

## Information Systems 2009 Report Temiskaming SCIA

### **Purpose:**

Due to the fact, that agricultural in the north is spread vastly across the province, through the use of technology, different communication devices and the internet, TSCIA would like to be able to connect the local and provincial agricultural community in faster and more efficient ways. In addition, TSCIA would like to be able to further develop and add innovation to agriculture through the use of new and advanced tools. TSCIA is doing this by setting up a web based weather and crop information gathering center, by using an in field weather station and a live feed crop camera, as well as, a web based communication device. The web based system, will be updated on a regular basis with information, pictures, videos, data and so forth and will be in an interactive tool for farmers and agricultural businesses.

The project has become a joint effort between TSCIA and Nipissing University; the two were linked together via NEOSCIA. Nipissing University has provided the weather station and has set-up a website for the weather station to further assist the agricultural community. The weather station website acts a central gathering place for collected weather data. The weather station is set-up in a canola field, located in the Earleton area.

### **Method:**

The weather station has eleven different sensors, ranging from wind speed, soil moisture, soil temperature, air temperature, precipitation and so forth. The data is collected and uploaded onto a web based system every half an hour, the data is then graphed. The web based system also allows one to look back at past weather conditions from a week ago, to months ago. Most importantly, the website is open and free to the public.

In addition, we have collected a group of crop specialists, crop suppliers, and local farmers to participate in a web based program, which is being used for providing and aiding in crop diagnose, as well as assisting one another with other issues that may arise. A blog has been set-up for these purposes. The blog is also a local source to connect one to other links (example: Breaking Ground newsletter), as well as, a place to advertise upcoming events, and to show past presentations that farmers may have missed.

A live feed, weather proof, camera has been purchased for the weather station, at the end of the 2009 fall season. The camera will be installed this upcoming spring: the specific location of the camera will be decided in the beginning of May 2010, as the weather station will be relocated.

### **Results:**

At this point time, we have had a positive response from the users of the weather station website and the blog. Members of the local agricultural group in Temiskaming, have made comments on the blog and have added images and other website links. The blog is consistently updated with videos, photos, and news articles. Local farmers often use the weather station website to observe and check past and present weather conditions. The farmers have shown specific curiosity to soil moisture, soil temperature and air

temperature. Members of TSCIA are looking forward to the addition of the live-feed video camera.

The weather station site has also been advertised to people outside of the agricultural community, and they have shown large interest in the web site.

The URL for the weather station website is <https://www.hobolink.com/p/818939aad887c84bdd0066ff1870baf2>. The URL for the blog is <http://www.temiskamingcc.blogspot.com>.



*Picture of new crop-camera attached to the weather station.*

### **Summary:**

The blog and the weather station are slowly becoming a popular commodity among the agricultural community in Temiskaming. With further advertisement of the services that both of the web based systems provide, the possibilities are endless of the potential it holds. The project needs to further expand before we can truly see its impact on the agricultural public in Temiskaming and on a broader scale, Northern Ontario.

The camera was purchased late in the season because we had difficulty finding a camera and an internet provider which would correspond with the location of the weather station. In Northern Ontario, there are issues with finding high speed internet in remote areas; the camera requires high speed internet to be able to operate. We now have located an internet provider which will work in conjunction with the weather station and the camera. The internet will be set-up in the spring when the camera is installed.

### **Next Step:**

In the spring, the live feed camera will be installed in conjunction with the weather station in Temiskaming district. The camera will provide 24/7 live feed video to allow anyone to watch the crop grow from start to finish by means of the internet. The weather station will need to continue to collect weather data, which will potentially allow Nipissing University to analyze it and relate the data back to ways to improve farming and agriculture. For

example, predicting plant disease, the ideal time to plant seed and any other issues that relate climate to agriculture.

NEOSCIA will be taking over the project with Nipissing University, and have already installed another weather station in Verner (Nipissing West/Sudbury East district), during the 2009 summer season. Nipissing University and NEOSCIA would like to further extend the project to include the addition of five more weather stations and other weather sensors. Ideally, the additional weather stations will be installed in different districts, and the weather sensors will be installed in different areas of each district. Finally, with the expansion of this project, Nipissing University is planning on investing one million dollars to include agricultural data retrieval from the use of remote sensing satellites.

We would also like to further develop the weather station website and blog to include e-mail updates, and the ability to download information from the website to one's personal computer. As well, we would like to further advertise the blog and the weather station site as being a viable tool for farmers and local businesses.

### **Acknowledgements**

Dr. John M. Kovacs, Geography Department, Nipissing University  
Daniel Tasse, Agricultural Représentative, Ontario Ministry of Agriculture, Food and Rural Affairs

### **Project Contacts:**

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### **Location of Final Report:**

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