



Farm Security: Smile! You're on Camera – Part two options and systems

The importance of video security systems for farms and rural properties

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A farm theft can make you feel like a victim rather than a manager. Farms are large 24-hour operations, and it's just not practical to lock all the doors all the time. Sadly, millions of dollars in equipment are stolen from farms annually across Canada, resulting in high replacement costs, insurance increases and unnecessary stress for farmers and their families. It doesn't have to be this way.

A farm security system deters theft on your farm, provides a record for police if a theft occurs, and offers peace of mind when you're away from your property. A picture is worth a thousand words, but a video clip will give the police what they need to get a warrant if a theft occurs. Security cameras for livestock barns are also a great way to stay up-to-date during calving and lambing seasons, reducing evening trips to the barn to check on progress.

So where do you get started with farm surveillance? What equipment do you need, and what is the cost?

A surveillance system gives you the ability to view farm activity on a monitor and remotely from your phone and store and replay video footage — ideally a few weeks' worth of history. A well-designed system needs to consider the size and complexity of your operation and whether your Wi-Fi network will cover all your barns, yards, driveways and sheds, now and into the future. You will need cameras (CCTV - Closed Circuit Television) and a Direct Video Recorder (DVR) to monitor your property. The cameras need to cover critical access points and areas of interest, while the DVR must store the video it receives from the cameras. Some will use cloud storage and not use an onsite DVR.

You have two choices to connect the cameras to the DVR: wire them directly or wirelessly. Wired cameras are connected by cables strung from the camera to the DVR. Wireless methods may suit large areas and use your existing Wi-Fi network. For remote locations, you may need a surveillance system with a sim card, like a cell phone that accesses the cell network. Options for storing the video feed from your cameras include offsite storage to "the cloud" or a hard drive DVR like your computer.

Simple camera systems are great for around the house and yard, but you should investigate more robust systems for long life outside and in barns. Full HD (high definition resolution) cameras of 1,920 × 1,080 pixels are ideal for farm security and monitoring livestock. These cameras can be wired to the DVR (near the house and yard) or linked wirelessly to your existing router (for barns and areas farther away from your base system). The feed from these cameras can be reviewed remotely on any PC, tablet or smartphone. A single-camera system can be purchased for as little as \$500. More complex systems with four or eight cameras and a DVR will run you about \$1K or \$2K. All surveillance systems have software that allows you to monitor activity or view video history on your phone. Modern cameras are available in HD and 2X, 4X and 8X zoom. Night vision and field of view constantly improve in cameras, so it's worth asking your technician about these specifications.

Generally speaking, surveillance systems are low maintenance and do not require a subscription or ongoing fee if you have your own DVR. You'll want to ask about channels and hard drive size when choosing a DVR. Channels determine how many cameras you can plug into them, usually four, eight or sixteen. You can plug in fewer cameras than the maximum channel numbers.

Hard drive size is an important consideration. Surveillance hard drives are designed to overwrite themselves as they fill up constantly. If an incident occurs, you review your history and save any relevant footage as a separate file before it is overwritten. The size of the hard drive you need depends on the number of cameras you install and the image quality you want to record. Hard drives are currently one or two terabytes for a better system. You'll also need to get a bigger hard drive if you want to keep more video history on hand before the DVR overwrites itself.

Many new companies on the market with one- and two-camera systems offer entirely wireless setups. These systems are great around the house where you have good Wi-Fi coverage but do not work as well at a distance or in barns with cement and steel. Brand names brought to our attention by farmers from the Facebook group *519 Farmers* include Waze and Arlo. Other big brands with more complex systems and long track records in the business include Lorex, Dahua, Annke, Unfi, Uniview, Amcrest, Ubiquiti and VIKVIZ.

For most farms, a multi-camera (eight or even sixteen) system with DVR recorder in the office or house will provide the most value in farm surveillance.

Operating a farm is a huge responsibility. Technology can share the load by enabling you to view the inside of the shed, barn or farmyard from anywhere you can use a cell phone or a computer. Yes, it's about security, but more about seeing what's happening in your barn, shed, or yard.

Visit www.farmfoodcare.on.org for additional resources on emergency management, security and farm power systems.