

Optical and Radar Satellites to Map and Monitor Canadian Agriculture: Current Activities and Future Opportunities

**Dr. Heather McNairn, Research Scientist
Agriculture and Agri-Food Canada**

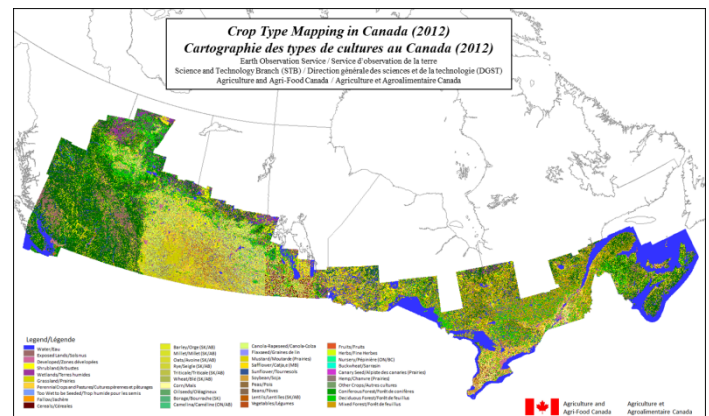
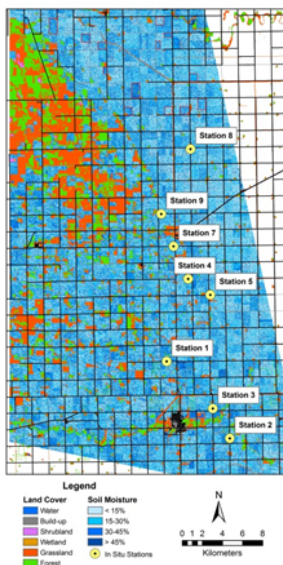


The next generation of remote sensing specialists will experience unprecedented opportunities to apply their skills and knowledge to monitor Canadian and global landscapes. These opportunities are due to several factors – access to an ever increasing number of Earth observing satellites, free and open data policies, significant advancements in the science of remote sensing, escalating computing power and most significantly, acknowledgement by clients of the value of remote sensing derived information.

Agriculture and Agri-Food Canada (AAFC) is a prime example of these developments and opportunities.

Today, AAFC scientists are developing new methods to use both optical and radar satellite data to deliver a diverse range of products which identify crops and crop productivity, soil moisture and land management activities.

Retrieved Soil Moisture Map for 25 April 2012



Equally important, these research methods are transitioning to operational activities to map and monitor the Canadian agricultural landscape. Each year AAFC delivers a national inventory of crops grown on every field in Canada, using optical and radar satellite data. Soil moisture maps are created using passive and active radar to help in identifying regions at risk of production losses due to too much or too little available water. Finally, research is ongoing to develop models to estimate crop productivity, yield and land management practices using Earth observing satellites.

The success at AAFC can be attributed to a strong and experienced remote sensing team, which has included many University of Waterloo co-op students. Dr. McNairn will present an overview of these remote sensing methods and products, and will discuss the future of remote sensing to support monitoring Canadian and global agriculture.

March 24, 2014, 12:00 — 1:15 pm
Room EV1—221



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Refreshments will be provided.

Please note, seating is limited.

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