

# Sky watch: Invasion of the drones

By Crystal Fogarty

Some Nova Scotians swear to have seen their share of UFOs. Might more soon be crowding our skies?

Drones, or unmanned aircrafts, are gaining in popularity, says Tim Stekkinger, CEO of SkySquirrel Technologies in Cape Breton.

Stekkinger and his business partner Richard van der Put, director of research and development, recently expanded their Inverness business to Halifax as they prepare for their first product launch this month.

"I think it is exciting to see something new happening," says Stekkinger. "When you look back, it's a major breakthrough in technology. It creates new possibilities and new solutions for old problems that currently exist."

The benefits of unmanned aircraft are endless. Originally initiated for military use, they are now used as an extra pair of eyes in the sky for security, to obtain weather and environmental data, access dangerous and difficult locations for disaster recovery, aid and exploration, and most of all monitor agriculture.

"Drones are often associated with dangerous work but the biggest area I see is in agriculture," notes Stekkinger. "On one hand you have the drone without an imager which is pretty useless but when you add a multi-spectral camera or another camera then it becomes useful, and that is what we focus on."

The human eye can only detect a fraction of the information that is reflected on an object — that is where SkySquirrel Technologies' spectral scoping technology comes in.

"When you look at a plant with your eye you see whether it is green or yellow which tells you

something about the health, but there is a lot of other information that can be detected through a spectral camera," notes Stekkinger. "It can detect stress levels in the plant due to a lack of water or nitrogen. Diseases can even be detected at an early stage if you have the right multi-spectral equipment."

Roger Miller, president of Northeastern Protection Service headquartered in Dartmouth, says drones can be very advantageous from a security perspective and that one of his clients is currently using them.

"They give you an instant awareness of what is going on at your property which is beneficial when you are dealing with a large property like a university or hospital," says Miller. "It provides situational awareness that allows you to take photographs and compile a lot of data instantly."

Although drones hold much potential, their price along with questions regarding safety and security factor into the amount of drones currently seen in Nova Scotia.

"I can see street level criminals using them to help plan break and enters," says Miller. "We already know that some criminals are using tools like Google maps and Google earth to gain access information for locations. Drones can take that one step further."

Canadian and provincial law is quite lenient in



Unmanned aircraft can be used to monitor agriculture. For example, a drone with a spectral camera can detect stress levels in plants due to a lack of water or nitrogen. - Photo courtesy of SkySquirrel Technologies

comparison to American and European laws in the use of drones according to Stekkinger. He notes that Canada is the best place for a drone-based company. However, in the future, as drones become more

popular, Miller says more regulation can be expected. "I think you will see laws almost like the cyberbullying law created because of events related to drones," says Miller.

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