PROVEYE

Digital Transformation of the Dairy and Beef Industry

A singular AI-driven Remote Sensing Platform to enable sustainable food production and nature-based solutions

THE NATIONAL Startup Awards

esa

ENTERPRISE IRELAND

UCD AgTechUCD

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Addressing Needs in Two Markets

Enabling Sustainable Food Production

Digital remote measurement and predictive insights to optimise productivity and sustainability in grass-based food production systems

Trusted measurement of Nature-based solutions

Digital remote measurement, monitoring and reporting at scale for nature-based solutions in carbon removal, habitat restoration and regenerative agriculture

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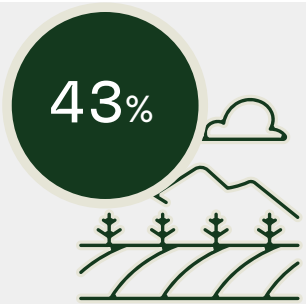
Why Grasslands?

They hold massive potential for food security and climate resilience

Long-term sustainability

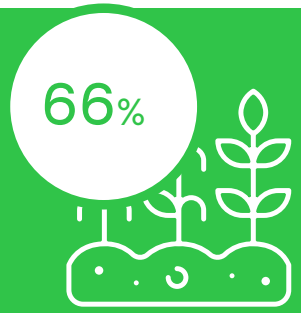


Grassland accounts for up to 40% of the world's land area

Peatland accounts for up to 3% of the worlds area

An unprecedented opportunity to create a sustainable balance feeding the world while saving it through regenerative farming.

Carbon Potential



Grassland and Wetlands combined hold **66% of global terrestrial carbon stocks**

Unlike trees and arable crops which release carbon when harvested, grasslands and wetlands offer the opportunity to improve sequestration indefinitely.

Sources: Oxford Academic

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Enabling Sustainable Food Production

Designed for the dairy and beef sector to meet the need for accurate and trusted data to optimise grass-based production, traceability and sustainability performance

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Success for the dairy & beef industry depends on making data work to drive better decisions

Countries that bridge the information gap will thrive in food security and exports

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The Dairy and Beef Industry faces multiple challenges

	Performance	Sustainability	Insights
Government and Industry	Increase the size of the milk and beef supply while using fewer resources	Measurably prove that your milk and beef is sustainably produced	Evidence based metrics on traceability and performance of farms under subsides
Farmer	Produce more milk or beef with fewer resources and and reduced costs	Measure and monitor sustainability to meet domestic and international market demands	Automated grassland insights to help you improve grazing management and reduce costs

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Scale of opportunity is huge!

Optimised grassland management can lead to significant increases in dairy and beef farm profitability across Asia, with profit increases typically ranging from **20%** to **40%**,

Indonesian Ministry of Agriculture, reported farms that adopted these grassland management techniques saw a **20-30% increase** in milk yield per cow. This led to a **15-25% reduction** in feed costs and a **25% increase** in overall farm profitability over a 3-5 year period.

Vietnam's National Institute of Animal Husbandry reported that dairy farmers who implemented these changes saw milk yield increase by **18-25%**, with a reduction in feed costs by **20%**, leading to an overall **20-35% increase** in profitability.

Malaysian Dairy Farmers Association (MDFA) research indicates that farms that switched to better grassland management practices observed a **15-20% increase** in milk production per cow and a **10-20% reduction** in feed costs, resulting in an overall **20-30% increase** in farm profitability.

India National Dairy Research Institute (NDRI) found that farms that improved their grassland management practices saw a **20-25% increase** in milk yield per cow and a **20% reduction** in feed costs. This resulted in an overall **30-35% increase** in profitability.

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Where Proveye can Help

We can provide continuous insights and digital support tools across thousands of farms to drive success across key objectives for your dairy and beef industries

Climate and Environment

Reduce deforestation and restore habitats by increasing regenerative grazing and agroforestry

Reduce Production costs

Increase the use of grass in dairy and beef production and optimise grassland, irrigation and manure management to reduce cost and increase profitability

Increase Market Growth

Provide immutable traceability data of your grass-fed dairy and beef to meet the growing demand for sustainable food

Optimise Government Subsidies

Enable government departments more effectively measure and monitor the sustainability performance of farmers receiving state supports

Education

Transform farming through education on best practices using digital decision support tools and predictive insights

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For Government and Industry

Digital transformation of industry providing a single view of the entire milk and beef supply base

- Exploit Big data with insights across thousands of farms regardless of size or location from a single digital platform
- Create immutable data for trusted traceability
- Segment and manage the milk or beef supply base by region, regulation, subsidies or specific Programmes
- Gain deep insights to location of high performing and environmentally sustainable farms

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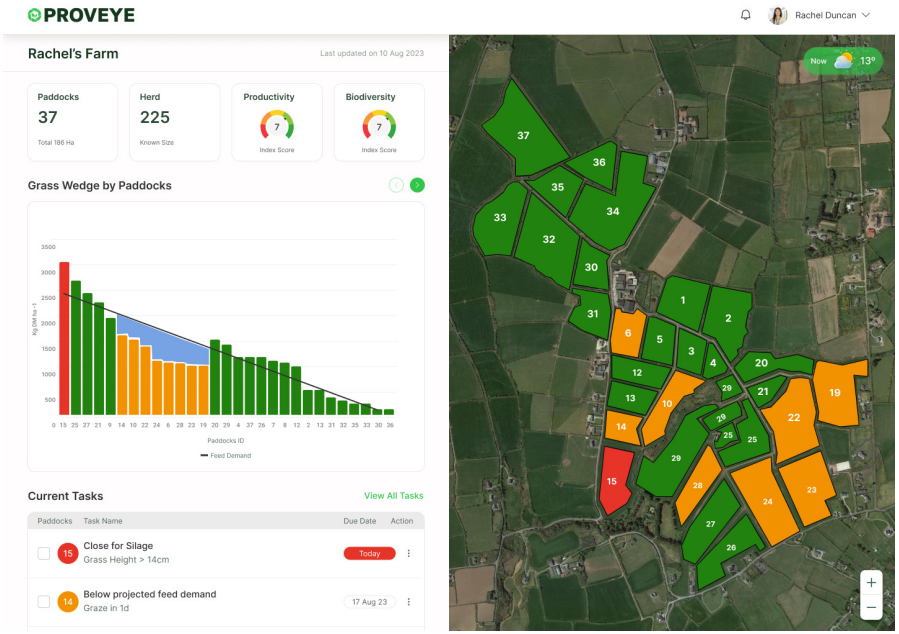
For Farmers

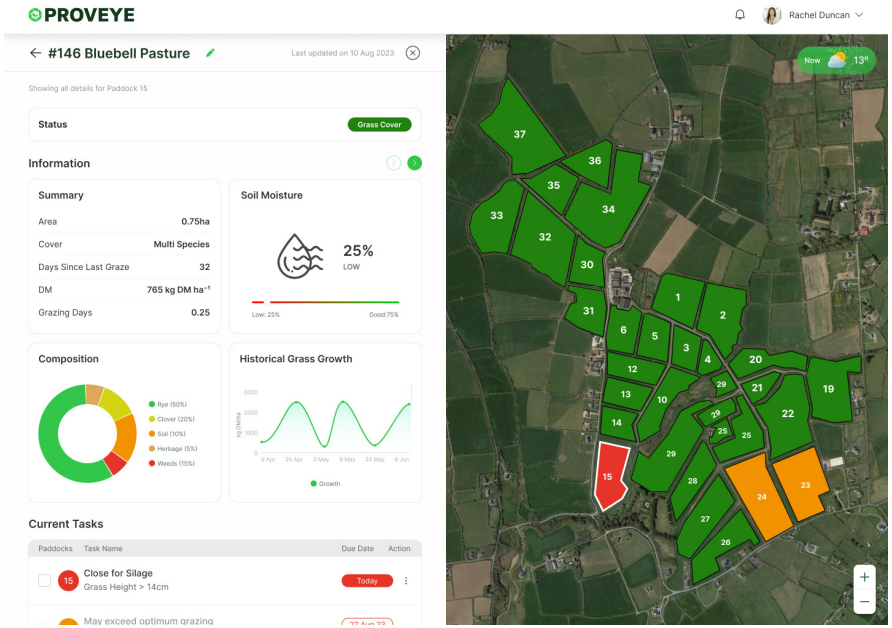
Farm level view

- Predictive grass yield across each field and whole farm
- Digital decision support to optimize grass utilization and manure application
- Performance of habitat restoration and irrigation across the farm
- Traffic light alerts by field for grazing rotation and habitat impact



Field level view

- Detailed summary of field yield performance and grazing days
- Composition analysis of grass sward composition
- Soil moisture and bare soil to optimize irrigation



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Trusted measurement of Nature-based solutions

Designed for Nature-based Solutions to carbon removal and habitat restoration in grasslands. Providing continuous digital measurement, monitoring and reporting of immutable data for high value carbon and bioiversity credits

Nature-Based Solutions: problems in Measurement, Monitoring, and Verification

Verification at Scale

Current ground-based methods for accurately confirming sustainable food production methods or carbon sequestration values are not viable at scale

Trust & Confidence

Sustainable farming and nature-based solutions fail to build trust as they can't monitor and measure performance and impacts accurately and frequently

Risk

Risk mitigation of under-performance & failure requires frequent insights to identify, report and enable early corrective action and avoid failure

A growing demand for immutable data to rebuild market Trust and Confidence

To fight climate change we need a better carbon market

The price for carbon credits in the voluntary market has repeatedly collapsed after academic and media investigations into large-scale projects found they overstated the amount of emissions they were supposed to offset and had negative effects on local communities.

The New York Times

Faulty Credits Tarnish Billion Dollar Carbon Offset Seller

South Pole, the world's leading purveyor of offsets, is facing allegations that it exaggerated climate claims around its forest-protection projects.

March 24, 2023

FT FINANCIAL TIMES

Revealed: more than 90% of rainforest carbon offsets by biggest certifier are worthless

Investigation into Verra carbon standard finds most are 'phantom credits' and may worsen global heating

Jan 18, 2023

The Guardian

Advertising authority orders removal of National Dairy Council advert

The complaints committee considered the claim in breach of multiple codes of standards for advertising, due to the direct claim in the advert that milk was "sustainably produced"..".."..

Oct 16, 2023

IRISH FARMERS JOURNAL

JBS greenwashing lawsuit 'wake-up call" for food firms

A lawsuit filed against meat processing giant JBS in the US should serve as a "wake up call" for food and drink manufacturers when publishing environmental targets, Dr Emily Pope of Trinity AgTech has said.

July 12, 2024

FOOD manufacture

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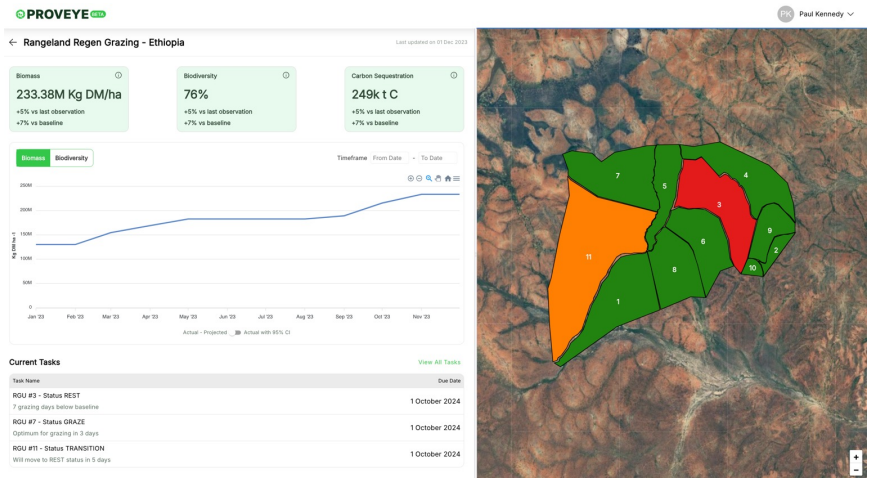
For Government, Project Creators & Investors

Empirical and immutable evidence of a nature-based solutions performance

Project level View

- Continuous Carbon and Biodiversity measurement
- Baseline, Current and Predictive Performance
- Immutable Data



Regional level view

- Detailed insights of Unit performance vs overall project
- Risk monitoring and alerts

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Case Study:

Our client in Ethiopia needed to continuously measure and monitor the performance and risk of their grassland-based carbon removal, habitat restoration and regenerative grazing project across several hundred thousands of hectares.

Click here for a demo video of the project

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Our Technology Platform

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What differentiates Proveye from the competition

Proprietary Remote Sensing Platform

In-house full stack UAV and Satellite image processing platform allowing total control of the data pipeline and IP ownership

Automated metric-based measurement of grass and biodiversity

Proprietary AI models trained on extensive ground truthing that delivers automated quantitative grass biomass **(Kg's Dry Matter) beta diversity, and land composition change, activity monitoring and alerts** as opposed to the qualitative measurement from competitors

World leading team of experts in grasslands and soil

Founder led world experts in soil, grassland ecosystems and their role in sustainable food production and biodiversity

Built for leaf to country level scale

End to end fully automated platform that is engineered to map millions of hectares with high frequency, scale and immutable data storage

PROVEYE

One platform, built on robust proven enterprise technology

As-a-service · Open API · Secure Access

Multiple Remote Sensing Sources

Multiple Image Types

Embed and align with existing processes and pipelines

Remote Sensing

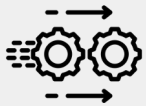

Image Processing

Image Analysis

AI Grass & Land Habitat Models

Actionable Insights

- Grassland
- Carbon monitoring
- Habitat & Biodiversity

Scalable and Secure Cloud Services

Single Platform Ecosystem

Agile DevOps & Continuous Delivery

Scalable AWS Cloud · Generative AI · Deep Learning · Third Party Ingest

PROVEYE

OUR MISSION

Delivery of a new era of knowledge and insights to customers using remote sensing technology