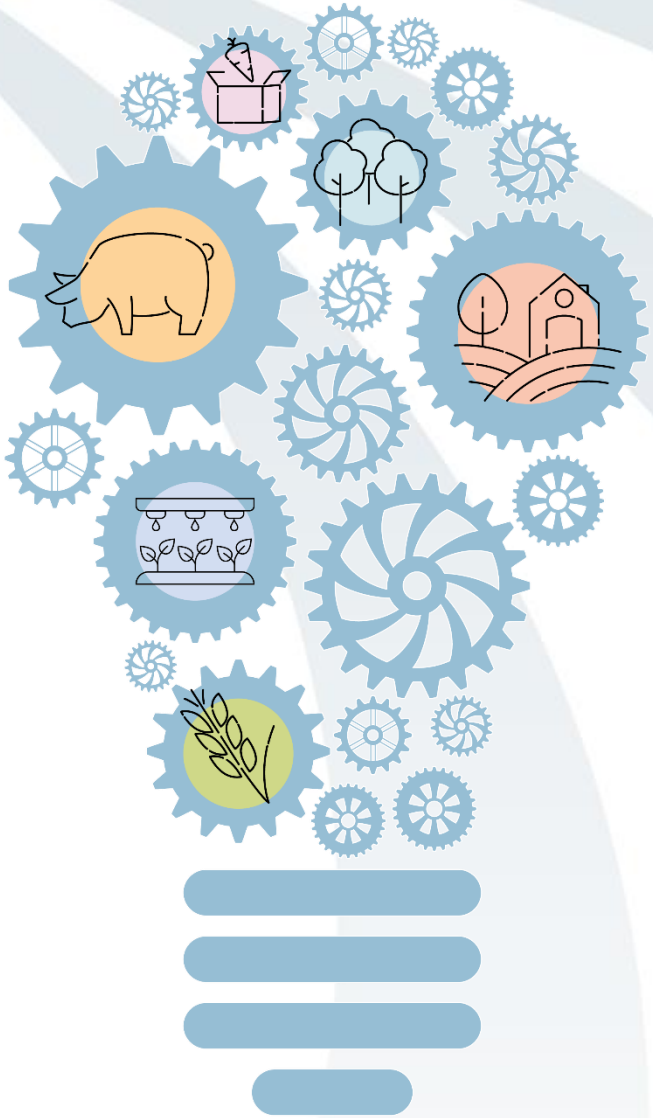

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Grupo Operativo Boviex 4.0: Mejora tecnológica en la producción de ganado bovino extensivo en España

Juan María Gallardo
Dirección Técnica RFEAGAS

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Beneficiarios

REAL FEDERACIÓN ESPAÑOLA DE ASOCIACIONES DE GANADO SELECTO

RAEANI
REAL ASOCIACIÓN ESPAÑOLA RAZA AVILEÑA-NEGRA IBÉRICA

digitanimal

ASOCIACIÓN ESPAÑOLA DE CRIADORES DE GANADO VACUNO SELECTO DE RAZA ASTURIANA DE LOS VALLES
ASEAVA

Subcontratados

inneara
Consultoría de Innovación Estratégica Agroalimentaria

iMiDRA
Instituto Madrileño de Investigación y Desarrollo Rural, Agrario y Alimentario

agriSat Iberia, S.L.

ICAV
CÁRNICA AVILEÑA

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OBJETIVO GENERAL

Desarrollar una herramienta de Business Intelligence para monitorización, gestión y apoyo a la toma de decisiones en ganaderías de bovino extensivo para mejorar el aprovechamiento forrajero disponible del entorno

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Como lo hicimos

Reuniones internas

Reuniones con los ganaderos

Selección de ganaderías

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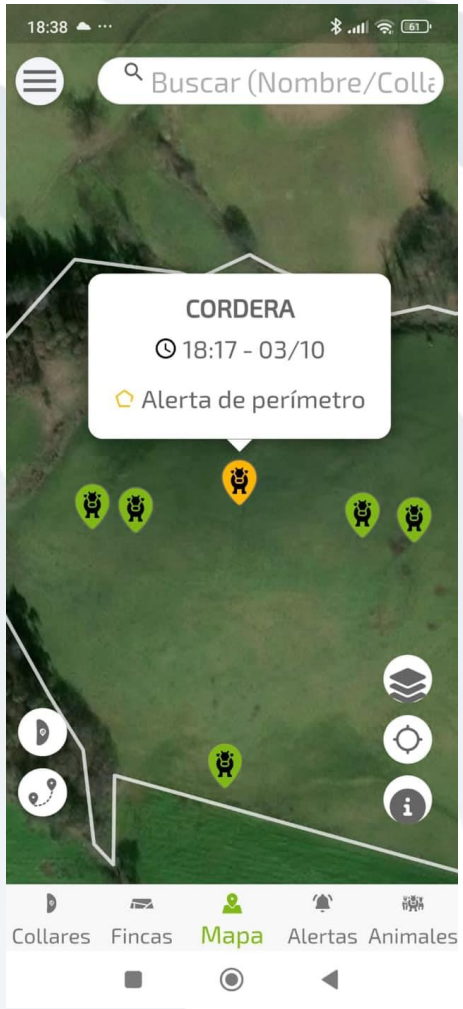
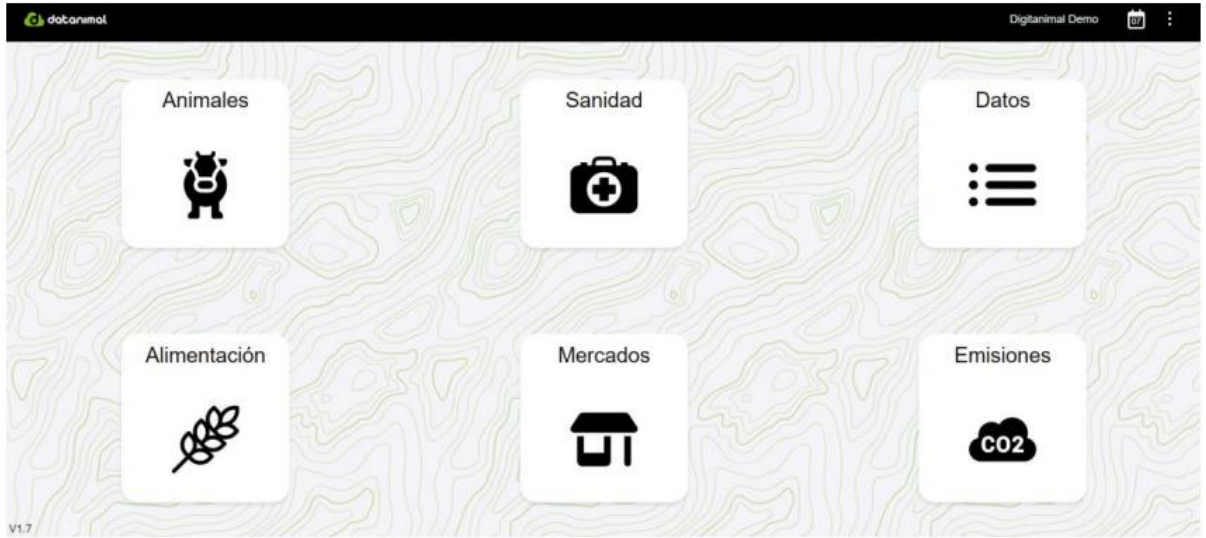
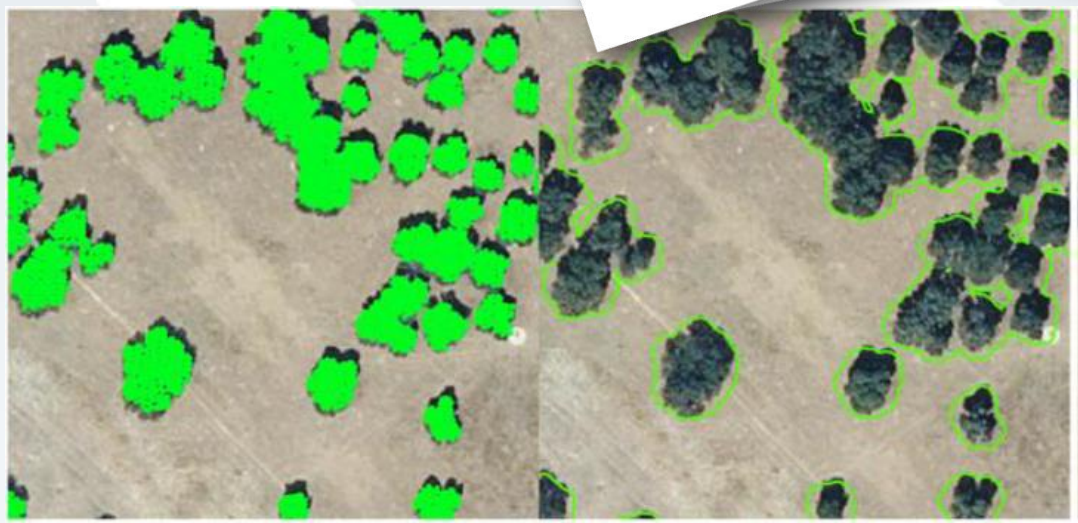

18:38
Buscar (Nombre/Colla
CORDERA
18:17 - 03/10
Alerta de perímetro
Collares
Fincas
Mapa
Alertas
Animales

datanimal


datanimal
Digitanimal Demo
Animales
Sanidad
Datos
Alimentación
Mercados
Emisiones
CO2
V1.7

AGRISAT

Estudios de pastos



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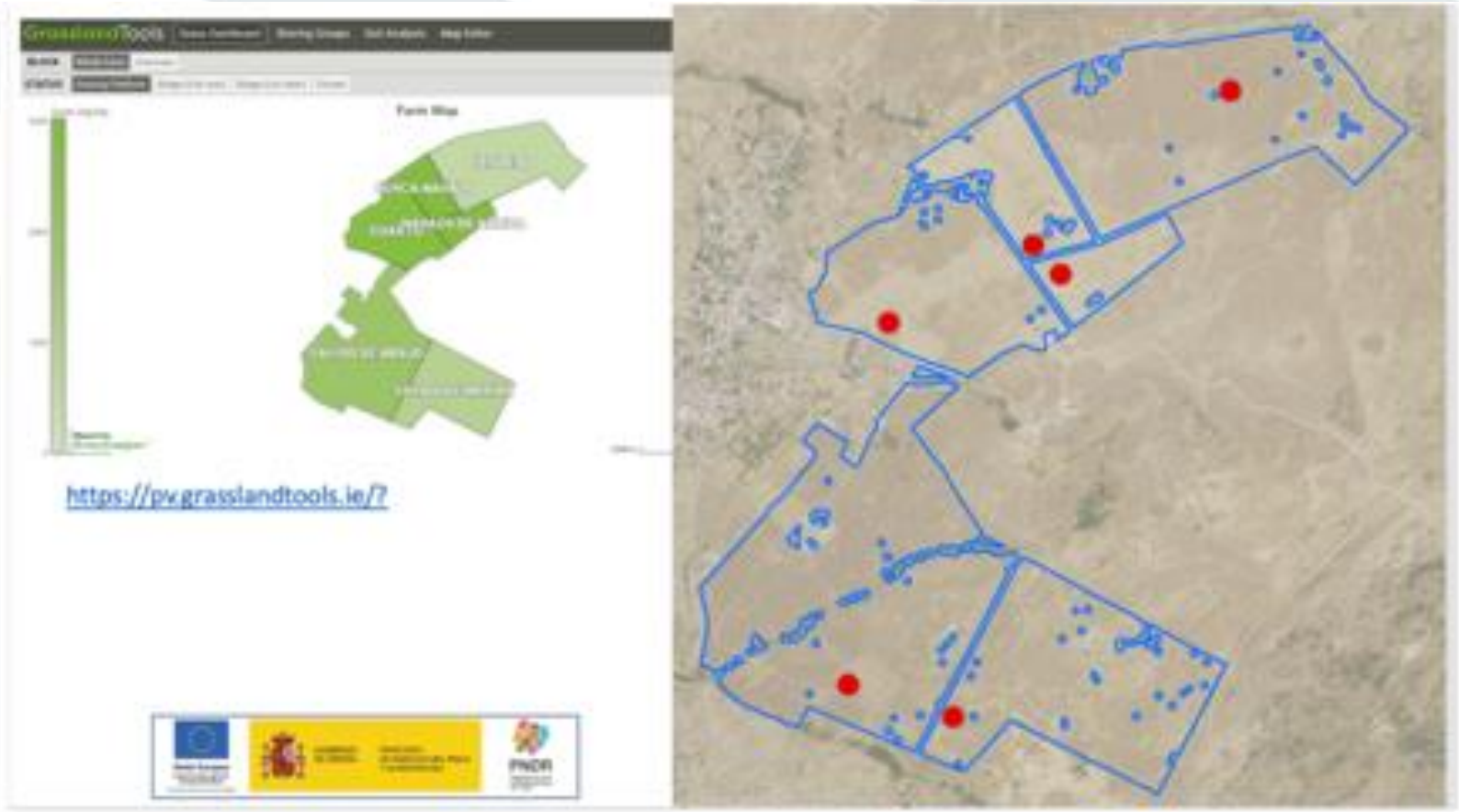
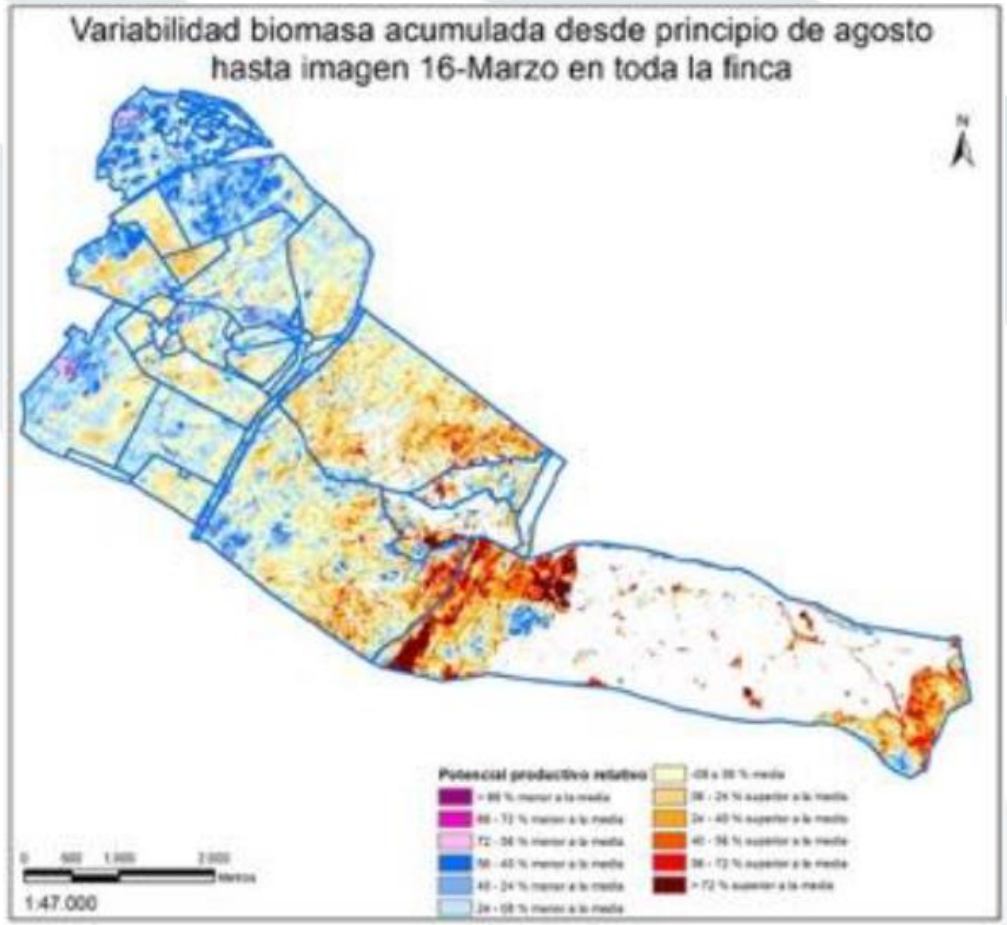
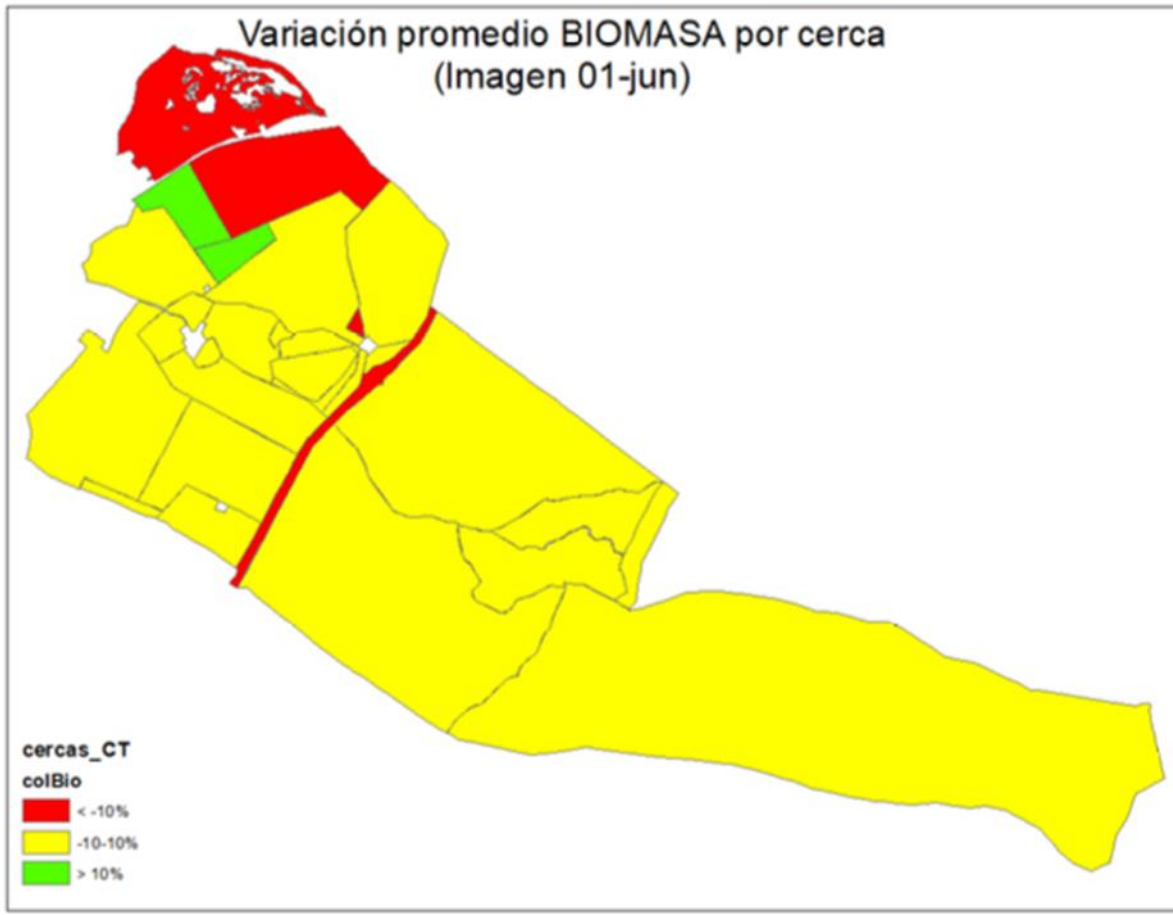
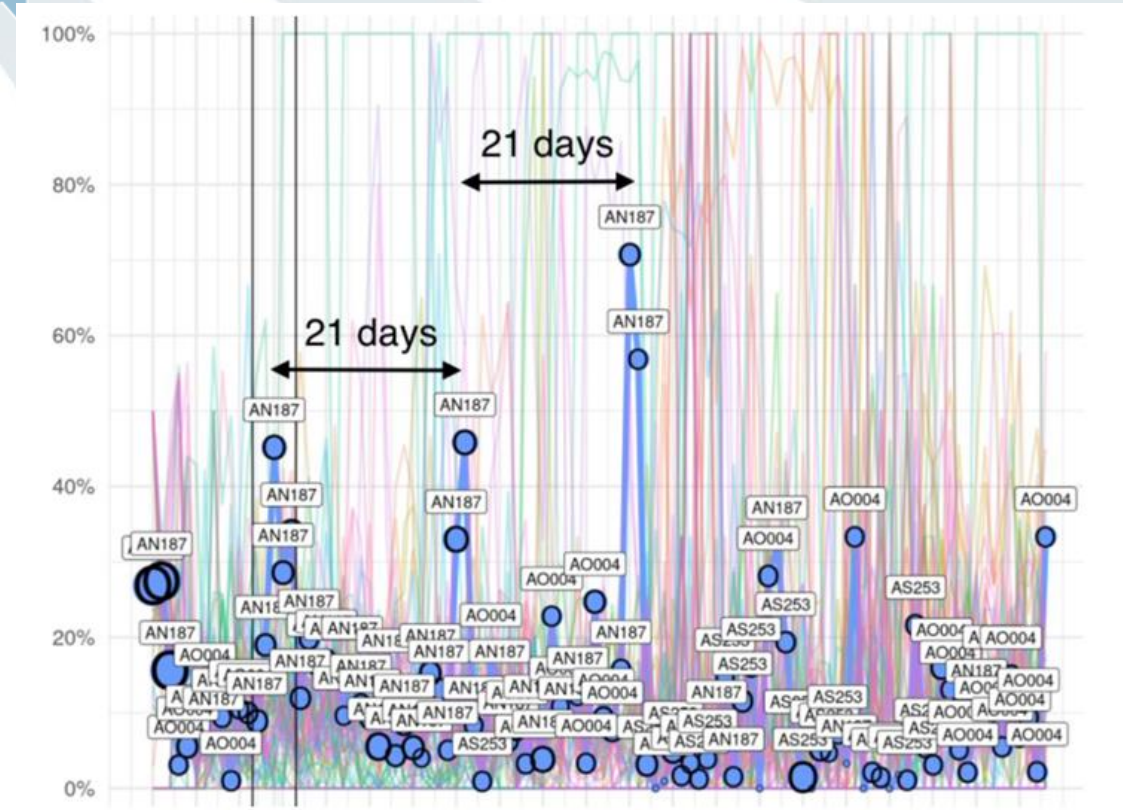


Figura 13:Puntos de muestreo seleccionados en diferentes cercados de la finca Caserio de la Torre.


Variabilidad biomasa acumulada desde principio de agosto hasta imagen 16-Marzo en toda la finca
N
Potencial productivo relativo
1:47.000


Variación promedio BIOMASA por cerca (Imagen 01-jun)
cercas_CT
colBio
< -10%
-10-10%
> 10%



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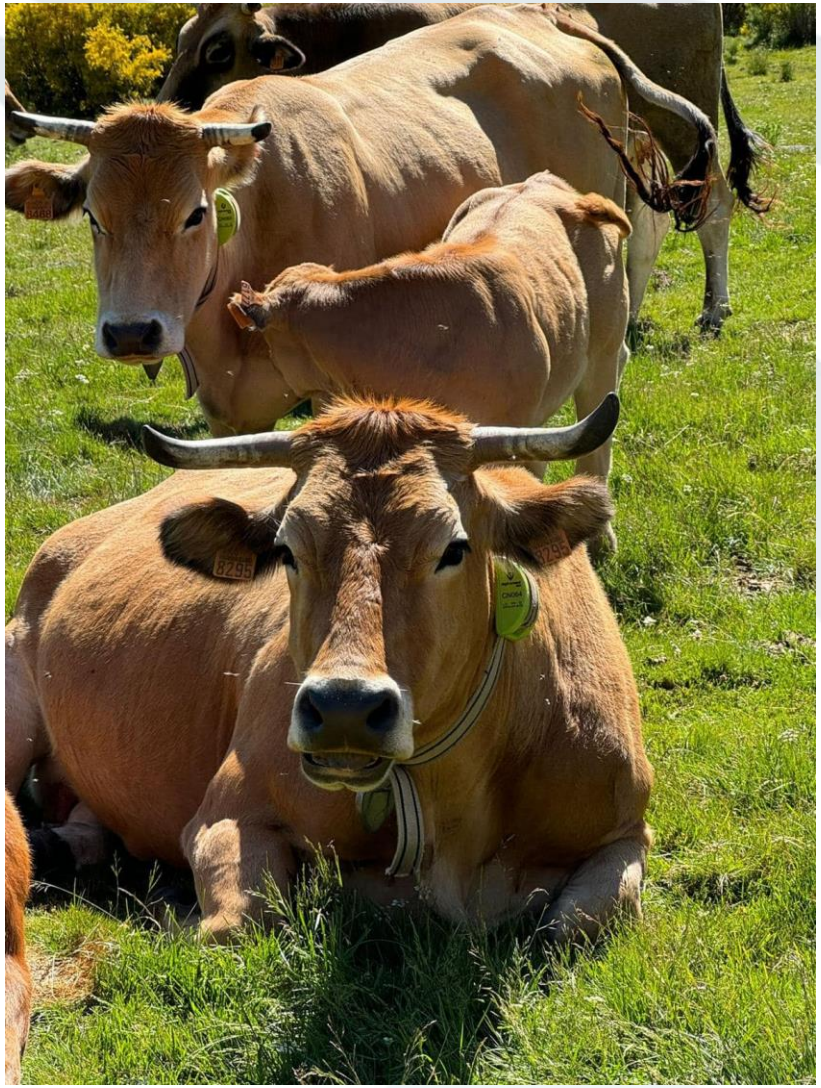

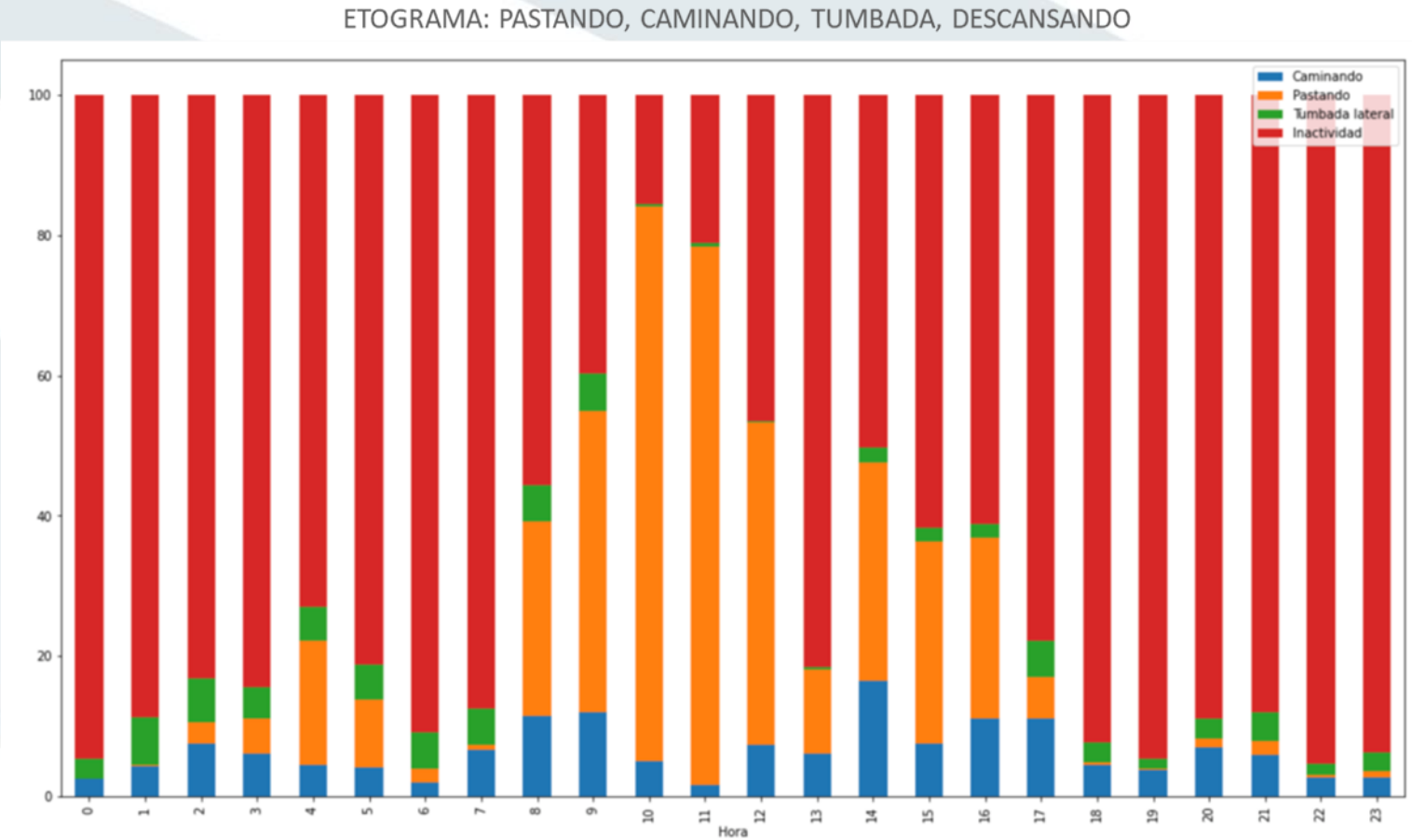

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ENCUESTAS

BIENESTAR ANIMAL

DIGITALIZACIÓN

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RESULTADOS

Aplicaciones para el Ganadero
Protocolos de Manejo del Ganado
Informes del Bienestar

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DIVULGACIÓN

GO BOVIEX

Preliminary results of the BOVIEX 4.0 project: Technological improvement in extensive cattle production in Spain.

C. Marcos Valtierra 1, J. M. Gallardo Bolaños[1]
[1] Royal Spanish Federation of Selective Livestock Associations (RFEAGAS), Veterinary Department, Castelló, 45 Street, 28001 Madrid, Spain

Introduction

Extensive cattle ranching has been a fundamental pillar of the Spanish rural economy for centuries [1]. However, this sector faces various challenges that threaten its long-term viability. These challenges include low profitability, environmental impact, and a lack of generational succession [2, 3].
The digital and sustainable transformation emerges as a promising alternative to modernize extensive cattle ranching, making it more efficient, competitive, and environmentally friendly [3, 4]. This transformation involves the adoption of cutting-edge technologies and the implementation of sustainable livestock practices that minimize environmental impact and improve animal welfare [3, 4, 5].
In response to these challenges, the BOVIEX 4.0 project has been developed with the aim of promoting the digital and sustainable transformation of extensive cattle ranching in Spain. This project, funded by the European Association for Innovation in Agriculture and Forestry Productivity and Sustainability (AEI-Agri), brings together various key actors in the sector, including ranchers, associations, research centers, and companies.

Preliminary results

It is still in an early stage of development, so definitive results are not yet available. However, some promising preliminary results have been obtained. The implementation of these solutions has shown positive results, including a reduction in production costs, an increase in animal productivity, an improvement in the quality of livestock products, and a reduction in the environmental impact of livestock farms.
This is because the animal monitoring system is based on both the GPS collar and the periodic acquisition of high-resolution satellite images of the grazing area. These images are processed and analyzed to quantify the state of the vegetation cover, and are directly related to the amount of rainfall in the area. Pasture depletion maps are used as a basis for developing pasture rotation plans, which optimize the use of forage resources and improve the health of grasslands.
The implementation of the monitoring system on the pilot farm will allow its effectiveness for extensive grazing management to be evaluated and will be replicated on the other farms participating in the project.

Desarrollo promedio de los pastos en la finca frente a los años de referencia

In the next stages of the project, exhaustive statistical assessments will be carried out on the animal welfare of the animals involved in the participating farms. These evaluations will be based on a series of carefully selected indicators, which will cover aspects such as castration, dehorning and tail cutting, feed supplementation or access to clean water, among others.
As the project progresses, it is expected that animal welfare initiatives will contribute to strengthening the transformation of extensive livestock farming in Spain, making it not only more efficient and sustainable, but also more respectful of the animals that are an integral part of this production system.

Materials and methods

This project is based on a participatory approach that involves all relevant actors in the extensive livestock sector. Specifically, a collaboration has been established with 16 farms of the Royal Spanish Association of Avileña - Negra Ibérica Breed (RAEANI) and 12 farms of the Spanish Association of Breeders of Select Cattle of the Asturiana de los Valles Breed (ASEAVA). In total, there are between 500 and 600 animals, each of which has been fitted with a GPS collar, which will provide us with information on the animal's movements and activities. On the other hand, of these 12 participating farms, 1 is being the pilot farm to carry out an exhaustive monitoring of the state of the vegetation cover and therefore of the pasture depletion, with the aim of avoiding pasture depletion through the establishment of a rotational method.

Grupo Operativo BOVIEX 4.0 Proyecto Innovador Mejora tecnológica en la producción de ganado bovino extensivo en España

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TRABAJO FIN DE MÁSTER
Estudio del índice de vegetación de diferencia normalizada en pastos herbáceos en la finca Caserío de la Torre (Torrecaballeros, Segovia) para la cría de vacuno en extensivo
Iñigo Bucero Descalzo
Curso 23-24

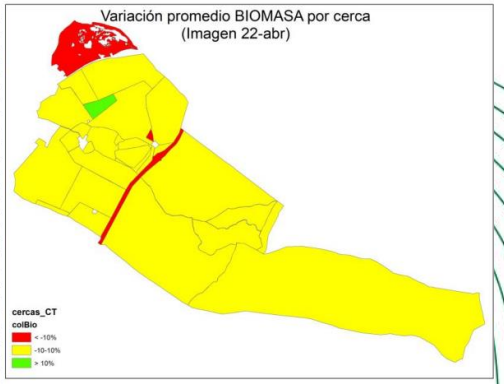
CONCLUSIONES

- SABER DONDE SE ENCUENTRAN LOS ANIMALES PARA: PARTOS, CELOS, BIENESTAR,
- MEJORAS EN LA GESTION DE LOS PASTOS: DISMINUCION EN LOS COSTES, APROVECHAMIENTO OPTIMO,
- INCORPORAR A LOS GANADEROS EN LA INNOVACION EN SU EXPLOTACION,
- CONOCIMIENTO DEL PROYECTO POR GRAN NÚMERO DE GANADEROS

¿QUÉ AVANCES SUPONE BOVIEX EN LA GANADERÍA?

Collares de geolocalización
+
Índices de vegetación

Parcela	Bio abr-10	Var. Mean Bio abr-10	Bio abr-17	Var. Mean Bio abr-17	Bio abr-22	Var. Mean Bio abr-22
A LARGA	13674	5	14769	5	15562	5
OSILLAS, MONTON DE TRIGO Y EL PINAR	14305	10	15164	8	15779	7
A ANTILOBOS	13219	2	14298	2	15068	2
A DE LA CAÑADA	12970	0	13998	0	14726	0
A DE SANTI	9745	-25	10504	-25	11045	-25
A EL NAVAZO	14067	8	15308	9	16208	10
A MORONDA	13897	7	15067	7	15901	8
AL DE LA PACHECA	12551	-4	13517	-4	14194	-4
ILLO Y LA ABIERTA	13222	2	14194	1	14891	1
NTENO	11669	-10	12624	-10	13300	-10
ARTO	12783	-2	13882	-1	14666	-1
BUDO	13579	4	14696	5	15504	5
JARON	13397	3	14476	3	15229	3
NAR	11420	-12	12330	-12	12969	-12
STACION EL SALIDO DE ABAJO	12219	-6	13184	-6	13871	-6
STACION LA ABIERTA-EL PICORONCHO	13676	5	14528	3	15147	3
TA DE ABAJO	13326	2	14384	2	15130	2
TA DE ARRIBA	12754	-2	13780	-2	14501	-2
AÑADA REAL	11343	-13	12237	-13	12873	-13
RA NUEVA	13744	6	14832	6	15615	6
HESA	13850	6	14886	6	15640	6
A	13923	7	15040	7	15827	7
GUSTINOS	12681	-3	13462	-4	14052	-5
OMILLARES	12519	-4	13477	-4	14150	-4
ZO DE ARRIBA	14530	12	15789	12	16700	13
GUES	13190	1	14282	2	15066	2
VA MORONDA	12838	-1	13865	-1	14578	-1
L DE VALMESADO	13528	4	14425	3	15067	2
O DE ABAJO	12572	-3	13621	-3	14355	-3
O DE ARRIBA	12716	-2	13766	-2	14509	-2
ALES	13606	5	14811	6	15671	6
	13744		14832		15615	



Ayuda en toma de decisiones

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