

# SOIL AND SITE CHARACTERISTICS AND RESOURCE PACKAGE

## Natural Risks

### Why should you be concerned?

The landscape (topography) and the soil on your farm influences the type of farming you can do (e.g. intensive vs. more limited production), the inputs you need (e.g. fertilizers and soil amendments), and the results you get (e.g. crop yield and quality). The natural features on your farm also affect the potential for contamination of ground and surface water and for soil erosion by wind or water.

As agricultural producers strive to increase efficiency on their farms, there is also mounting pressure on producers to ensure the environment is being protected. In any given farm operation, "sensitive areas" may be present where productivity is lower (such as eroded knolls or saline areas), and/or in areas that have heightened risks of impacts to soil and water (such as creeks, potholes, ditches, springs, wells or rapidly permeable areas). Although these can be areas that, from an agronomic perspective, provide inconsistent or continuously poor yields, they are very important from an environmental perspective and are assets worth retaining.

The purpose of identifying sensitive areas in a proactive manner is that it allows the main parties involved (the producer/landowner, agronomist and/or custom applicator) to decide how they wish to deal with sensitive areas that makes economic and environmental sense without the onus of regulation. It also demonstrates how the agriculture industry can take steps on its own to find solutions that make sense for managing sensitive areas. Once identified, sensitive areas can be avoided during activities such as soil sampling or crop scouting to prevent biasing composite sampling procedures meant to represent the majority or "average" portions of the field. Conversely, sensitive areas can be sampled separately in order to determine the yield-limiting factors and the most efficient way to manage these areas. Either way, the producer, agronomist and custom applicator will have better information about the field if sensitive areas are designated prior to field activities.

Acquiring relatively simple baseline information, such as ortho photos, yield maps, soil maps, and cropping history, coupled with producer experience and agronomic principles, can allow for a quick assessment of the type, location, extent and severity of limitations on a farm.

The best way to start your Environmental Farm Plan is to analyze the natural risks on your farm. Then you can more effectively choose farming methods that reduce the risk to the environment and maintain or improve land productivity.

### What can you do?

1. Evaluate your farmstead for the potential risks of runoff and leaching.
2. Examine ortho photos of your fields and identify any sensitive areas.
3. Complete the questionnaire to determine the most significant limitations to crop production on a field-by-field basis.
4. Use the provided chart and your experience to assess the severity of the limitations in each field.
5. Based on what you know about your fields, consult the maps provided to confirm or re-assess your lands.

6. Fill out the summary chart on the last page of this section to have a record of information for your farm. Keep this information available as you complete the other worksheets.
7. Use this information to help you choose methods that will decrease the potential for environmental degradation.
8. Contact your local GO Office for additional information and support, or other appropriate agricultural extension specialist.

