



## ONE WELFARE

# Nuevas aportaciones del bienestar animal a la sanidad y producción animal

**Rebeca García Pinillos**

 **@onewelfare**  
**@onewelfareworld**  
 **onewelfare**

[www.onewelfareworld.org](http://www.onewelfareworld.org)

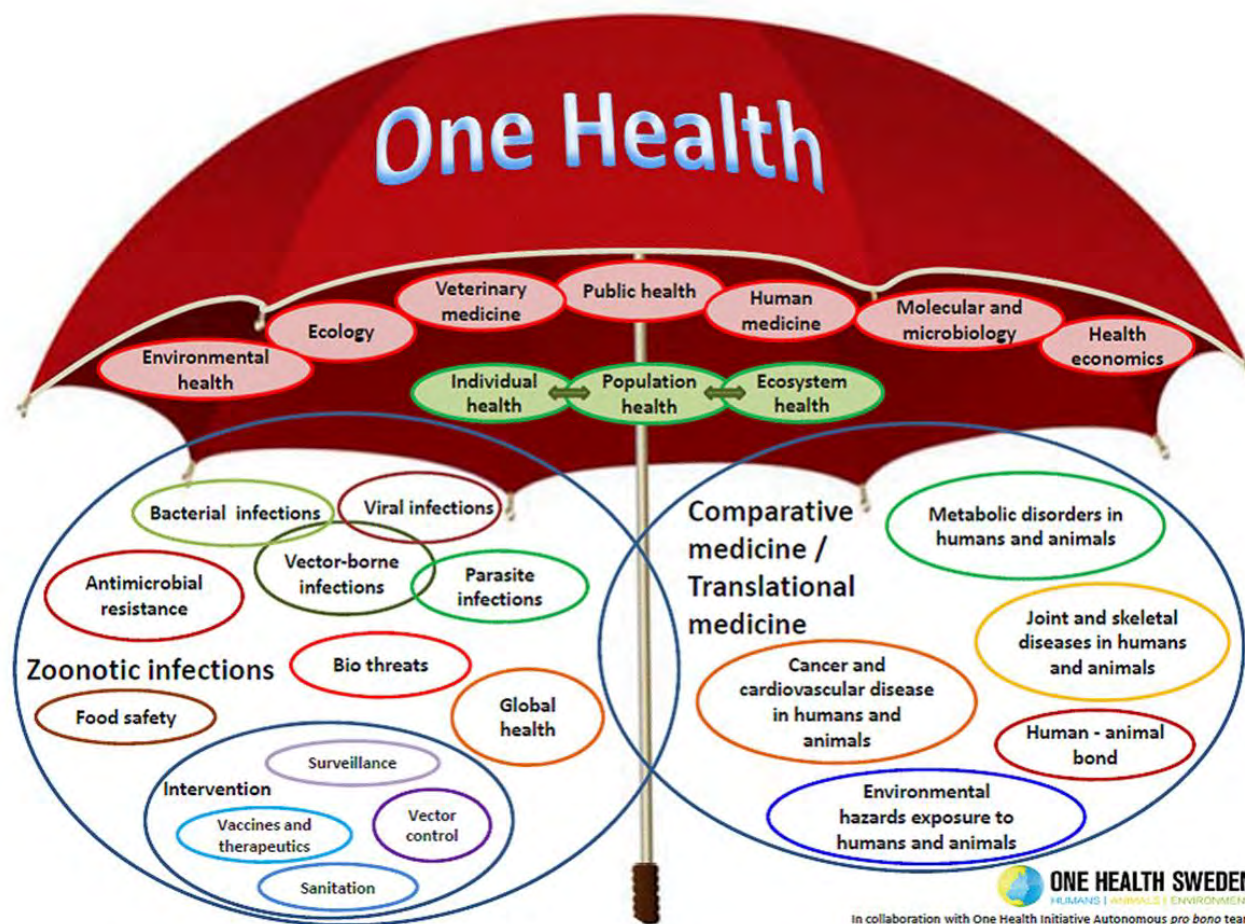
# OBJECTIVOS

- Una salud (One Health) / Un bienestar (One welfare)
- Avances de salud pública / producción en el context del marco 'Un bienestar'
  - Casos prácticos y ejemplos
- Conclusiones

## 'ONE WELFARE'

Qué es One Welfare?

# ONE HEALTH





Garcia Pinillos et al. Veterinary Record 2016, 179: 412-413

<http://veterinaryrecord.bmj.com/content/179/16/412/DC1/embed/inline-supplementary-material-1.pdf>

## 'ONE WELFARE'

Un bienestar es el término utilizado para describir la interconexión entre el bienestar animal, humano y mediambiental (físico y social)

## ‘ONE WELFARE’

- Reconoce las interconexiones entre el bienestar animal, humano y medioambiental
- Se enfoca en la colaboración interdisciplinaria para mejorar el bienestar humano y animal;
- Cubre la seguridad alimentaria, sostenibilidad, reducción del sufrimiento humano y mejora de la productividad del sector agrícola;
- Expande y hace explícito el enfoque de One Health hacia el bienestar animal y humano (algo de lo cual carece actualmente)

## 'MARCO ONE WELFARE'

El marco One Welfare





# 'MARCO ONE WELFARE' – SECCION 1

## Las conexiones entre el abuso y la negligencia de los animales y los humanos



# 'MARCO ONE WELFARE' – SECCION 1



Ref: National Link Coalition

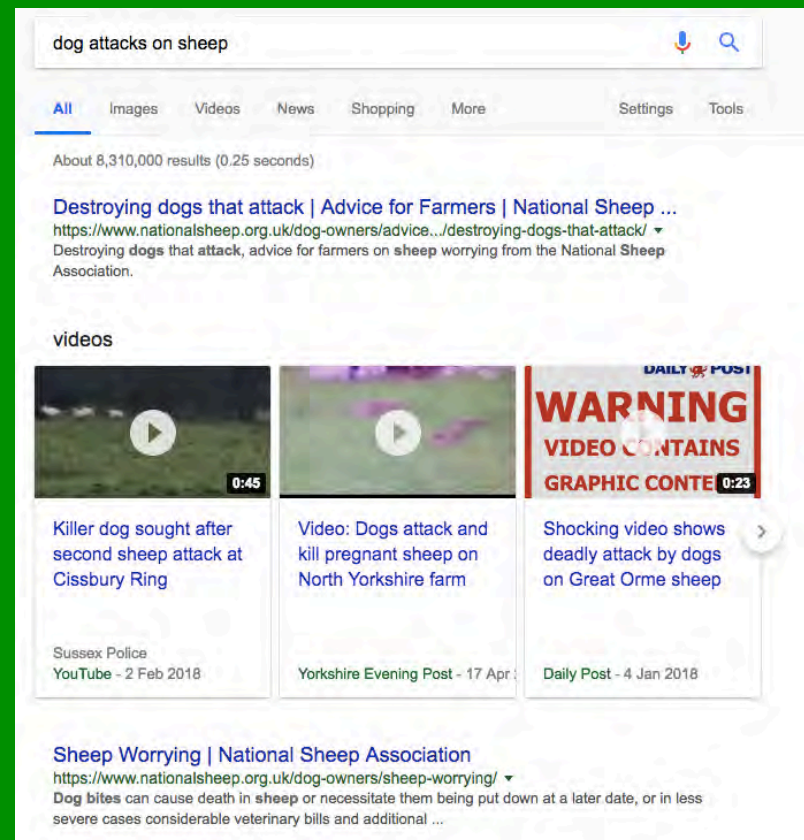
# 'MARCO ONE WELFARE' – SECCION 2

## Las implicaciones sociales del bienestar animal



# 'MARCO ONE WELFARE' – SECCION 2

## Tenencia responsable de perros



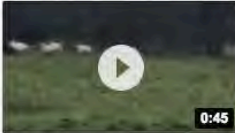
dog attacks on sheep

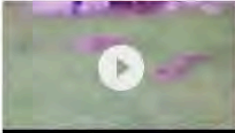
All Images Videos News Shopping More Settings Tools


About 8,310,000 results (0.25 seconds)

[Destroying dogs that attack | Advice for Farmers | National Sheep ...](#)  
<https://www.nationalsheep.org.uk/dog-owners/advice.../destroying-dogs-that-attack/>  
Destroying dogs that attack, advice for farmers on sheep worrying from the National Sheep Association.

videos

 0:45  
Killer dog sought after second sheep attack at Cissbury Ring  
Sussex Police  
YouTube - 2 Feb 2018

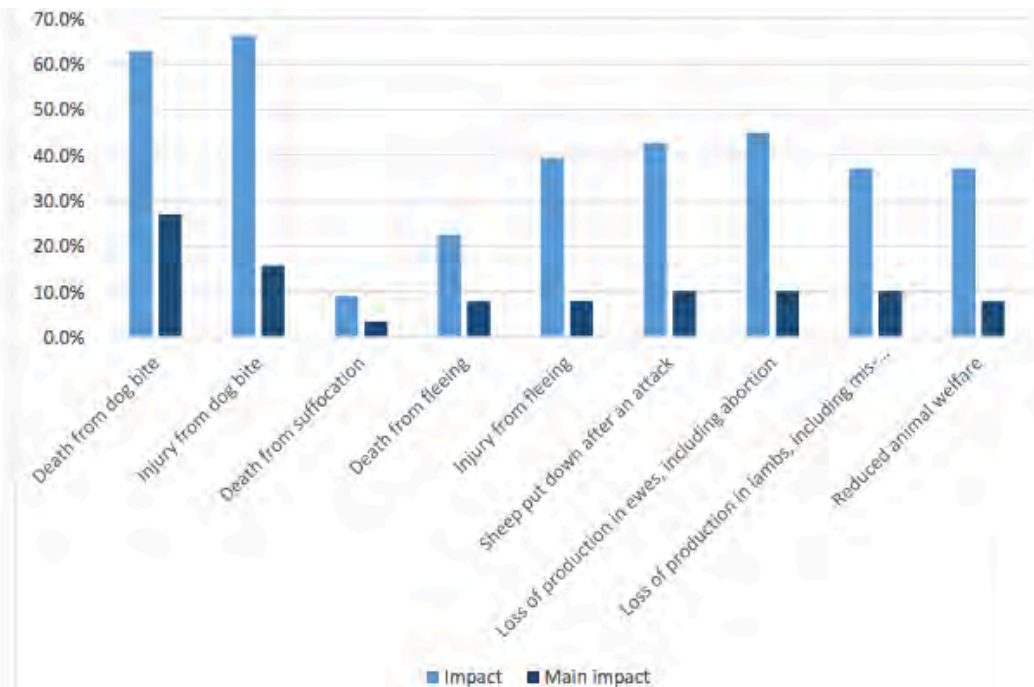
 0:23  
Video: Dogs attack and kill pregnant sheep on North Yorkshire farm  
Yorkshire Evening Post - 17 Apr

 0:23  
**WARNING**  
VIDEO CONTAINS  
GRAPHIC CONTE  
Shocking video shows deadly attack by dogs on Great Orme sheep  
Daily Post - 4 Jan 2018

[Sheep Worrying | National Sheep Association](#)  
<https://www.nationalsheep.org.uk/dog-owners/sheep-worrying/>  
Dog bites can cause death in sheep or necessitate them being put down at a later date, or in less severe cases considerable veterinary bills and additional ...

# 'MARCO ONE WELFARE' – SECCION 2

**Qué tipos de impacto / lesiones encuentras en el Ganado como resultado de ataques de perros?  
(de estos cuales consideras los más comunes?)**

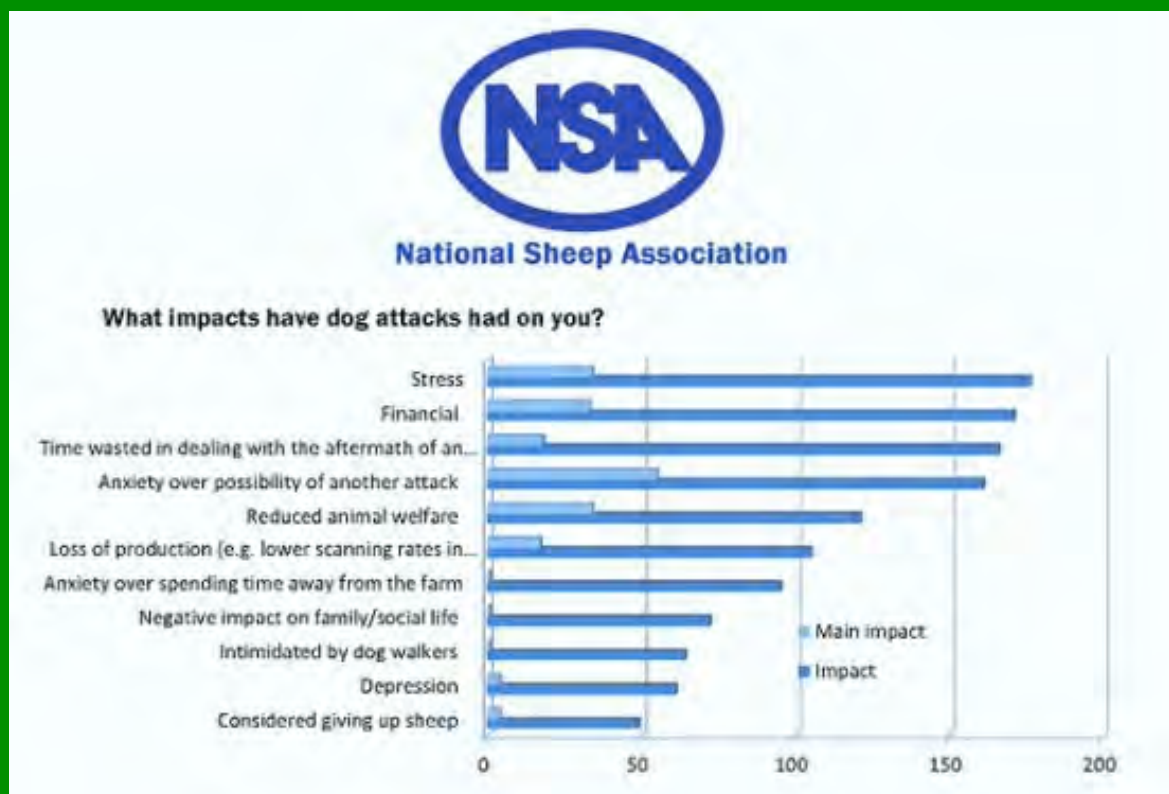


Ref: [https://www.nationalsheep.org.uk/workspace/pdfs/2017-results\\_1.pdf](https://www.nationalsheep.org.uk/workspace/pdfs/2017-results_1.pdf)



# 'MARCO ONE WELFARE' – SECCION 2

## Tenencia responsable de perros



## 'MARCO ONE WELFARE' – SECCION 2

### Bienestar animal y desastres ó guerras

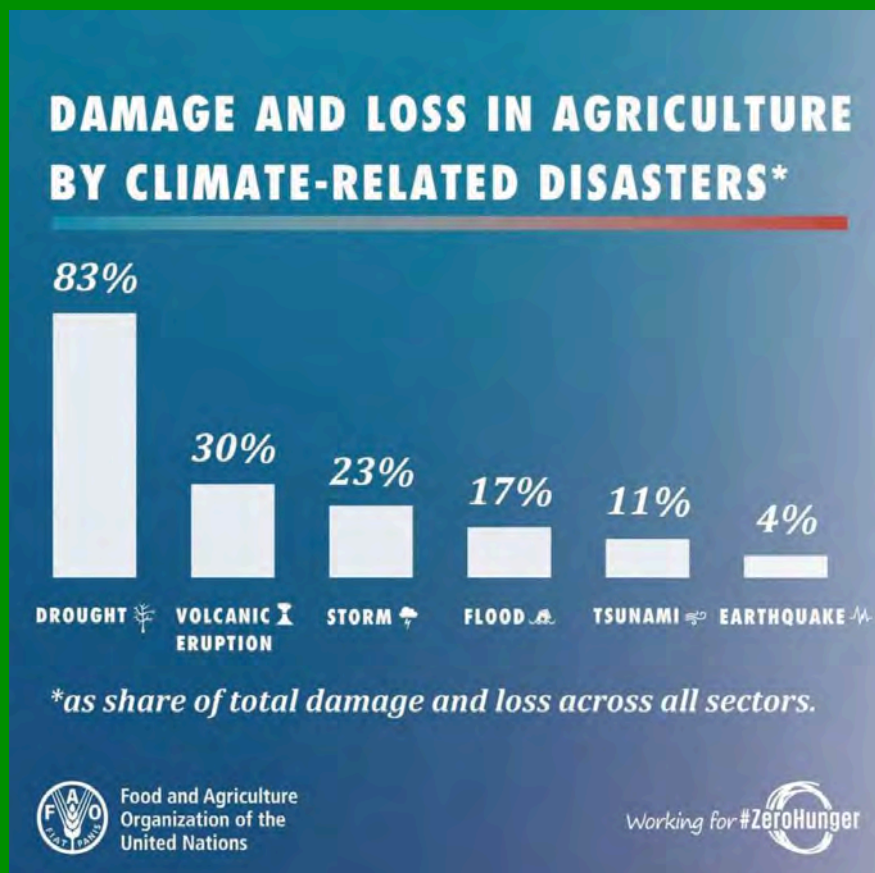


Ref: <https://elcomercio.pe/redes-sociales/facebook/inundaciones-china-arrasaron-granja-cerdos-232507?foto=4>  
<https://www.abc.net.au/news/2019-02-27/pakistan-shoots-down-two-indian-jets-in-kashmir/10854976>



# 'MARCO ONE WELFARE' – SECCION 2

## Bienestar animal y desastres ó guerras



ECONOMÍA

### El pollo aumenta hasta un 41% por las inundaciones

El sector ganadero también sufre las consecuencias de la situación meteorológica en el centro del país.

## 'MARCO ONE WELFARE' – SECCION 3

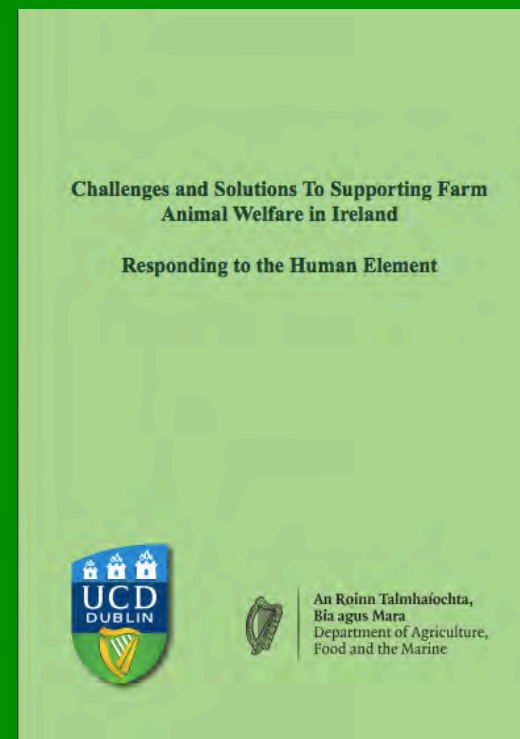
### Salud y bienestar animal, bienestar humano, seguridad alimentaria y sostenibilidad



## ‘MARCO ONE WELFARE’ – SECCION 3

### Mejora del bienestar animal y de los agricultores

El bienestar de los agricultores está relacionado con el bienestar de su ganado. Los problemas de salud y bienestar de los animales pueden ser reveladores de presiones físicas o mentales o angustia en un agricultor.



<https://www.agriculture.gov.ie/media/migration/publications/2018/ChallengesSolutionsSupportingFarmAnimalWelfareIreland210618.pdf>

# 'MARCO ONE WELFARE' – SECCION 3

## Mejora del bienestar animal y de los agricultores

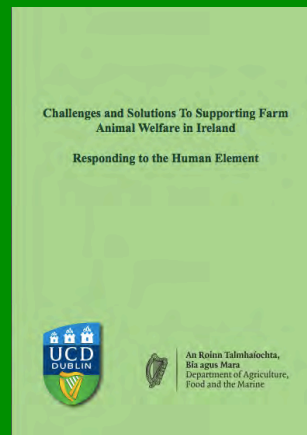
### INTRODUCING *ONE WELFARE*

*One Welfare* builds on the *One Health* Initiative by advancing the relationship between human and animal health to include human wellbeing and animal welfare, providing a platform for multidisciplinary collaboration.

*'Considering health and welfare together — because of the interconnections between human, animal and environmental factors — helps to describe context, deepens our understanding of the factors involved, and creates a holistic and solutions-oriented approach to health and welfare issues.'* (Garcia Pinillos et al., 2016)

*One Welfare* involves bringing together various disciplines and professions, including social scientists, community and rural development, human health professions, veterinary professionals, and agricultural scientists to work collaboratively on animal welfare, and human wellbeing.

This approach can help to improve animal welfare and address social problems, poverty and community support, and food safety, human wellbeing, farming productivity, food security, and sustainable development.

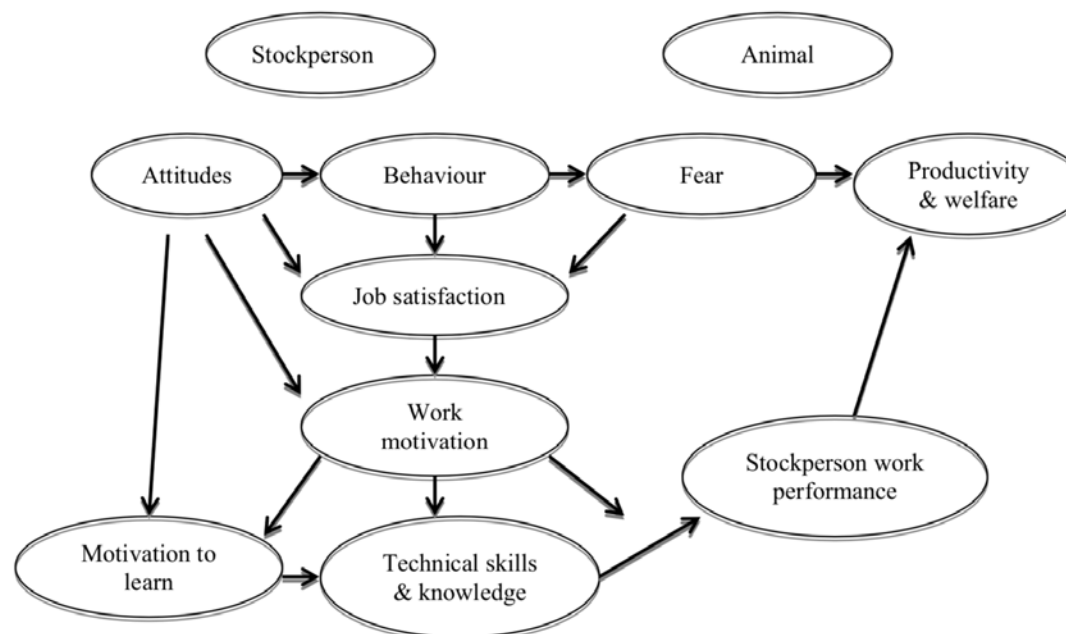


<https://www.agriculture.gov.ie/media/migration/publications/2018/ChallengesSolutionsSupportingFarmAnimalWelfareIreland210618.pdf>

# 'MARCO ONE WELFARE' – SECCION 3

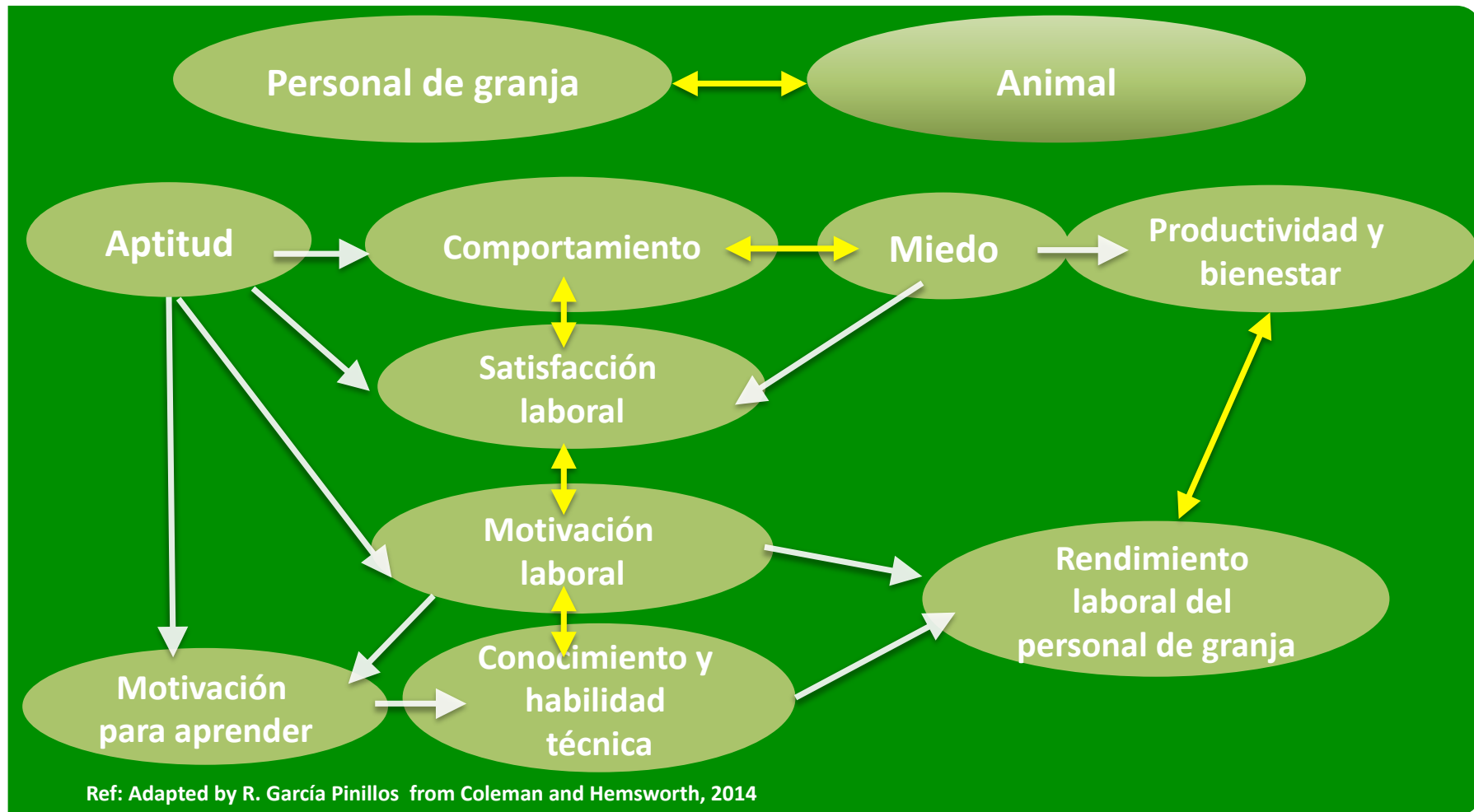
## Mejora del bienestar animal y de los agricultores

Figure 1: Work related characteristics in the sequential relationship between farmer attitude and farm animal welfare (Source: Coleman and Hemsworth, 2014)



<https://www.agriculture.gov.ie/media/migration/publications/2018/ChallengesSolutionsSupportingFarmAnimalWelfareIreland210618.pdf>

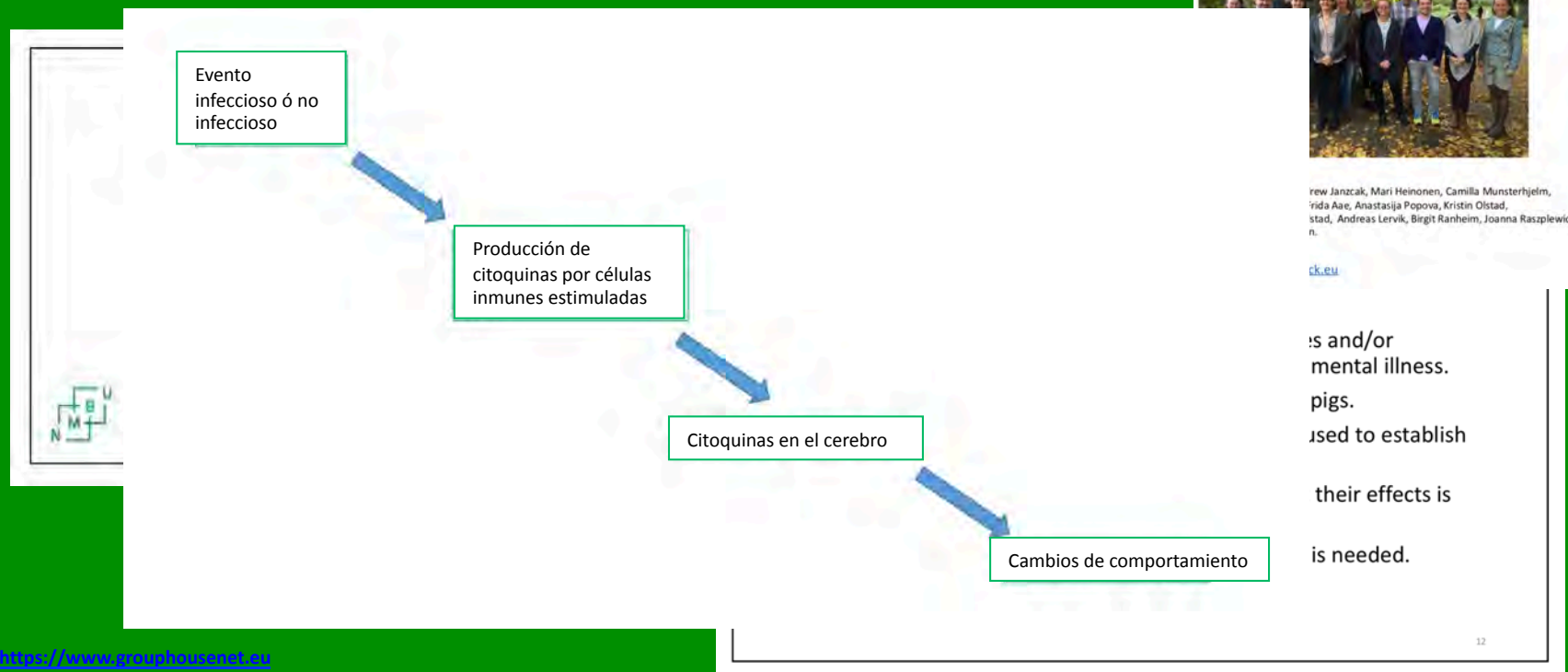
# 'MARCO ONE WELFARE' – SECCION 3





# 'MARCO ONE WELFARE' – SECCION 3

## Salud animal y problemas de comportamiento – mordeduras de cola



<https://www.grouphouse.net.eu>

Gráfico traducido por R. Garcia Pinillos

## 'MARCO ONE WELFARE' – SECCION 3

### Salud animal y problemas de comportamiento – mordeduras de cola

- La salud, a través del efecto de las citoquinas en las hormonas y / ó neurotransmisores tiene un efecto en el desarrollo de las enfermedades mentales
- El mecanismo exacto por el que las citoquinas establecen este efecto aun no es bien conocido
- Hace falta mas evidencia para demostrar esta correlacion en humanos y animales de produccion
- A menudo los síntomas/lesiones establecen correlacion pero no demuestran las causas

<https://www.grouphouse.nl.eu>



# 'MARCO ONE WELFARE' – SECCION 3

## Problemas de comportamiento/picaje en ponedoras

Relationships between health and damaging behaviours in laying hens

Jerine van der Eijk<sup>1,2</sup>, Aart Lammers<sup>2</sup>, Bas Rodenburg<sup>1</sup>  
<sup>1</sup>Behavioural Ecology Group, <sup>2</sup>Adaptation Physiology Group, Wageningen University

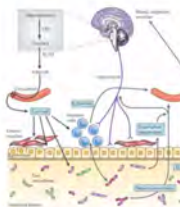


WAGENINGEN  
 CAWA  
 Centre for Animal Welfare and Adaptation

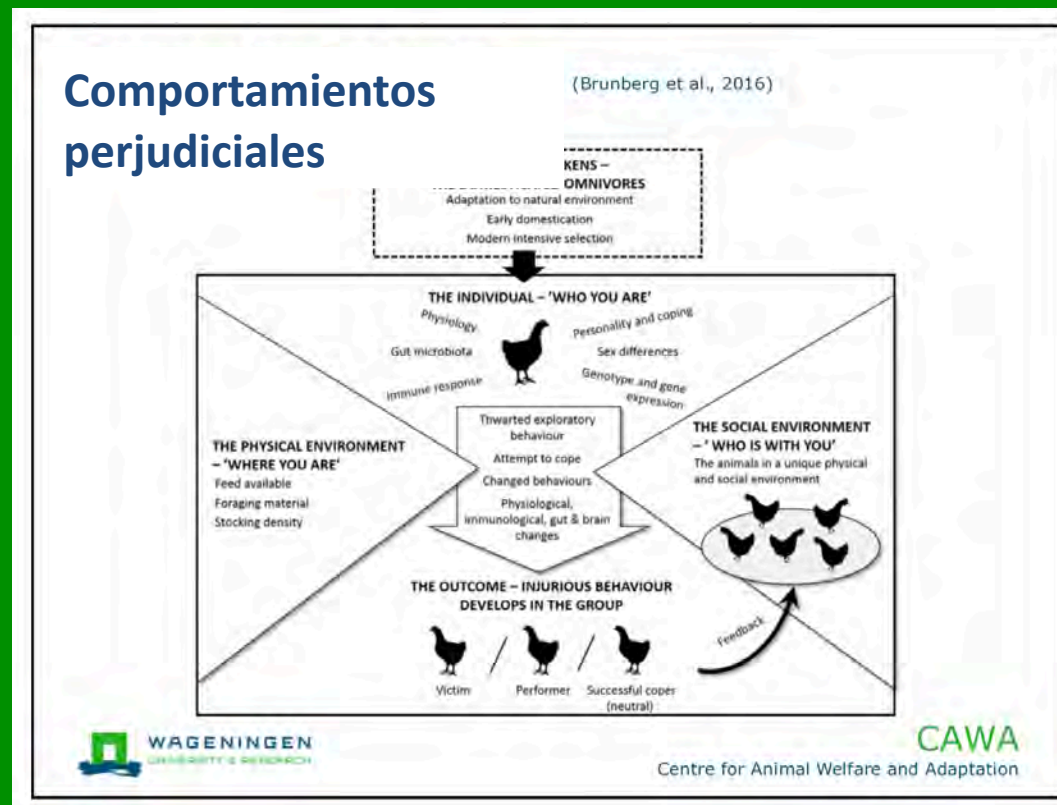
Microbiota-gut-brain axis: connecting piece? (Brunberg et al., 2016; Dinan and Cryan, 2012)

Microbiota colonization:

- Programming of HPA-axis
- Activation and development of immune system
- Influence on behaviour..



WAGENINGEN  
 CAWA  
 Centre for Animal Welfare and Adaptation



<https://www.grouphouseset.eu>

## 'MARCO ONE WELFARE' – SECCION 3

### Bienestar animal y salud pública

La mejora del bienestar de los animales está interconectada con sistemas inmunológicos más fuertes, animales menos propensos a las enfermedades y, como resultado, con menos necesidad de necesitar medicamentos

Ref: One Welfare – a complement to One Health supporting a sustainable dairy industry approach  
<https://www.fil-idf.org/wp-content/uploads/2018/09/IDF-Animal-Health-Report-Web.pdf>

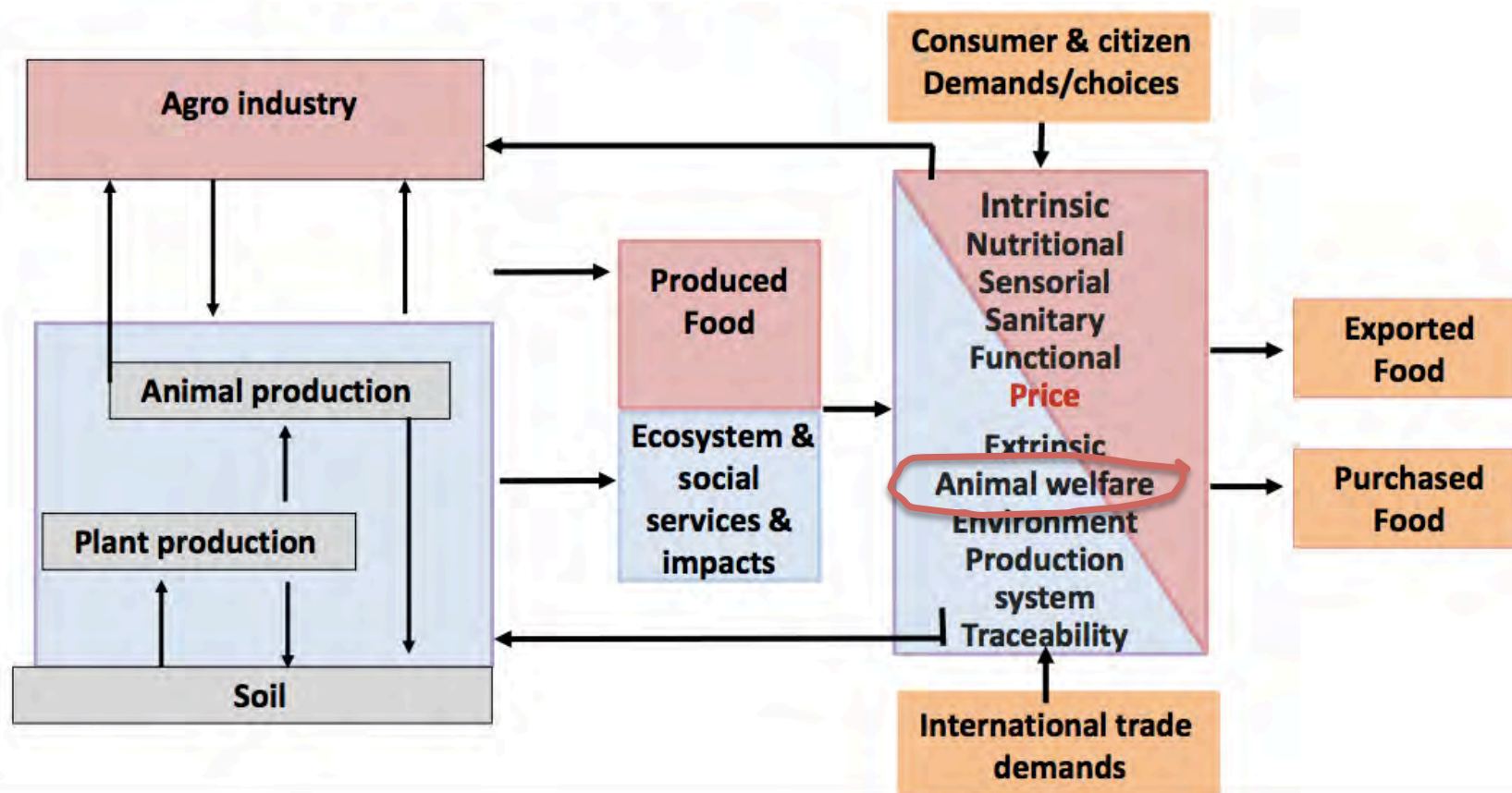
# 'MARCO ONE WELFARE' – SECCION 3



A European Public-Private Platform



## Como crear valor añadido



# MARCO 'ONE WELFARE' – SECCION 3

## RAISED WITHOUT ANTIBIOTICS (RWA)

- A GROWING MARKET
- A MEGA TREND

Results from the first Danish farms:




- 20-30 % is possible as part of a conventional production unit
- The higher health status the better
- Focus on animals all the time





## 'MARCO ONE WELFARE' – SECCION 3

### NATIONAL LABEL WITH THREE LEVELS

			
No tail docking	X	X	X
Straw as rooting material	X	X (On floor)	X (On floor)
Straw as nesting material	X	X	X
Loose sows	X (Protective rails allowed for 4 days)	X (Protective rails allowed for 2 days)	X
8 hours' transport	X	X	X
Space requirements according to standard requirements	X	+ 30 %	+ roughly 100 %
Weaning 28 days		X	X
Straw in lying area			X
Free-range farrowing			X
Access to outdoor area			X

## ‘MARCO ONE WELFARE’ – SECCION 3

### SACRIFICIO DE PRECISIÓN Una solución “One Welfare”



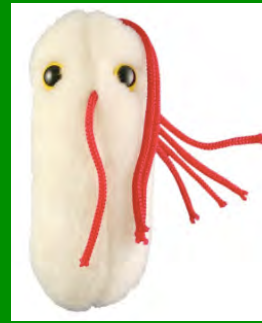
Ref: Garcia Pinillos, R. (2018) We need to make more use of technology in the slaughter industry to improve welfare *Veterinary Record* **183**, 198-199.

Garcia Pinillos, R (2019) Aplicación de nuevas tecnologías para conseguir un “sacrificio de precisión” Eurocarne, Enero -273

## 'MARCO ONE WELFARE' – SECCION 3

### Bienestar animal y seguridad alimentaria

- Con mayor stress, aumenta la secreción de *Escherichia coli*, *Salmonella* or *Campylobacter*

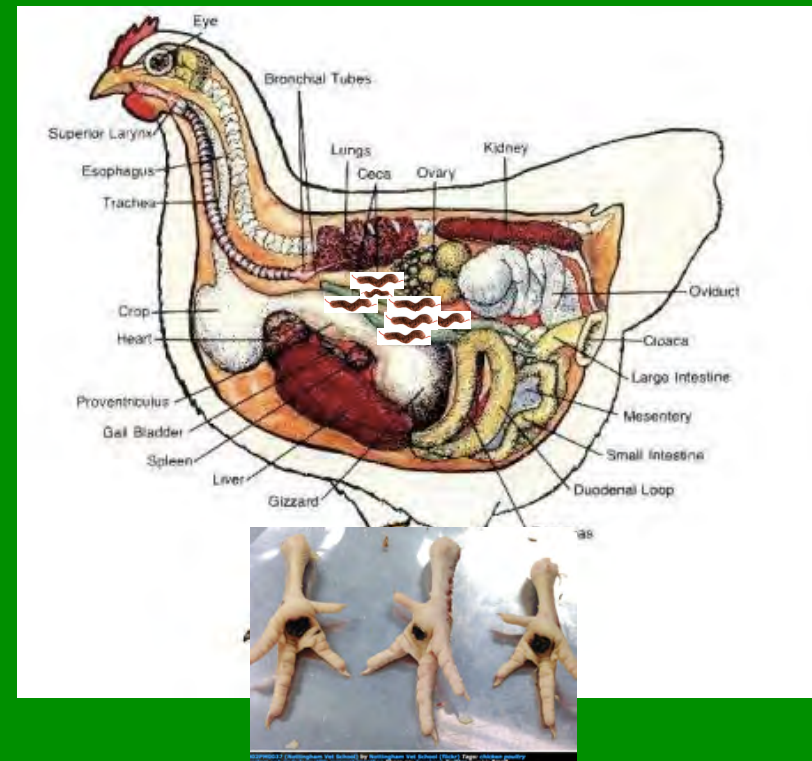


Pictures: <https://www.giantmicrobes.com/ca/products/ecoli.html>

## 'MARCO ONE WELFARE' – SECCION 3

### Vínculos entre mejor bienestar animal y seguridad alimentaria

Un estudio de pollos de engorde en GB demostró que lotes de ciegos positivos a *Campylobacter* se asociaron con mayores niveles de decomiso debido a infecciones y dermatitis digital



Appl Environ Microbiol. 2008 Sep;74(17):5408-13. doi: 10.1128/AEM.00462-08. Epub 2008 Jul 18



# 'MARCO ONE WELFARE' – SECCION 4

## Intervenciones asistidas de animales, personas y el medio ambiente



## 'ONE WELFARE FRAMEWORK' – SECTION 4

### Interacciones entre animales, personas y el medio ambiente



Ref: Case Study 17 – Green Chimneys (by Green Chimneys, USA)

## 'MARCO ONE WELFARE' – SECTION 4

### Beneficios del vínculo Humano–Animal (HAB)

- Intervenciones asistidas con animales (e.g. tratamiento para trastornos de estrés post-traumático)
- Actividades asistidas con animales (e.g. perros sin entrenar visitando residencias de ancianos)
- Terapias asistidas con animales (e.g. animales de asistencia para ayudar con rehabilitación y para condiciones de salud física ó mental como el autismo )
- Rescate y programas de apoyo humano (e.g. centros de rescate, animales de laboratorio)

# 'MARCO 'ONE WELFARE' – SECCION 4/1



# 'ONE WELFARE FRAMEWORK' – SECTION 5

## Sustainability: Connections Between Biodiversity, the Environment, Animal Welfare and Human Wellbeing



## 'ONE WELFARE FRAMEWORK' – SECTION 5

- Enfocada en aspectos más globales, relacionados con la conservación, llendo más allá de la producción ganadera
- Captura tópicos importantes relevantes, relacionados con los objetivos de desarrollo sostenible relevantes para One Welfare, que no se han resuelto en otras partes del marco
- Conectada íntimamente con la Sección 3



# 'MARCO ONE WELFARE' – SECCION 5



## 'MARCO ONE WELFARE' – SECCION 5

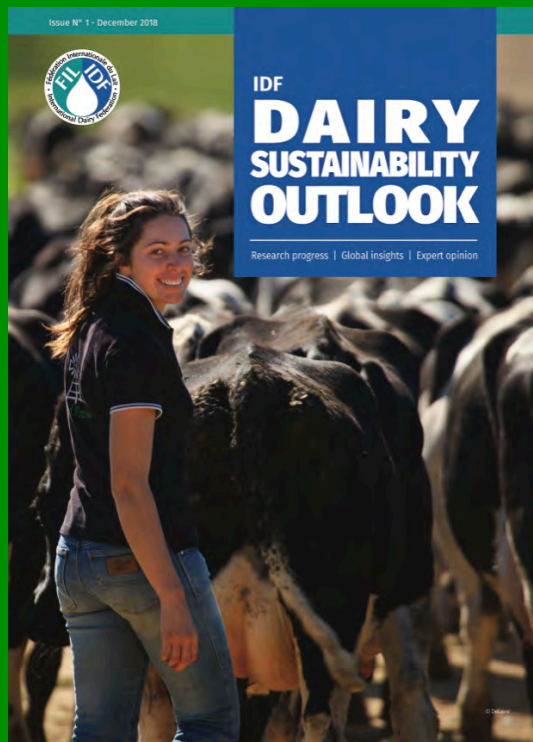
### Aire, agua, tierra, cambio climático y One Welfare

La integración de los beneficios del bienestar animal y conservación en la agricultura y mercados respalda las mejoras en una serie de aspectos:

- menos requerimiento de mano de obra en la producción intensiva,
- mejor gestión de la disponibilidad de agua y desechos,
- mejor calidad del suelo y filtración de agua
- Dietas SHARP (Sustainable, Healthy, Affordable, Reliable, Preferred) (Mertens et al., 2017)



# 'ONE WELFARE FRAMEWORK' – SECTION 5



Ref: <https://store.fil-idf.org/product/report-163-idf-dairy-sustainability-outlook-no-1/>

Economy	<p><b>Liquidity</b></p> <ul style="list-style-type: none"> <li>Systematic planning of liquidity</li> </ul> <p><b>Profitability</b></p> <ul style="list-style-type: none"> <li>Life-effectiveness of culled cows (kg of milk per day)</li> <li>Satisfaction with the economic situation of the (dairy) farm in the past three years</li> </ul> <p><b>Stability</b></p> <ul style="list-style-type: none"> <li>Changes in equity of the last three years</li> <li>Investments in dairy production</li> <li>Hedge/safeguard of farm in case of a long-term illness, etc.</li> <li>Hedge/safeguard of various risks</li> <li>Further education and training of the manager</li> <li>Use of socio-economic consulting/advice</li> <li>Use of production-related consulting/advice</li> <li>Existence of the dairy farm in ten years</li> </ul>	<p><b>Individual work situation of the manager</b></p> <ul style="list-style-type: none"> <li>Workload</li> <li>Satisfaction with the personal work situation</li> <li>Individual work situation at the farm</li> <li>Free days per week</li> <li>Frequency of holidays and number of leave days</li> </ul> <p><b>Individual work situation of permanent employees in fulltime positions</b></p> <ul style="list-style-type: none"> <li>Average of weekly working hours</li> <li>Number of leave days</li> </ul> <p><b>Employment situation and socio-occupational safety</b></p> <ul style="list-style-type: none"> <li>Possibility for permanent staff to introduce their own ideas</li> <li>Wage of the farm workers</li> <li>Compensation for overtime work</li> <li>Opportunity of special training/further education for farm workers</li> </ul> <p><b>Social integration</b></p> <ul style="list-style-type: none"> <li>Activities for youth development (apprentice, trainee)</li> <li>Public relations activities</li> <li>Involvement in work-related civic service/voluntary work</li> <li>Volunteering for non-agricultural civic service/voluntary work</li> </ul>
Ecology	<p><b>Cultivation/management of permanent pasture</b></p> <ul style="list-style-type: none"> <li>Conversion of permanent pasture to arable land in the past five years</li> <li>Ploughing of grassland in terms of maintenance measures in the past five years</li> </ul> <p><b>Ecologically valuable land, cultural landscape and preservation of landscape</b></p> <ul style="list-style-type: none"> <li>Share of extensive pastures</li> <li>Participation in contractual environmental and nature conservation measures</li> <li>Share of landscape features, ecologically valuable land and extensive pastures (share of UAA)</li> <li>Preservation of landscape: maintenance measures</li> </ul> <p><b>Management of arable land</b></p> <ul style="list-style-type: none"> <li>Percentage of arable land covered in winter</li> </ul> <p><b>Nutrient management</b></p> <ul style="list-style-type: none"> <li>Average nitrogen balance of the last three years</li> <li>Average phosphorous balance of the last six years</li> <li>Monitoring the nutrient contents of the soil</li> <li>Analysis of silage in terms of crude protein content, taking crude protein contents into account while planning the fertilisation</li> <li>Analysing the nutrition contents (N, P, K) of organic fertilizer</li> </ul> <p><b>Manure management</b></p> <ul style="list-style-type: none"> <li>Type of slurry storage (and residual fermentation storage)</li> <li>Storage capacity (in month)</li> <li>Application methods of manure and fermentation residue/digestate from biogas plant (on arable land and pastures)</li> </ul> <p><b>Plant protection management</b></p> <ul style="list-style-type: none"> <li>Share of pasture not treated pesticides or only partly treated (single weeds)</li> </ul> <p><b>Energy production and energy consumption</b></p> <ul style="list-style-type: none"> <li>Regenerative energies: own regenerative energy production or participation in regenerative energy production</li> <li>Participation in energy checks in the past five years</li> <li>Energy-saving measures in milk production and milk chilling</li> </ul>	<p><b>Rearing methods and cow well-being</b></p> <ul style="list-style-type: none"> <li>Freedom of movement of the dairy cows</li> <li>Type of cubicle and the floor covering; management of the lying areas</li> <li>Cow per resting spot ratio</li> <li>Cow per feeding areas spot ratio</li> <li>Access to water</li> <li>Inspection and cleaning of the drinking trough</li> <li>Availability of a calving pen; management of the calving pen: ground material and litter; cleaning management</li> <li>Area for sick cows</li> <li>Elements for cow comfort</li> </ul> <p><b>Animal health</b></p> <ul style="list-style-type: none"> <li>Udder health (status quo): somatic cells</li> <li>Strategies for drying off</li> <li>Udder health management: maintenance of the milking system</li> <li>Cow-individual control of lameness</li> <li>Prevalence of lameness</li> <li>Control of joint injuries</li> <li>Frequency of hoof care</li> <li>Analysis of the dairy cows' metabolism: no of cows with fat:protein-ratio &gt; 1,5 or fat:protein-ratio &lt; 1,0</li> <li>Calculation of daily feed rations</li> <li>Dairy cows mortality rate</li> <li>Calf mortality</li> <li>Antibiotics: use of antibiotics for treatment of mastitis</li> <li>Application of hormones</li> <li>Method of dehorning</li> </ul> <p><b>Additional indicators</b></p> <ul style="list-style-type: none"> <li>Herd care by external consultants (e.g. veterinarians)</li> <li>Share of difficult calving</li> <li>Calf rearing management: supply of colostrum, water and solid feed</li> <li>Calf rearing system: resting area for new-born calves</li> </ul>

Table 1 – Ecological, economic, social and animal-welfare criteria included in the monitoring-tool

# 'ONE WELFARE FRAMEWORK' – SECTION 5



	Tu granja	Excelente	Bueno	Satisfactorio	No satisfactorio	Número de granjas con respuestas
<b>Stability</b>						
Inversión en producción lechera en los últimos 5 años	Si		Si 79%		No 21%	220
<b>Individual work situation of the farm manager</b>						
Carga laboral del encargado de la granja	Permanentemente muy alto y a menudo por encima del límite personal.		Asequible, raramente al límite personal 13%	A menudo alto, pero aún asequible. Sólo ocasionalmente por encima del límite personal 63%	Permanentemente muy alto y a menudo por encima del límite personal 24%	216
<b>Animal Health</b>						
Células somáticas: % de vacas con recuento medio de células somáticas menor de 100,000 células/ml en los últimos 12 meses	Al menos 40% pero no más de 60% del rebaño tiene un recuento de células somáticas inferior a 100,000 células/ml.	Al menos 75% del rebaño tiene un recuento de células somáticas menor de 100,000 células/ml 8%	Al menos 60% pero no más del 75% del rebaño tiene un recuento de células somáticas menor de 100,000 células/ml 24%	Al menos 40% pero no más del 60% del rebaño tiene un recuento de células somáticas menor de 100,000 células/ml 49%	Menos del 40% del rebaño tiene un recuento de células somáticas menor de 100,000 células/ml ó no hay datos 19%	195

Table 2 – Example of a benchmark: selected criteria and their respective ratings; percentage of farms in the different categories

Ref: Translated by R. Garcia Pinillos from Lindena et al., 2018, IDF sustainability outlook publication.

# 'ONE WELFARE' FRAMEWORK

A background image of severely cracked, dry earth, symbolizing drought and food insecurity.

**SEVERE**

Sequías severas están empeorando y revertiendo el progreso que mejora el hambre global

Source: SOFI 2018 <http://www.fao.org/state-of-food-security-nutrition/en/>

# MARCO 'ONE WELFARE'

## Intervenciones para reducir impactos del cambio climático

- Impacto en ganado y ganaderos:
  - Estrés por calor – animales más vulnerables a enfermedades
  - Reducción en fertilidad
  - Reducción de productividad
- Impacto en océanos
  - Aumento en la temperatura del agua
  - Extinción de ciertas especies
  - Modificación del hábitat
  - Aumento del riesgo de enfermedades



# 'MARCO ONE WELFARE' – SECCION 5



Food and Agriculture Organization of the United Nations

## LIVESTOCK DIVERSITY HELPS COPE WITH CLIMATE CHANGE

Livestock diversity or **animal genetic resources** are terms used to describe the pool of **38 species** of domesticated birds and mammals with more than **8 800 breeds** currently used for food and agriculture.

**Did you know?**  
There are 800 breeds of cattle in the world, each with different valuable traits

### LIVESTOCK ADAPTIVE TRAITS

Thrive on poor quality feed



Tolerate extreme temperatures



Tolerate or resist diseases



Tolerate drought



Walk long distances for water or food



Produce meat, eggs, and milk, even under stressful conditions

### WHAT ARE THE BENEFITS FOR PEOPLE

Increase resilience to hazards including drought, floods and disease

Allow lands where no crops can grow to be productive

Allow for relocation of species or breeds better adapted to harsh climatic conditions

Form and maintain landscapes through grazing and manure fertilization, while facilitating biodiversity

Provide diverse income and food sources for millions of people

## 'MARCO ONE WELFARE' – SECCION 5

### Asociación para la evaluación y rendimiento global del Ganado (LEAP partnership)

- Quantificación de los gases de efecto invernadero producidos por las cadenas de producción ganaderas (piensos, ruminantes, aves y cerdos)
- Base de datos global sobre las emisiones de gases de efecto invernadero sobre los 5 cultivos principales (cebada, madioca, maíz, soja y trigo)
- Desarrollo de guías sobre el desarrollo del carbono fijado en la tierra, el ciclo de nutrientes, agua, biodiversidad y aditivos de pienso ó guías para fomentar cambios

Ref:<https://store.fil-idf.org/product/report-163-idf-dairy-sustainability-outlook-no-1/> (Livestock Environmental Assessment and Performance (LEAP) Partnership)



**ENVIRONMENTAL PERFORMANCE OF ANIMAL FEEDS SUPPLY CHAINS: GUIDELINES FOR ASSESSMENT**



Technical guidance document  
Environmental assessment frameworks: LCA  
Scope - Environmental accounting: GHG emissions, fossil energy use  
Scope - Environmental impacts/resource use: Climate change, fossil resources depletion, acidification, eutrophication, land occupation

**NUTRIENT FLOWS AND ASSOCIATED ENVIRONMENTAL IMPACTS IN LIVESTOCK SUPPLY CHAINS: GUIDELINES FOR ASSESSMENT**



Technical guidance document  
Environmental assessment frameworks: LCA, resource use efficiency, nitrogen footprinting, environmental footprinting  
Scope: Crops and livestock  
Scope - Production systems: All.



**A REVIEW OF INDICATORS AND METHODS TO ASSESS BIODIVERSITY – APPLICATION TO LIVESTOCK PRODUCTION AT GLOBAL SCALE**

Technical guidance document  
Environmental assessment frameworks: LCA, Pressure-State-Response (PSR)

**GREENHOUSE GAS EMISSIONS AND FOSSIL ENERGY USE FROM SMALL RUMINANT SUPPLY CHAINS: GUIDELINES FOR ASSESSMENT**



Technical guidance document  
Environmental assessment frameworks: LCA  
Scope - Livestock species: Goats and sheep  
Scope - Environmental accounting: GHG emissions, fossil energy use  
Scope - Environmental impacts/Resource use: Climate change, fossil resources depletion

**WATER USE OF LIVESTOCK PRODUCTION SYSTEM AND SUPPLY CHAINS: GUIDELINES FOR ASSESSMENT**



Technical guidance document  
Environmental assessment frameworks: water footprinting, LCA, resource use efficiency, water productivity  
Scope: Crops and livestock  
Scope - Production systems: All.



**PRINCIPLES FOR THE ASSESSMENT OF LIVESTOCK IMPACTS ON BIODIVERSITY**

Technical guidance document  
Environmental assessment frameworks: LCA, Pressure-State-Response (PSR)

**LEAP DATABASE ON FEED CROPS**



Technical guidance document  
Environmental assessment frameworks: LCA  
Scope - Feed crops: Barley, cassava, maize, soybeans and wheat  
Scope - Environmental accounting: GHG emissions

**MEASURING AND MODELLING SOIL CARBON STOCKS AND STOCK CHANGES IN LIVESTOCK PRODUCTION SYSTEMS: GUIDELINES FOR ASSESSMENT**



Technical guidance document  
Environmental assessment frameworks: carbon footprinting, LCA, land management  
Scope - Livestock species: mostly ruminants  
Scope - Production systems: Guidance was developed for grasslands and rangelands; yet, it can also be used for any type of crop production.

**ENVIRONMENTAL PERFORMANCE OF FEED ADDITIVE SUPPLY CHAINS: GUIDELINES FOR ASSESSMENT**

Technical guidance document (under revision before external review)  
Environmental assessment frameworks: LCA  
Scope - Environmental accounting: GHG emissions, fossil energy use  
Scope - Environmental impacts/resource use: Climate change, fossil resources depletion, acidification, eutrophication, water use, land occupation.

**ENVIRONMENTAL PERFORMANCE OF LARGE RUMINANT SUPPLY CHAINS: GUIDELINES FOR ASSESSMENT**



Technical guidance document  
Scope - Livestock species: Cattle and buffalo  
Environmental assessment frameworks: LCA  
Scope - Environmental accounting: GHG emissions, fossil energy use  
Scope - Environmental impacts: Climate change, fossil resources depletion, water footprint, acidification, eutrophication, land occupation, biodiversity

**BIODIVERSITY AND LIVESTOCK PRODUCTION SUPPLY CHAINS: GUIDELINES FOR QUANTITATIVE ASSESSMENT**

Technical guidance document (under revision before external review)  
Environmental assessment frameworks: LCA and PSR  
Scope: Crops and livestock  
Scope - Production systems: All.

Ref:<https://store.fil-idf.org/product/report-163-idf-dairy-sustainability-outlook-no-1/>



## 'ONE WELFARE' – Próximo proyecto

### PROYECTO ONE WELFARE PHOENIX

Desarrollar guías genéricas a nivel global, de acceso gratuito, para profesionales y el público sobre el vínculo entre el maltrato y la negligencia anima -humano, proporcionando secciones flexibles para que los contactos locales, logotipos, etc. se incorporen en las guías de los grupos locales.

1. Profesionales veterinarios (e.g. veterinarios, enfermeras veterinarias)
2. Profesionales médicos (e.g. médicos, enfermeras, dentistas)
3. Profesionales de servicios sociales (e.g. trabajadores sociales, cuidadores de niños)
4. El público

# CONCLUSIONES



*tribuna*

«Un solo bienestar» :  
marco de trabajo para apoyar la implementación  
de las normas de bienestar animal de la OIE

Rebeca García

Utilizar el concepto de «Un solo bienestar» puede ayudar a «mejorar el bienestar animal y humano (y viceversa); a coordinar acciones entre los servicios veterinarios y otros servicios y a proteger el medio ambiente como una etapa fundamental para el bienestar tanto del hombre como de los animales» [8].

Reconocer los lazos entre el bienestar animal, el del hombre y el del entorno representa un paso hacia la implementación de las normas y políticas de bienestar animal, con la meta de integrar el bienestar animal con otras áreas pertinentes para beneficio de todos.

Ref: Boletín de bienestar animal, OIEm 2017-1  
[http://www.oie.int/fileadmin/Home/eng/Publications\\_%26\\_Documentation/docs/pdf/bulletin/Bull\\_2017-1-ESP.pdf](http://www.oie.int/fileadmin/Home/eng/Publications_%26_Documentation/docs/pdf/bulletin/Bull_2017-1-ESP.pdf)

## CONCLUSIONES

Reconocer, estudiar y trabajar respetando los vínculos entre el bienestar animal, el bienestar humano y el medio ambiente es clave en el contexto de salud pública y producción animal

La profesión veterinaria debe hacer lo posible for fomentar colaboraciones **‘One Health One Welfare’** entre veterinarios / servicios sociales / servicios de salud pública para maximizar los beneficios sociales

Integrar el bienestar representa un paso adelante en la implementación de estándares y políticas de bienestar animal.

# ONE WELFARE

A Framework to Improve Animal  
Welfare and Human Wellbeing

Rebeca García Pinillos



Dr. Rebeca García Pinillos  
[onewelfare@outlook.com](mailto:onewelfare@outlook.com)

[www.onewelfareworld.org](http://www.onewelfareworld.org)    [@onewelfare](https://twitter.com/onewelfare)    [onewelfare](https://www.facebook.com/onewelfare)