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GIS Application Paper 1

Tracking Codling Moths with a GIS

Tree fruit growers in British Columbia, Canada, are turning to technology to help protect their crops from codling moths. A Geographic Information System (GIS) was created to plot the insects' population spatially on maps of southern Okanagan. These maps will then be issued to the farmers on a weekly basis so they can be aware of the insects' movements, providing growers an awareness of areas of their crops where they need to monitor for the moths' presence.

Since no cadastre is present for the province, workers are traveling from community to community and patching their existing maps together to create a province-wide cadastre. Using the new maps, 2,500 moth traps were set, mapped and linked to 1,500 home sites. By counting the number of moths trapped, and entering that data into the computer, the moths' movement was tracked and analyzed. This data is then integrated with property and topographical information to create new maps showing the moths most active areas. The maps are then issued weekly on the internet, places where farmers can access them, and at the Sterile Insect Release offices.

GIS was a perfect choice to help solve this problem. Not only did it give farmers another tool to help fight the codling moths, it gave birth to the cadastral survey of the Okanagan province, which allows their land information to be more accessible and uniform. Also, the GIS is designed to be simple to maintain which saves money on not having to hire GIS experts to run the programs. This is important because the farmers, who are familiar with their land, and know what exactly they want out of the maps, can maintain and retrieve useful data for their needs. This article does not go into the details of the GIS used, but it does give an excellent example of a use of GIS and it's immediate and continuing benefits.

Mithan, Peter. GIS helps pinpoint codling moth problem areas.
www.goodfruit.com/archive/Aug-00/special5.html+gis+problem&hl=en.
Accessed January 31, 2002.