

- Farmers also annually analyze or "test" their soils to determine exactly which nutrients needs to be added for the crop they plan to grow.
FEEDING OUR CROPS

- They use the test results to create a "nutrient management plan", a strategy which ensures that only those nutrients which are required are added back to the soil.
- These nutrients are used by the growing plant limiting the possibility of water pollution.
Taking care of the environment is something our family takes very seriously. I’m the fifth generation to manage this farm here and everyone before me has taken good care of it so that it’s in good shape for me. And my brother Greg and I wish to do that for the future generations.

Rodney Wright, farmer
STEWARDSHIP

- Stewardship is a joint effort
- Farmers work with a variety of different groups to ensure that we care for the land in a sustainable way
The Ministry of Natural Resources’ Ontario Stewardship program is a community-based initiative that brings together landowners, associations, resource agencies and individuals who share an interest in responsible land care and sustainable resource use.

The program advocates stewardship as a tool for land management.
Participants in the program are encouraged to work together to develop an ecosystem-approach for improving local stewardship and to create collaborative resource management tools.

Developed in 1995, the ongoing success and growth of the Ontario Stewardship program is largely due to its strong foundation of community partnerships and volunteerism.
FOOD SAFETY

Providing safe food for Canadians involves:
- Careful use of pesticides
- Biosecurity
- Food safety protocols
FOOD SAFETY

Careful use of pesticides

- IPM and other strategies we have discussed
FOOD SAFETY

Biosecurity

- Ensuring that barns and other areas that contain animals are free from disease
Biosecurity

- Bacteria can enter into the food supply and make humans very ill
- Biosecurity is a way to stop this bacteria from entering the food chain
- Most people do not realize that they can carry disease on their person, clothing and shoes
FOOD SAFETY

Biosecurity

- Sanitation is very important to protect animals
- On some farms you are sanitized when you go into the barn and when you leave so that you do not spread disease
FOOD SAFETY

Food Safety Protocols

- A series of practices that farmers put into place to ensure that the food they produce is safe to eat.
- They are established by government agencies and commodity groups.
Food Safety Protocols

- Hazard Analysis Critical Control Points (HACCP)
- This identifies places where food safety can be compromised
FOOD SAFETY

HACCP

- On farm
- In transit
- Food processing facilities
- At mills where feed is made
- In storage facilities
FOOD SAFETY

- Safety measures are taken and records are kept
- Independent auditors do safety audits
Trace Back

- Being able to trace back the history of an animal is a very important part of food safety.
- Canada has an identification system for all cattle, in order to be able to trace back in case of disease.
WE ARE THE FARMERS OF ONTARIO

We are the people who spend every day growing crops, and caring for animals. We are world leaders in the production of safe, high quality, and low-cost food. We do so in a way that protects the environment. In fact, Ontario farmers lead the world in environmental initiatives. We are proud of how we care for our land, and want to tell you why. Our future depends on our ability to take good care of our land and water. Its a job we take seriously.
WEBSITES

- http://www.caringfortheland.com
- http://www.agcare.org
- http://agvisiontv.farms.com
- http://www.farmissues.com
- http://www.canfightbac.org
- http://www.foodsafetynetwork.ca
- http://www.omafra.gov.on.ca
- http://www.ontariostewardship.org