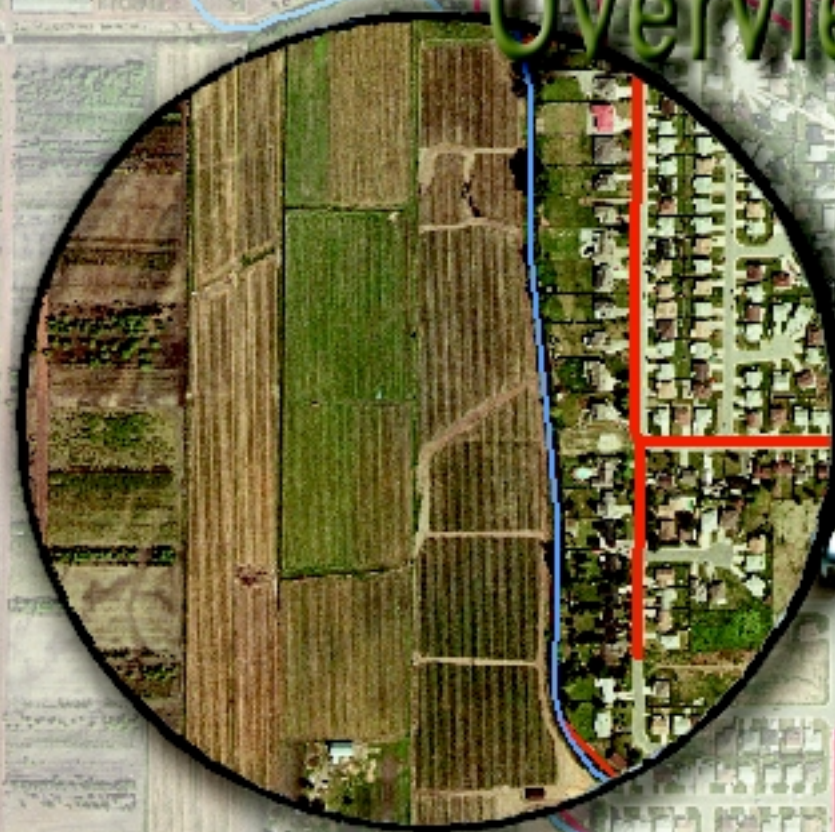


AGFOCUS

An Agricultural GIS Overview



The Pitt Meadows Pilot Project



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A GIS Pilot Project in Pitt Meadows

Ag GIS

GIS provides a new way to connect with agriculture. This booklet provides a snapshot of an agricultural GIS pilot project that the Ministry of Agriculture, Food and Fisheries (MAFF) undertook with the District of Pitt Meadows. A detailed description of the pilot project can be found in the report, 'AgFocus - An Agricultural GIS'. The purpose of this booklet is to summarize the report and highlight the key benefits and applications of an agricultural GIS. It will also provide some ideas for completing similar projects in other communities.

Pilot Project

The purpose of the pilot project was to consider the information and tools needed to promote and plan for agriculture using GIS. Developing constructive examples and applying the work in a practical manner within an active farm community were central to the project. Pitt Meadows, with almost 180 farms in 1996, provided an excellent cross-section of different farming operations within which to develop an agricultural GIS.

Goals/ Benefits

For Pitt Meadows the project was intended to enhance access to local agricultural information and provide a "ready-built" agricultural GIS. For MAFF, it was important that the knowledge gained from the project would serve the needs of other municipalities and regional districts throughout B.C. and assist the ministry when working with other local governments that may be interested in developing an agricultural GIS.

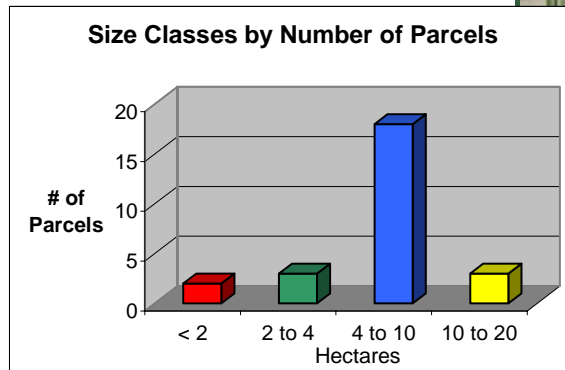
Pitt Meadows now has a system that will:

- *increase access to local farm sector information;*
- *assist plan & bylaw development;*
- *assist in promoting farming in the community; and*
- *enhance decision-making processes.*

What is GIS ?

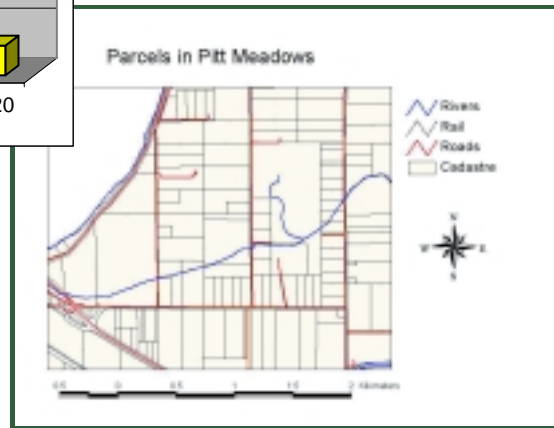
A GIS or Geographic Information System is a computer system capable of capturing, storing, analyzing and displaying geographically-referenced information. With GIS you can:

- efficiently access information;



- perform statistical analysis; and

- create customized mapping products.



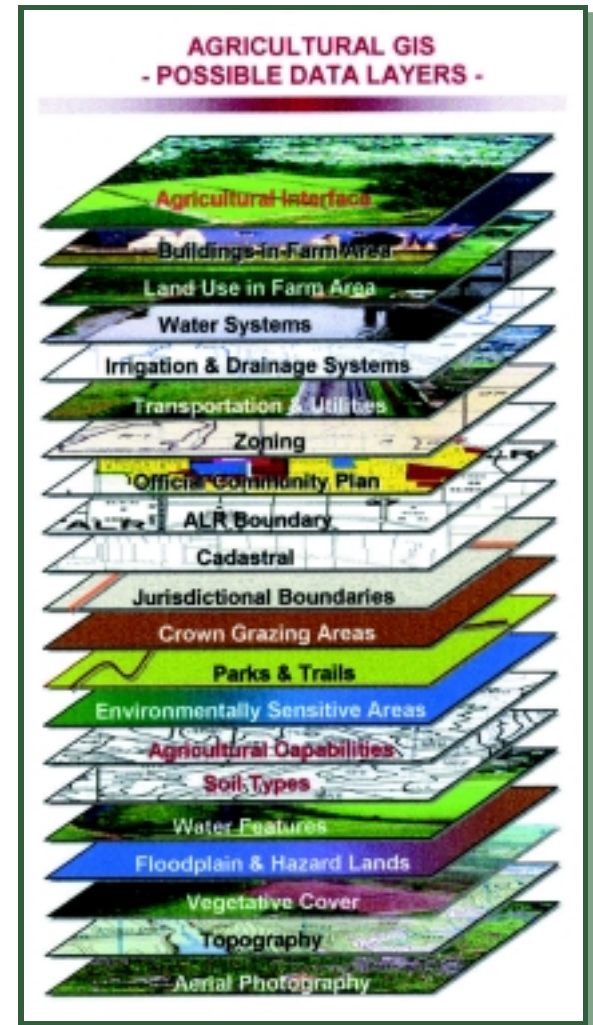
How does GIS work ?

Geographic information is stored in different layers, with each layer containing spatial features of one particular theme. Spatial features can be stored as:

- points (e.g. *buildings, wells*);
- lines (e.g. *roads, streams*);
- or
- polygons (e.g. *legal parcels, soil types*).

Each spatial feature is tied to a location on the earth's surface by a geographic reference. Anything that has a location on the earth can make up a data layer. When designing a map you can choose which layers to display as well as how you want them to look.

The Pitt Meadows Pilot Project provided an opportunity to examine the usefulness of different information layers collected from other agencies, as well as to develop a land use layer based on an inventory conducted in the district's farming area.

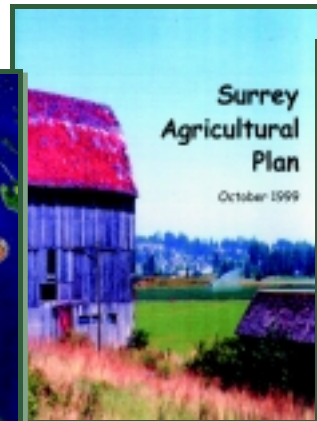


GIS ... Helping to Meet Challenges in Farming Areas

Many communities are already using GIS to help manage a wide variety of urban planning, servicing, and public safety needs. With the introduction of the *Farm Practices Protection (Right-to-Farm) Act* and changes to the *Local Government Act* and *Land Title Act*, new planning opportunities in farming areas have emerged. As a result, several local governments are now involved in focused agricultural studies, and strategies, agriculture area plans and bylaw reviews.

To assist these agriculturally focused processes, GIS can help to:

- enhance knowledge of farming areas;
- identify opportunities for greater land use and resource compatibility; and
- determine the impact of proposed policies and regulation on farming activities.



GIS ... Assisting Plan & Bylaw Development

Decision-makers are often involved with developing land use policies and regulations. GIS can aid in determining the impacts and overall effectiveness of proposed policies and regulations.

For example, GIS can be used to:

- examine the impact of lot line setbacks;
 - How large are potential building areas?
 - Which buildings are potentially non-conforming?
 - assess the impact of setbacks along a watercourse;
 - What types of watercourses are present?
 - How much land is potentially taken out of farm production?
- and
- examine land use patterns along different interfaces.
 - What are the most effective separation distances?
 - What are the most appropriate landscaped buffers?



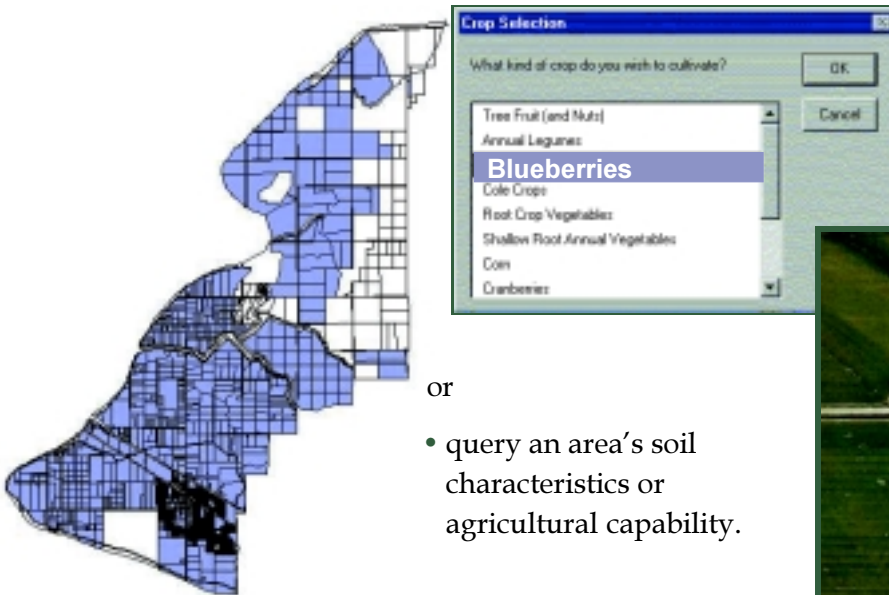
GIS ... Supporting Agriculture Industry Development



GIS can better equip a community to support agriculture development. People interested in starting or expanding a farm business can use GIS to examine data such as soils information, crop suitability, parcel size, present land use, infrastructure and surrounding land uses for a single parcel or larger area.

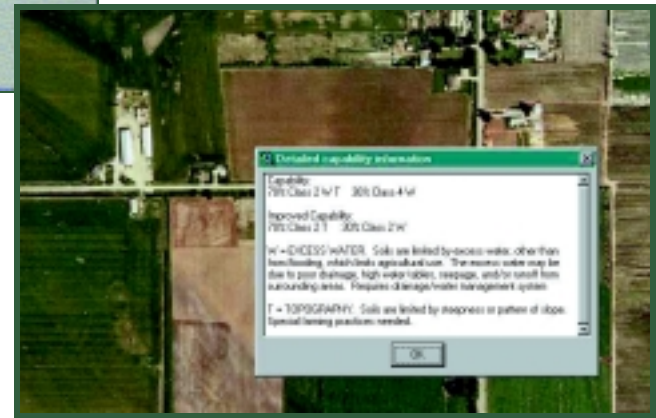
For existing farms, GIS can assist with management decisions. For example, using GIS a farmer can:

- find parcels suitable to grow a specific crop;



or

- query an area's soil characteristics or agricultural capability.

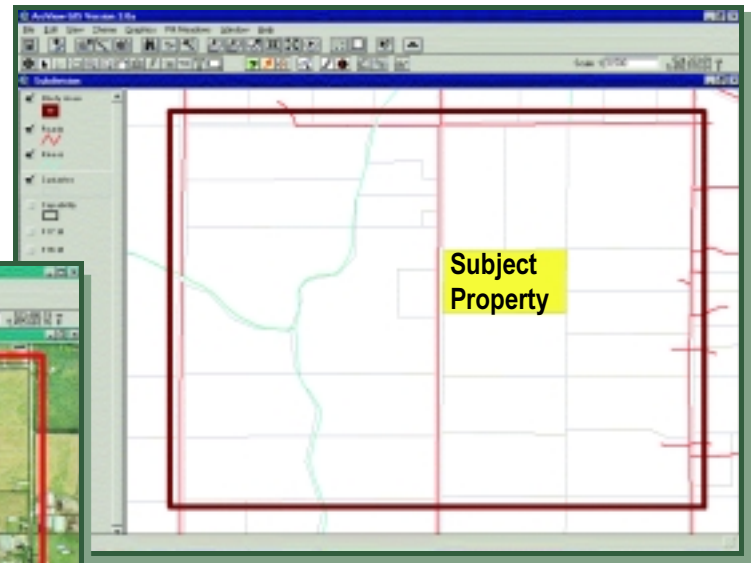
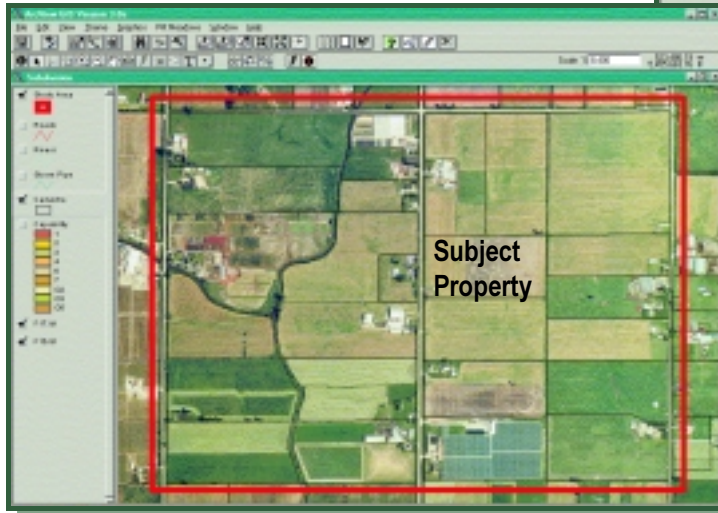


GIS ... Enhancing Land Use Decision-Making Processes

GIS can provide easy access to information, which can assist land use decision-making processes and help determine infrastructure needs in farm areas such as drainage.

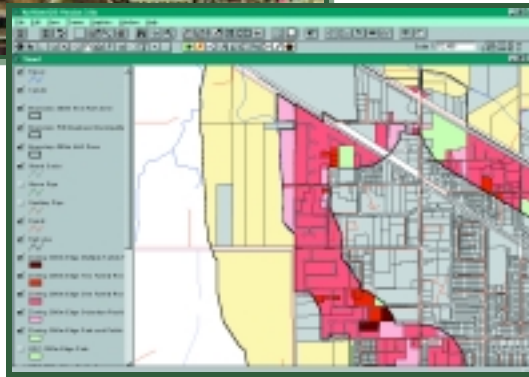
When considering a proposal, a wide range of information can be readily assembled concerning a property's size, land use, plan policies, zoning regulations, agricultural capability and soil types.

The surrounding area can also be examined to provide further context to the proposal.



Looking Ahead ...

The Pitt Meadows Pilot Project has demonstrated that GIS has many possible applications to enhance agricultural awareness and aid in the planning and development of agriculture. Several specific tools were designed as part of the project and there are numerous opportunities for developing new tools and applications in the future to support local government and provincial initiatives.



Some examples may include:

- identifying marketing and employment opportunities;
- analyzing changes to the Agricultural Land Reserve (ALR) and ALR application history;
- tracking urban / rural conflicts;
- relating agricultural land use to flood and forest fire hazard areas;
- identifying trends in land use and ownership patterns;
- tracking issues important to farming such as crop insurance and animal health; and
- applying buffers along the urban / rural edge

Working Together

The Ministry of Agriculture, Food and Fisheries will continue to work with Pitt Meadows to evaluate new scenarios and provide support as required. MAFF is also interested in working with other local governments wishing to use GIS in their agricultural areas. Possible projects may involve undertaking land use inventory work in farming areas, developing agricultural area plans, updating bylaws and generally promoting and planning for agriculture as part of more comprehensive sustainability programs.

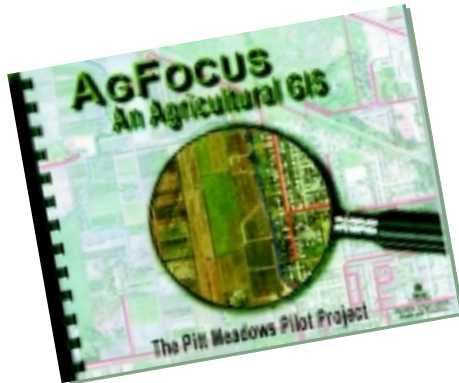


Where to Get More Information

This booklet and the document 'AgFocus - An Agricultural GIS', were developed as part of the **Strengthening Farming Program**, jointly implemented by the MAFF and Land Reserve Commission (LRC). The primary objective of the Program is to work in partnership with local governments and the agriculture industry to strengthen farming in B.C.

For more information about the Strengthening Farming Program you can contact:

- BCMAFF- Resource Management Branch in Abbotsford (604) 556-3100;
- or
- one of the provincial Agri-Team members either at your nearest MAFF office (telephone numbers will be in the Blue Pages of your telephone directory) or at the office of the LRC in Burnaby at (604) 660-7000.



A copy of the report "AgFocus - An Agricultural GIS" and this booklet can be found on the MAFF web site at www.agf.gov.bc.ca/

If you are interested in obtaining a copy of the full report or have questions or comments about this booklet, please contact:

- BCMAFF - Resource Management Branch (604) 556-3100.