



# AgriMap: Mapping Out Sound Land-Use Decisions

Saskatchewan Edition: [www.agr.gc.ca/agrimap-sk](http://www.agr.gc.ca/agrimap-sk)

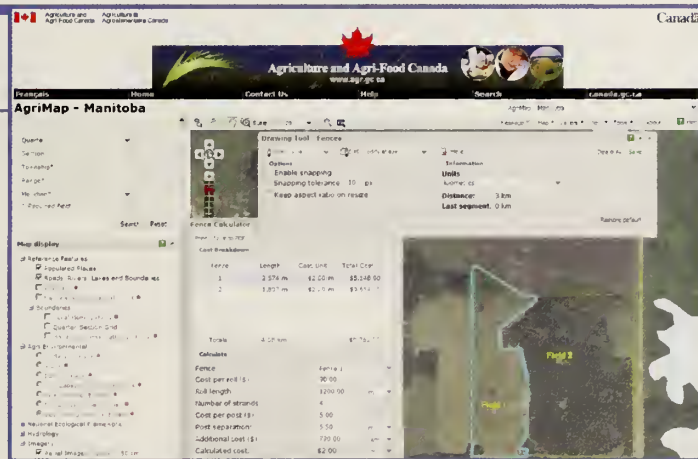
Manitoba Edition: [www.agr.gc.ca/agrimap-mb](http://www.agr.gc.ca/agrimap-mb)

AgriMap provides agri-environmental information and tools to allow agriculture producers, landowners, decision-makers and the public to identify and analyze key environmental challenges and opportunities. Developed by Agriculture and Agri-Food Canada, this custom web-mapping application gives users access to information to allow them to adopt better on-the-ground practices to protect the health, sustainability and resiliency of agricultural landscapes.

## Unique On-Farm Planning Tool

Developed for rural Canada and the agriculture sector, AgriMap is a unique web-mapping application that allows producers to view a variety of information from soils to water features, land cover to high-resolution satellite and aerial imagery, as well as cities, roads, quarter-sections and more. In fact, producers can zoom down to a specific land location to see a detailed view of their own operation. By viewing the aerial imagery, it is possible to see existing water bodies, riparian areas, buildings, shelterbelts and other features and structures. From a bird's-eye view, users gain a better feel for the relationship among all the features in the area or on their farm. This helps build a better understanding of environmental risks and production opportunities.

In addition to viewing the built-in map layers, producers can add their own GPS and other geo-spatial information to identify additional information about their land. There is even a fencing tool where a producer can map out a new fence. After supplying a few specifications such as the number of strands and the distance between posts, the calculator determines the length and calculates the cost per unit length and the total cost of your new fence. More tools will be added over time.



## Regional Land-Use Planning

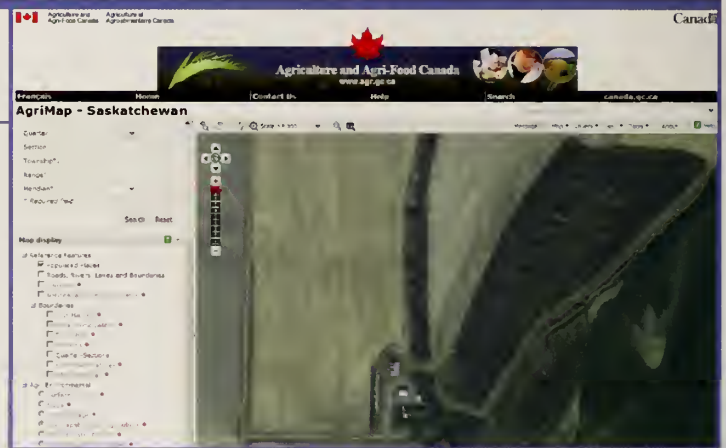
AgriMap has very diverse applications and is not just intended for individual producers. It is an online mapping application that anyone can use. Planners can upload their own data and create custom maps with sophisticated drawing tools. They can then print or save the maps on their computer for future analysis or to send to a colleague.

This flexibility allows AgriMap to be used in a number of different settings. Potential users of the AgriMap web-mapping application include: agriculture producers and producer groups, agri-environmental groups, watershed associations, federal and provincial resource specialists, land-use planners, municipalities, towns, developers, First Nations and other landowner associations.



## Advantages of Regional Planning

Most people recognize that everything on the landscape is connected, but we do not always consider how our decisions may affect our neighbours. Equally, you may have little control over actions by others that may impact your operation or quality of life. That is where regional planning comes in. By looking at the landscape as a whole, personal and environmental conflicts and issues can be resolved or avoided altogether through careful and collaborative planning.



## Why Plan: Resiliency and Sustainability

Resilience, in terms of agriculture ecosystem and production opportunities, is the ability to recover from negative impacts or unfavourable stresses. A healthy and functioning system has that ability. But in many cases, it takes active management to achieve resilience. A land manager should have a good understanding of how land and water features affect land-use decisions and vice versa.

AgriMap gives land managers, from the individual producer to a regional planner, the tools and agri-environmental information to help make informed land-use decisions. The trick is to translate the decisions into better on-the-ground practices to protect the health of the agri-environment, ensure sustainable production, develop regional protection plans and create economic opportunities through community capacity building and resource development.

## Resiliency:

To be resilient means to be able to bounce back from an impact or stress, much like a balloon returns to its former shape after encountering an immovable object. Similarly, agricultural systems can also be said to be resilient when they can return to their former production capacity and environmental performance after a negative impact or stress like droughts or extreme precipitation events.

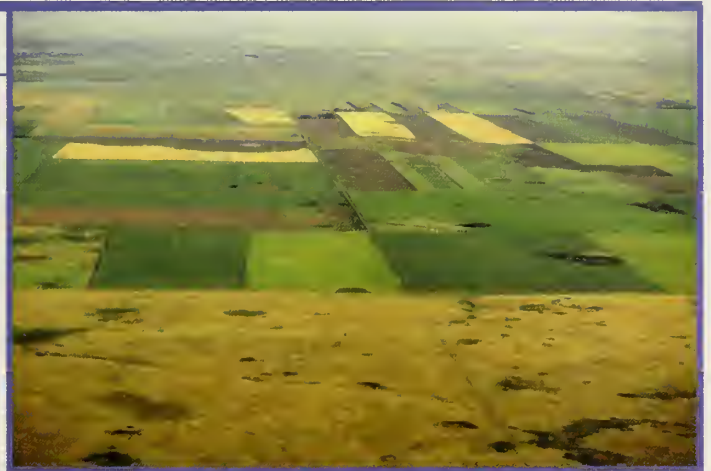


## Available Information

- Soil parameters
- Water features
- Land cover
- High-resolution satellite and aerial imagery
- Quarter-sections
- Federal and Provincial Community Pastures
- Roads
- More (see back page)

## Features

- Mark out and estimate the cost of a fence project with a built-in fencing calculator
- Personalize and customize maps by adding text, lines, points and shapes
- Measure length and area
- Create buffers around features like roads, streams and your own data points
- Add your own GPS and geo-spatial information
- Save features added during your session (e.g. fencing project) as a custom map layer to use again in future AgriMap sessions
- Print, save or email custom maps to a colleague in pdf or jpeg format
- More features to be added over time



## Benefits

- Free access to a comprehensive collection of land and water information
- Map based information and tools to help understand the connection between land-use decisions and agri-environmental features
- Rural capacity building – increase the capacity of local groups to address local or regional issues like resource planning and economic development
- The bird's-eye view allows for neighbouring municipalities and other large regional planning units to easily work together on large-scale planning initiatives
- Understand the location of a farm and surrounding agri-environmental features to make informed decisions: leverage the power of mapping technologies

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## Available Information

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### Agri-Environmental

- Soil surface texture<sup>1</sup>
- Slope<sup>1</sup>
- Soil drainage<sup>1</sup>
- Soil capability for agriculture<sup>1</sup>
- Risk of water erosion<sup>1</sup>
- Soil zones of the Prairies<sup>1</sup>
- Soil Landscapes of Canada 3.0 Agricultural extent<sup>1</sup>

### Hydrology

- Wetlands (SK only)<sup>2</sup>
- Watersheds<sup>1</sup>
- Sub-watersheds (SK only)<sup>1</sup>

### Imagery

- Aerial imagery<sup>4,5</sup>
- Satellite imagery (SK only)<sup>6</sup>
- Land Cover and Topography
- Hill shade<sup>1</sup>
- Landcover<sup>1,2,4</sup>

### Reference Features and Boundaries

- Populated places<sup>2</sup>
- Place names<sup>2</sup>
- Roads, rivers, lakes and boundaries<sup>2</sup>
- Railways<sup>2</sup>
- National and provincial parks<sup>3,4</sup>
- First Nations<sup>2</sup>
- Rural Municipalities<sup>3,4</sup>
- Townships (SK only)<sup>3</sup>
- Sections (SK only)<sup>3</sup>
- Quarter-sections<sup>3,4</sup>
- Conservation Districts (MB only)<sup>4</sup>
- Provincial pastures (SK only)<sup>3</sup>
- AESB pastures (SK only)<sup>1</sup>

### National Ecological Framework

- Ecozones<sup>1</sup>
- Ecoregions<sup>1</sup>
- Ecodistricts<sup>1</sup>

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<sup>3</sup> Adapted from: Her Majesty in Right of Saskatchewan or Information Services Corporation of Saskatchewan

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<sup>5</sup> © (2009-2011) Saskatchewan Research Council

<sup>6</sup> Adapted by AAFC from SPOT data © 2005/2006, CNES, licensed by lunctus Geomatics Corp, Lethbridge, Alberta, Canada

Front cover satellite image source: NASA Langley Research Centre (NASA-LaRC)

For more information or to leave a comment, contact Agri-Geomatics at [Agri-Geomatics-Agrog@agr.gc.ca](mailto:Agri-Geomatics-Agrog@agr.gc.ca)