

GPS collar/E-bell

Need:	Surveillance of animals on pastures, particularly in large rangeland areas.
Aim:	<p>Improved surveillance and animal welfare for grazing livestock</p> <p>Alarms when there is something wrong with an animal on pasture</p> <p>Timesaving and improved revenue for farmers</p> <p>Realtime data on whereabouts of livestock</p> <p>Ease of finding and gathering animals from rangeland pastures in the autumn</p>
Description:	<p>A GPS-collar / E-bell provide realtime information on the position of an animal.</p> <p>This information can be monitored from laptop, tablet or smartphone.</p> <p>In addition to providing the position of an animal the GPS-collar commonly also provide:</p> <ul style="list-style-type: none"> • A geofence function: Define areas in the map and get alerts to your smartphone if the animal moves into or out of the area. • Alerts from position and activity sensors: If the sensor(s) detects unusual behaviour it will transmit an alert to the farmers smartphone. Alerts provided may be: <ul style="list-style-type: none"> • Low activity (i.e. animal is sick) or high activity (i.e. animal is chased). • No movement. • No change in position. • Mortality alert. • Analysis of grazing activity: I.e. heat maps of where animals graze the most.
How to Implement:	<p>Buy GPS-collars / E-bells directly from the company. Commonly you also need to buy battery and subscription per season or per year.</p> <p>Activate E-bells in user portal on computer and/or turn on the E-bell via an app that is provided.</p> <p>Hang the E-bells on the collar and animal.</p> <p>During the grazing season you track your animals on the app/tablet/PC.</p> <p>Alerts if animals experience abnormal activity are provided.</p>



Country:
Norway



Production System (dairy or/and meat sheep/goat):

Meat sheep

Category of Animal (ewe, goat, replacement, lamb, kid):

Ewes

Source of Information:

Attachment/Links:

<http://www.telespor.no/>

<http://www.findmy.no/>

<http://www.gietargut.no/>

<https://www.youtube.com/watch?v=YxchJG1V5Vo>

<https://www.youtube.com/watch?v=yCGIxnu4t4Q&t=5s>

<https://www.youtube.com/watch?v=eZTxlmqJBo>

Expected Benefits:

- Efficient attention and overview of animals while grazing.
- Comfort: It gives the farmer more freedom and provides security for grazing animals.
- Time saving: The farmer saves time on both supervision of animals during grazing season and when gathering animals in the autumn.

Costs and Challenges:

- Availability of mobile network must be identified in order to choose the appropriate GPS collar provider. If mobile network is not available, a collar that communicates via satellite can be used.
- Wireless technologies like LTE-M, NB-IoT and LoRaWAN may be provided.
- Number of positions per day is limited due to battery capacity. Commonly a position report every 4th hour for 4 months can be expected.
- A two-way communication system is available for some GPS-collars, allowing adjustments of alarms and reports during grazing season. This is not provided by all.

- Individual costs ~ 50 – 200 Euro
- Subscription required: Yes
- Ease of use? Scale 1 (Complicated) – 10 (Simple)



- Value for money (for this type of benchmark farm)?
Yes
- Recommend this tool/technology for use on other types of farm? Yes



We use it to have efficient attention to animals on summer mountain rangeland grazing. Particularly in autumn to locate animals in the mountains and gather them efficiently. Also, for breeding purposes i.e. to cull animals that graze in areas we do not want them to be.

Improvement suggestions: Improved battery capacity for more frequent reports. Alarms if odd behaviour. Better collaboration possibilities between farmers/users of tracking devices.

FARMER FROM NORWAY



It would take 7,5 years for 92 % adoption.



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