HAWK RISK PROTECTION

Livestock Monitoring & Response Services

www.dcii-hawkrisk.co.za

What is Stock Theft?

Any person who is found in possession of stock or produce regarding which there is reasonable suspicion that it has been stolen and is unable to give a satisfactory account of such possession shall be guilty of an offence.

Reasons for Stock Theft

Unemployment and the drought, both of which are beyond farmers' control, appear to be the main causes of stock theft. In addition, a recent RPO study of the effects of the drought estimates that the national cattle herd has decreased by about 15% and the sheep flock by about 14%.

However, my findings confirm that perpetrators of livestock theft come from different race, ethnic, socio-economic and cultural backgrounds, where the motives include both greed and need. The criminal element doesn't exclude respected, trusted and sophisticated individuals who steal without empathy for their victims.

Rural communities regard livestock as "living wealth", and they are often their only source of income and sustenance. Thus, when their livestock are stolen many households and subsistence farmers lose their livelihoods.

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How can livestock theft be prevented:

Implementing a good security system, using identification methods, building good relationships with neighbours, educating yourself on local laws and regulations, and joining local farmer's association or crime prevention forums are all important steps to take to protect your livestock from theft.

Livestock theft is a serious issue that affects farmers in many parts of the world, especially in South Africa. It not only results in an estimated financial loss of up to R3 billion per year, but severely threatens the physical security of farmers and their loved ones. To protect your livestock from theft, it's important to take proactive steps to secure both your property and your animals.

The following measurements can be taken to limit livestock theft:

1. **Implement a good security system**
Protect your property with a security system that includes cameras, infrared systems, alarms or motion sensors to help you monitor your property closely and alert you to any suspicious activity. This can help deter potential thieves, as well as provide evidence in case of theft.

2. **Use identification methods**
Properly marking and tagging your livestock with accepted identification methods such as ear tags, tattoos, and microchips can help you track and identify your animals in case of theft. This can help you recover stolen animals and also provide evidence of your ownership to authorities if thieves are caught with your livestock.

3. **Establish good relationships with neighbours and workers**
Building a good relationship with your neighbours and other members of the community is essential to keeping your animals and your farm safe. Notifying a neighbour of suspicious behaviour on their property is one of the most effective methods of preventing theft. Workers are also more tuned into goings-on on a farm, whether it be rumours of possible theft, or even seeing markers thieves leave on the farms before attacks. A good relationship with them allows them to be comfortable enough to approach you with such information.

4. **Educate yourself on local laws and regulations**
Livestock theft is underreported by up to 70%. Familiarise yourself with local laws and regulations regarding livestock theft, as well as the procedures for reporting and resolving theft cases. This can help you take the appropriate action in case it happens to you. Additionally, knowing local laws and regulations can help you take steps to ensure that your livestock is properly marked and tagged.

5. **Join local farmer's associations or crime prevention forums**
These groups can be useful for sharing information and receiving tips about preventing theft. They can also provide a support network for farmers and ranchers who have experienced theft. Joining these groups can also provide access to resources and experts who can help you protect your property and your animals.

6. **Use GPS collars for monitoring livestock**
Smart farming with advanced GPS tracking such as livestock security collars are designed to provide real-time tracking of your animals during an alarm, and alert you when they are behaving abnormally during predator attacks or theft attempts.

7. **Mandate and tasking of Private Security Company, to assess, monitor and coordinate all stock.**
In cases where any alerts receive, to send a livestock reaction team to investigate and provide feedback from the ream on the ground. The farmer can be informed by the security service providers control room where issues identified, where these issues been investigated and where perpetrators been identified and arrested.

8. **Make use of security drones to react on the alerts received directly from livestock.**
For the drone to be deployed from area of docking, and to investigate the alert as a pro-active measurement. Security Drones are equipped with thermal and heat sensor cameras, that can detect all movements day and night. Livestock Reaction Team/s can be deployed where information gathered from the Security Drone is sent to the Security Service Providers Control Room, to contain the situation and provide feedback to the farmer.

Biometric Identification of Stolen Livestock

Traceability in the context of stock theft refers to the ability to track and document the movement and ownership of livestock throughout their lifecycle. This includes recording information such as origin, ownership transfers, movements, and any other relevant data to ensure accountability and enable authorities to trace stolen animals back to their rightful owners. It helps in identifying stolen animals, investigating theft cases, and ultimately reducing livestock theft through better monitoring and enforcement.

What is Biometrics Identification of Cattle?

Livestock biometrics is a way of identifying an animal using a pattern recognition system based on the physical attributes of an animal. Used for livestock identification, traceability and health and welfare assessments, livestock biometrics can enhance efficiency, productivity and sustainability on your farm.

Dr.Phillip Zalda developed software of face recognition on cattle. *"The identification algorithm profiles a cow in a way that produces the same outcome as unique as fingerprints on humans."*

To solve these major problems, the muzzle (nose) point image pattern of cattle is a suitable and primary biometric characteristic for the recognition oof cattle. The recognition of muzzle point images is similar to the recognition of minutiae points in the human fingerprints.

The Process of Photos Taken

The Agri Facial Recognition Agent captures 10 photos of each cattle on your farm, which are then uploaded to a software database along with your farm andd cattle details.

For future purchases or breeding, you, as a farmer, can use your smartphone to take photos and share it with us to put on the system, allowing the database to be updated with the new information. This facilitates easy management and tracking of cattle information.

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HAWK RISK PROTECTION

Hawk Risk presents the GSatRancher Solar Satellite Tracker device which was designed with the specific goal of providing the tracking market with a low-cost, compact, satellite-based terminal that can be used in conjunction with the industry's best telematics visualization platform, Hawk Solar Satellite Tracker, to deliver a much-needed accessible data solution.

Its design and functionality make it perfect for off-grid tracking of lower-cost assets, remote IoT operations, and livestock tracking. Adding data intelligence to these industries has previously yielded quandaries related to cost-effectiveness and network connectivity, each of which have been alleviated by the introduction of the Hawk Solar Satellite Tracker Series.

POCKET-SIZED

Each GSatRancher Solar Satellite Tracker Series device is a pocket-sized tracker suitable for mounting on almost any asset. Measuring just 58mm (2.2”) on its longest side, the terminal is perfectly sized, and its form factor intentionally designed to be ideal for, but not limited to, livestock applications in the agriculture industry. Its small size also lends to the terminal's usefulness in tracking smaller assets that can't support mounting of larger, more cumbersome devices that are prevalent throughout the market.

LIGHTWEIGHT

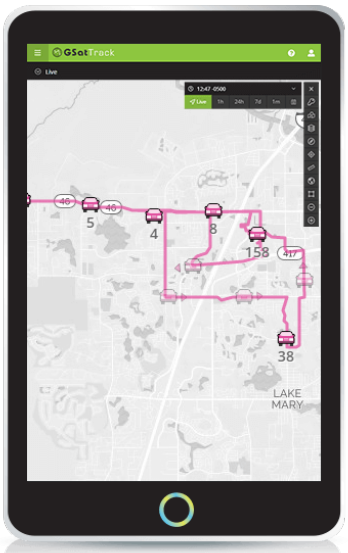
Weighing just 22.2 grams (0.783 oz), each GSatRancher Solar Satellite Tracker Series device has been weight-tested to be suitable as an ear tag for any beef or dairy cattle, and for most other livestock it can track. This lightweight design is a critical feature for the device’s success in any market.

SOLAR-POWERED

Being solar powered separates the GSatRancher Solar Satellite Tracker from other low-cost terminals in the market and is the primary reason the device can be used for livestock tracking and as part of remote IoT applications. Solar power means no need to periodically charge the device if it gets mounted with the solar panel facing up, and the asset receives sufficient sunlight during the day. It also means no charging ports, resulting in higher ingress protection for outdoor use.

LOW COST

The GSatRancher Solar Satellite Tracker's low up-front investment and controlled monthly operating rates allow people and organizations to invest in a tracking solution for lower-cost assets, and to manage their budget with non-variable monthly tracking costs. In the satellite market, airtime cost fluctuations have been barriers to tracking, and the Hawk Solar Satellite Tracker provides an elegant solution with its fixed-rate plans.



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BUILT TOUGH FOR OUTDOORS

The GSatRancher Solar Satellite Tracker is a rugged terminal that was designed with the intent to be used outdoors and continue to operate reliably even in harsh conditions. The device is completely sealed and self-contained in its durable case and has an Ingress Protection rating of 67 (IP67). Materials used in the creation of the case were chosen for their strength, temperature resistance, and animal safety. There are even industrial design elements included in the GSatRancher Solar Satellite Tracker that help prevent pooling of water, snow, and ice or buildup of dirt and mud on the surface of the solar panel.

QUICK & EASY SETUP

One of the best things about the GSatRancher Solar Satellite Tracker's simple design and functionality is that just about anyone can track assets with little to no understanding of tracking technology. Each unit comes ready to track, and only requires the user to mount it to their asset to begin collecting data. Once it's on the asset, the terminal takes care of the rest, and the tracking portal will display the location data after the device has been in the sun long enough to charge and send its first report. No engineering degree, no maintenance, and no hassle required!

MOUNT & TRACK

Because there are so many different uses for the GSatRancher Solar Satellite Tracker, the mounting mechanisms were designed to be able to accommodate the needs of dozens of industries and hundreds of different asset types. Each unit has grooves on its sides that can work with third party products like clip mounts, as well as tie bars that work with strap mounts. This design provides endless possibilities for future development, and also allows end users to create custom mounting mechanisms that work with the pre-existing options

GSatRancher

GET CONNECTED

The GSatRancher Solar Satellite Tracker is a satellite terminal, which is a critically important piece of its ability to deliver IoT and remote range functionality. Most low-cost trackers that exist for small assets are not capable of reporting outside of terrestrial network range, and the GSatRancher Solar Satellite Tracker leverages the satellite network for off-grid solutions. Anywhere a GSatRancher Solar Satellite Tracker can see the sun and a satellite, asset managers can track their unit.

HAWK LIVESTOCK SERVICES

- ☑ Live Monitoring of Livestock as per mandate and SLA Requirements from our Central Command Centre
- ☑ Deployment of Security Drones for Assessment of Livestock
- ☑ Deployment of Tactical Livestock Reaction Teams where livestock compromised or under threat
- ☑ Apprehension of perpetrators and recovery of livestock
- ☑ Assess recovered stock with national data base biometrics
- ☑ Add livestock on national data base biometric data base for future references
- ☑ Conduct investigation protocols with local law enforcement agencies and update farmer of status case requirements and findings.
- ☑ Provide Farmer Support and training where needed on livestock recoveries and on farm security.

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Get in Touch

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