

Agricultural Land Resource Atlas of Alberta

Background

Alberta and Canada jointly conducted a scan of the environmental issues facing agriculture in Alberta as a commitment under Agriculture and Agri-Food Canada's Agricultural Policy Framework (APF). The purpose was to identify areas to target Environmental Farm Planning (EFP) efforts and Beneficial Management Practice (BMP) incentive funding.

A scan refers to a geographic assessment of the location, extent and severity of environmental issues associated with primary agriculture production. Five components were considered in the environmental scan: surface water quality, groundwater quality, soil erosion risk, air quality and biodiversity. The vulnerability of each component to impacts from agriculture was considered with respect to the physical characteristics of the component and agricultural activities carried out. Various geographic-linked data sets were selected and used to form risk factors for each of the five components in each land location.

This environmental scan process resulted in a wealth of agricultural resource maps useful to producers and other agricultural professionals involved in developing environmental farm plans and in other activities related to agricultural land management in Alberta.

Introduction

The Agricultural Land Resource Atlas of Alberta is a collection of agricultural resource maps developed following completion of the *Environmental Scan for Agriculture in Alberta* by the Alberta Environmental Scan Technical Team in 2003.

The maps in the Atlas were prepared for the environmental scan process or were added to the collection because of their potential value to Alberta's agricultural community. The maps were recognized for their value to people involved in developing environmental farm plans who could use resource and environmental information on a broad scale.

Using the Atlas

The maps in the Atlas are displayed at a common scale of approximately 1:3 000 000 making comparison between themes easier. All maps also have the Alberta Township System (ATS) displayed for generalized location reference. The ATS is explained on its own map in this Atlas.

Various geographic-linked datasets were gathered and compiled in order to produce the maps. Descriptions of each map, the data used, how the map can be used and where to look for further information is provided for each resource map.

This Atlas contains generalized land resource information that was compiled for presentation at the provincial level. This scale of information is appropriate for making broad comparisons between different regions of Alberta. Between regions, comparisons can be made with respect to different characteristics or limitations, but it is not appropriate for assessing individual legal locations or for farm scale use.

The five risk maps developed for the environmental scan considered the vulnerability of surface water quality, groundwater quality, soil erosion risk, air quality and biodiversity as they relate to the impacts from agriculture. The assessment of vulnerability considers the interaction of the physical characteristics of air, water and soil landscapes and the associated agricultural management activities. The geographic datasets used to represent these characteristics and activities combined information at various levels of detail into a unit-less ranking from 0 to 1. These rankings were then assigned to classes for mapping purposes.

The intent of the risk maps is to identify potential issues at the regional level. Individual land locations may be located and the potential risks identified, but further site-specific evaluation and assessment are required to identify beneficial management practices to address or reduce the risk.

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