Jornada sobre bienestar animal en acuicultura

Proyectos, resultados y líneas futuras

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EFSA

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European Food Safety Authority

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EFSA in focus ANIMALS

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Contents

> Key topics

Animal cloning risk assessments underline complexity of the issue, finds EFSA

EFSA's assessment of the scientific implications of animal cloning on food safety, animal health and welfare and the environment underlined the complexity of the issue. *"EFSA cannot always offer simple answers or reassurances,"* said Prof Vittorio Silano, chair of EFSA's Scientific Committee. *"Complex and evolving science and technology, where data can be limited, do not offer such neat solutions."*

While there are a limited number of studies available, consistent findings, based on the growing amount of available data, still emerged. These relate to pigs and cattle, the only animals for which there were adequate data.

EFSA found that there were significant animal health and welfare issues for a monitored during their production life and natural life span. Risk assessments should also be performed on food animals other than cattle and pig that have also been produced via SCNT, when relevant data become available.

In addition, EFSA recommends that the

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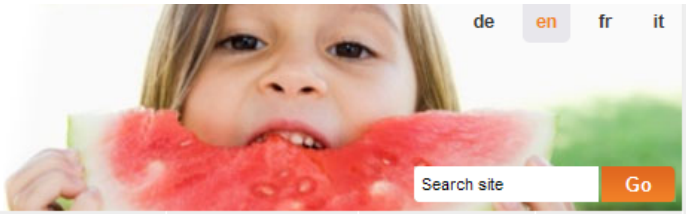

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Fish Welfare

Aquaculture is an important animal farming activity. Farming of fish and other aquatic species has increased in recent decades, and the husbandry practices used and associated welfare issues are becoming increasingly focused on by policy makers, scientists and consumers. Scientific approaches to assess fish welfare are continually evolving. Challenges include the great diversity of fish species and production systems, as well as an overall shortage of scientific data in this field.

See also

- Topic: Animal Welfare
- AHAW homepage

EU framework

In the EU, Council Directive 98/58/EC lays down minimum standards for the protection of animals bred or kept for farming purposes, including fish.

International organisations have also issued recommendations and guidelines concerning fish welfare. In 2005 the Council of Europe adopted a recommendation on the welfare of farmed fish and in 2008 the World Organisation for Animal Health (OIE) adopted guiding principles for fish welfare. A number of codes of practice have also been adopted by industry that includes measures to safeguard fish welfare.

EFSA's role and activities

EFSA's activities in the area of fish welfare are carried out in the wider context of animal health and welfare by the Panel on animal health and welfare (AHAW). The Panel provides independent scientific advice to risk managers on all aspects of animal diseases and animal welfare. Its work chiefly concerns food-producing animals, including fish.

Through its activities on fish welfare, EFSA aims to gain an in-depth understanding of the factors affecting the welfare of farmed fish and to provide a science-based foundation for European policies and legislation. Its scientific opinions focus on helping risk managers identify methods to reduce unnecessary pain, distress and suffering for animals and to increase welfare where possible. EFSA is not mandated to give advice on ethical or cultural issues related to animal welfare.

EFSA

Publications

Scientific Opinion on the increased mortality events in Pacific oysters, *Crassostrea gigas*
Scientific Opinion of the AHAW Panel - Published: 17 November 2010

Species-specific welfare aspects of the main systems of stunning and killing of farmed turbot
Scientific Opinion of the AHAW Panel - Published: 11 May 2009

Species-specific welfare aspects of the main systems of stunning and killing of farmed tuna
Scientific Opinion of the AHAW Panel - Published: 6 May 2009

Species-specific welfare aspects of the main systems of stunning and killing of farmed Carp
Scientific Opinion of the AHAW Panel - Published: 27 April 2009

Species-specific welfare aspects of the main systems of stunning and killing of farmed fish: Rainbow Trout
Scientific Opinion of the AHAW Panel - Published: 14 April 2009

Species-specific welfare aspects of the main systems of stunning and killing of farmed Atlantic Salmon
Scientific Opinion of the AHAW Panel - Published: 14 April 2009

Species-specific welfare aspects of the main systems of stunning and killing of farmed Eels *(Anguilla Anguilla)* [1]
Scientific Opinion of the AHAW Panel - Published: 14 April 2009

Species-specific welfare aspects of the main systems of stunning and killing of farmed Seabass and Seabream
Scientific Opinion of the AHAW Panel - Published: 14 April 2009

General approach to fish welfare and to the concept of sentience in fish[1]
Scientific Opinion of the AHAW Panel - Published: 24 February 2009

Food Safety considerations of animal welfare aspects of husbandry systems for farmed fish - Scientific opinion of the Panel on Biological Hazards
Scientific Opinion of the BIOHAZ Panel - Published: 18 December 2008

Animal welfare aspects of husbandry systems for farmed common carp
Scientific Opinion of the AHAW Panel - Published: 17 December 2008

Animal welfare aspects of husbandry systems for farmed European seabass and gilthead seabream - Scientific Opinion of the Panel
Scientific Opinion of the AHAW Panel - Published: 26 November 2008

Animal welfare aspects of husbandry systems for farmed trout - Scientific Opinion of the Panel on Animal Health and Welfare
Scientific Opinion of the AHAW Panel - Published: 20 October 2008

Animal welfare aspects of husbandry systems for farmed fish - European eel - Scientific Opinion of the Panel on Animal Health and Welfare
Scientific Opinion of the AHAW Panel - Published: 20 October 2008

Comentario sobre informe EFSA Mayo 2009

Enfoque normativo, con escasos datos

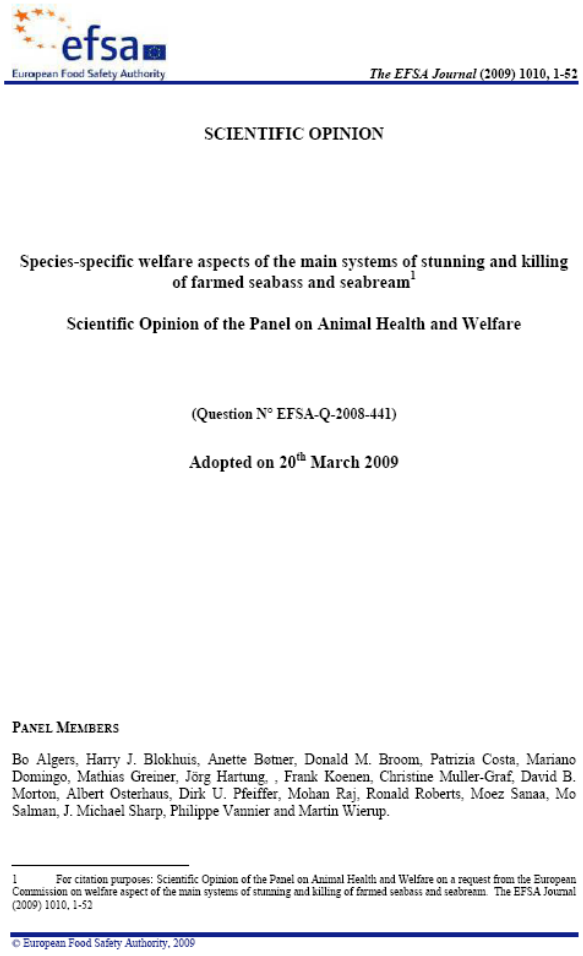
30 citas científicas

10 sobre dorada-lubina

5 científicos (JCR)

2-3 pertinentes

Referencia	Citado	Revista impacto
Poli et al. 2004	5	No
Zampacavallo et al. 2008	5	No
Kestin et al. 2002	4	Aquaculture Research
van de Vis et al 2003	3	Aquaculture International
Robb and Kestin 2002	2	Animal Welfare
Acerete et al. 2009	1	Aquaculture
Bagni et al., 2002	1	No
Di Marco et al. 2007	1	No
Knowles et al. 2007	1	Veterinary Record
Marino et al 2009	1	*



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The EFSA Journal (2009) 1010, 1-52

SCIENTIFIC OPINION

Species-specific welfare aspects of the main systems of stunning and killing of farmed seabass and seabream[1]

Scientific Opinion of the Panel on Animal Health and Welfare

(Question N° EFSA-Q-2008-441)

Adopted on 20th March 2009

PANEL MEMBERS

Bo Algers, Harry J. Blokhuis, Anette Bøtner, Donald M. Broom, Patrizia Costa, Mariano Domingo, Mathias Greiner, Jörg Hartung, , Frank Koenen, Christine Muller-Graf, David B. Morton, Albert Osterhaus, Dirk U. Pfeiffer, Mohan Raj, Ronald Roberts, Moez Sanaa, Mo Salman, J. Michael Sharp, Philippe Vannier and Martin Wierup.

1 For citation purposes: Scientific Opinion of the Panel on Animal Health and Welfare on a request from the European Commission on welfare aspect of the main systems of stunning and killing of farmed seabass and seabream. The EFSA Journal (2009) 1010, 1-52

Algunos proyectos

opinión

Bienestar animal en peces:

Crítica del informe EFSA sobre aturdimiento y sacrificio de doradas y lubinas

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BIENESTAR ANIMAL EN PECES

El bienestar animal es un tema relevante en Europa para los consumidores, los legisladores y los productores. No obstante, existe cierta confusión en torno al concepto de bienestar animal en el ámbito político, educativo e incluso científico. A nivel social, para el consumidor, crece la preocupación por el bienestar animal sobre todo en cuanto a seguridad alimentaria y calidad de producto. Para los legisladores, la Política Agraria Común de la Comunidad Europea tiene como objetivo abandonar subvenciones e intervenciones de la agricultura a varios niveles. A cambio, las instituciones gubernamentales están favoreciendo ayudas y promocionando nuevas directivas en base a conceptos ecológicos y de calidad, incluido el bienestar animal. Para el sector, los


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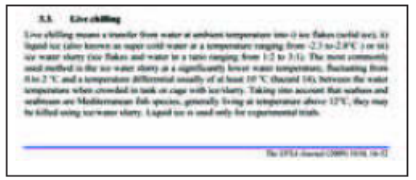
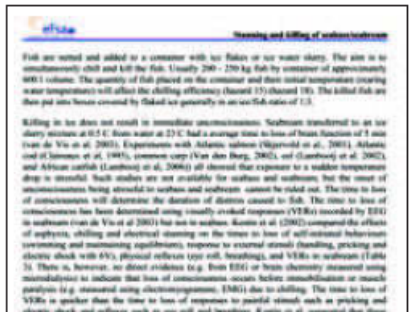
SCIENTIFIC OPINION

Species-specific welfare aspects of the main systems of stunning and killing of farmed seabass and seabream

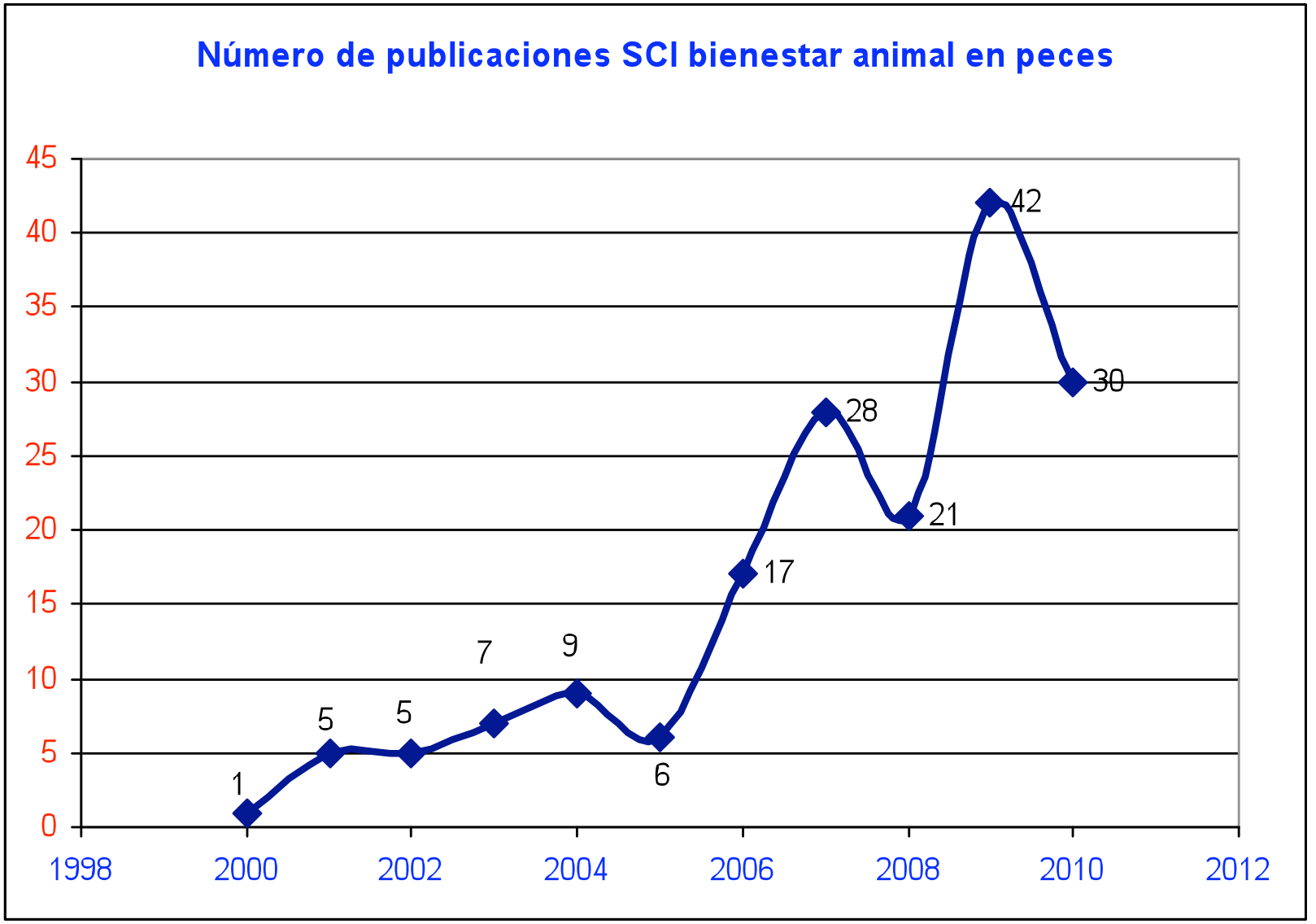
Scientific Opinion of the Panel on Animal Health and Welfare

Adopted on 28th March 2009





Publicaciones internacionales



Dolor

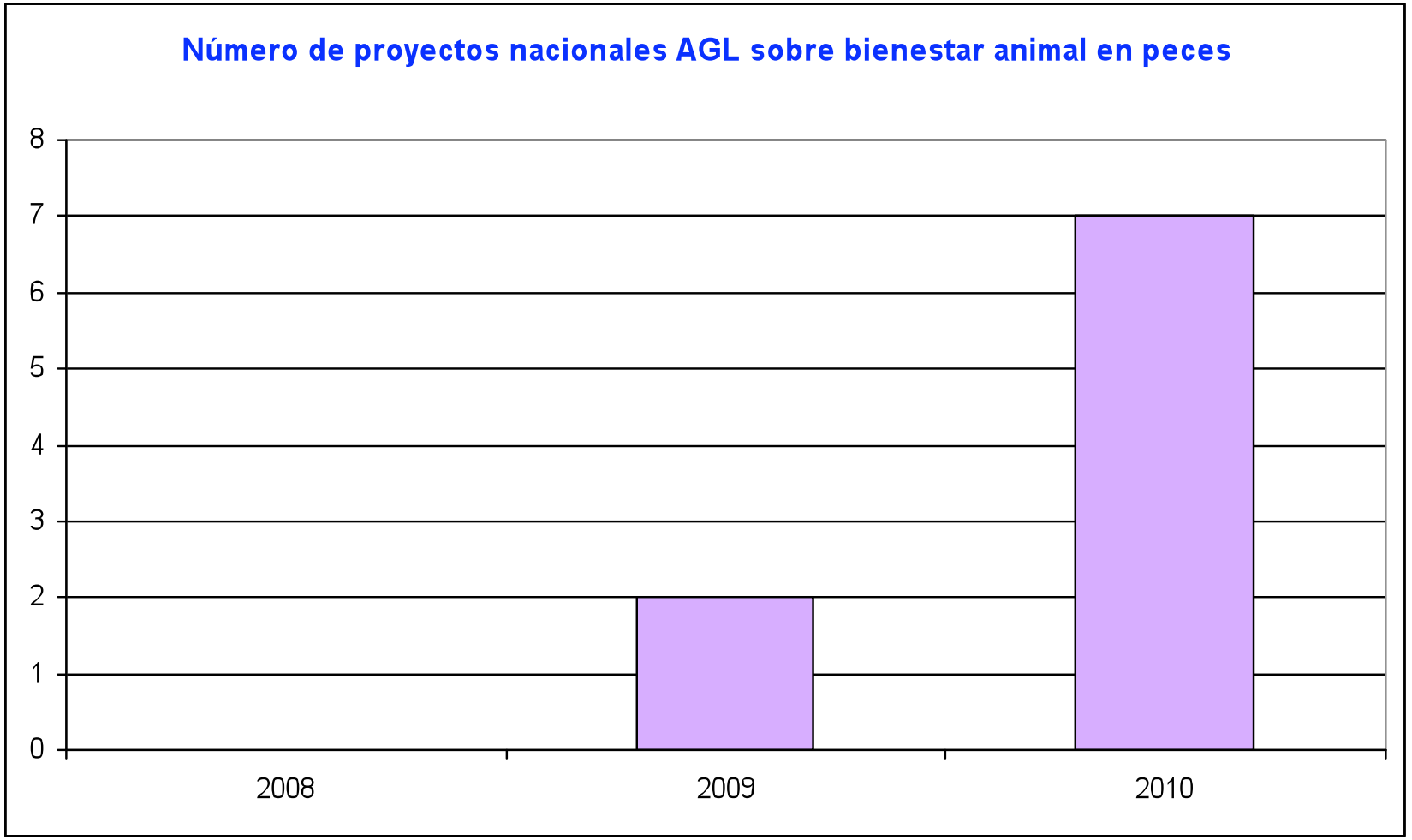
Dolor

	Bee venom	vinagre	solución salina	control
opérculo	90	90	70	50
Espera antes de comer	3.5h	3.5	80 min	80 min

Dolor

	Vinagre	solución salina
Objeto nuevo	no evitar	evitar
Morfina	evitar	evitar

Proyectos nacionales



Algunos proyectos 2010

Caracterización de los sistemas vasotocinergico e isotocinergico en la dorada (*Sparus aurata*): empleo en la evaluación del bienestar animal bajo condiciones de cultivo

Universidad de Murcia

Diseño de herramientas para la valoración y mejora del bienestar animal en el cultivo de peces

Universidad de Almería

Efecto del ayuno sobre estrés y calidad del producto en trucha arco iris

Universidad Politécnica de Madrid

Algunos proyectos 2010

Fisiología de la nutrición y del estrés en las primeras fases de vida del pulpo común (*Octopus vulgaris*). Nutrición y estrés

IEO

Influencia de señales intrínsecas (sensores metabólicos y sistema circadiano) y del estrés sobre el control de la alimentación en peces teleósteos. Aplicación en piscicultura

CSIC

Ingestión de alimento y estrés en teleósteos. Influencia del sistema circadiano

Universidad Complutense de Madrid

ARTÍCULOS

Autores: M. Villarroel, JMR Alvariño, J.M. Durán
Título: Aquaponics,: integrating fish feeding rates and ion water production for strawberry hydroponics.
Revista: Spanish Journal of Agricultural Research, 2011 in press.

Autores: M. Villarroel, JMR Alvariño, J. López.
Título: The effect of feeding frequency and one day fasting on tilapia (*Oreochromis niloticus*) production, welfare and water quality
Revista: Israeli Journal of Aquaculture, 2011 in press.

Autores: Rodrigo Fortes da Silva, Francisco J Martínez, Morris Villarroel, Francisco J Sánchez-Vázquez
Título: Daily feeding patterns and self-selection of dietary oil in Nile tilapia
Revista: Aquaculture Research, 2010, 42, 157-160

Autores: R. Fortes-Silva, F.J. Martínez, M. Villarroel, F.J. Sánchez-Vázquez.
Título: Daily rhythms of locomotor activity, feeding behavior and dietary selection in Nile tilapia (*Oreochromis niloticus*)
Revista: Comparative Biochemistry and Physiology, Part A 156 (2010) 445–450.

ARTÍCULOS

Autores: J.A. García, M. Villarroel
Título: Effect of feed type and feeding frequency on macrophage functions in tilapia (*Oreochromis niloticus* L.)
Revista: Fish and Shellfish Immunology, 2009, 27:325-329

Autores: Tupac-Yupanqui , L. Vasquez, M. Villarroel, S. Dunner
Título: Fatty acid food source affects expression of genes involved in the stress response in tilapia (Oreochromis niloticus)
In preparation

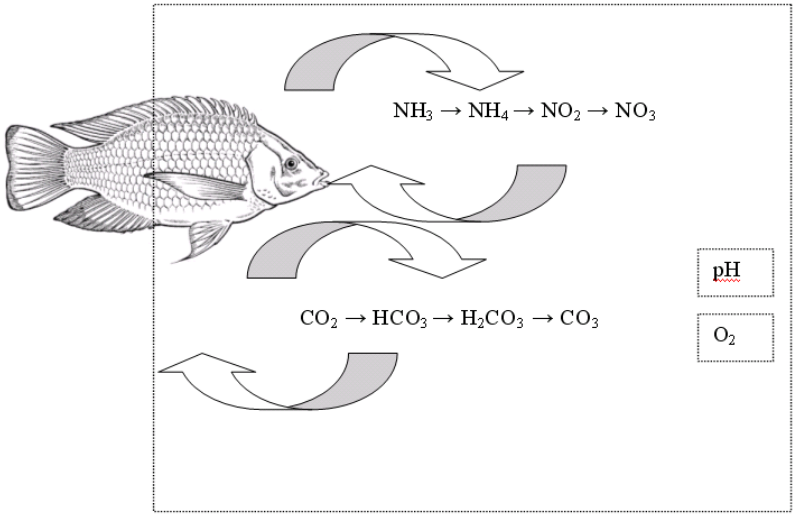
Piensos y bienestar animal

Fuente proteína origen vegetal
soja, girasol, maíz, guisante

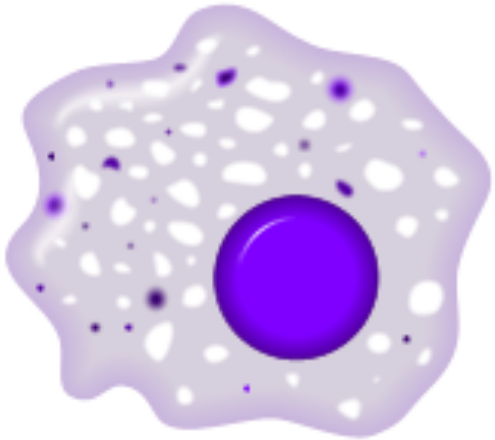
Fuente de CH_2O
trigo, g. crudo, g. extrusionado, arroz

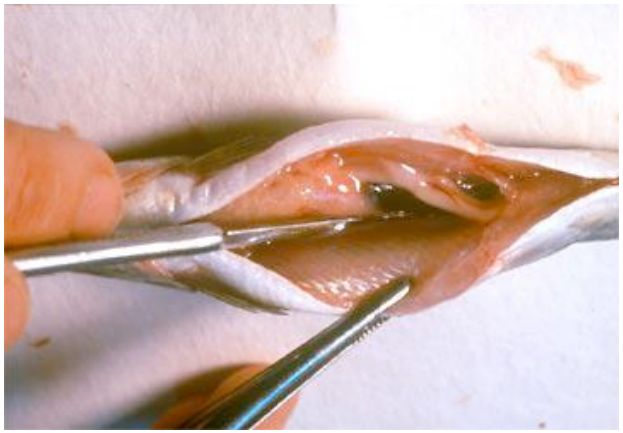
Fuente de aceite
pescado, girasol, lino y girasol alto oleico

Año 1 Año 2 Año 3



Indicadores inmunológicos





Macrófagos

- Fagocitos (leucocitos)
- capaces de engullir patógenos (microbios)
- destruyen bacteria con una “explosión respiratorio” o “respiratory burst” (microbicida)

Indicadores inmunológicos

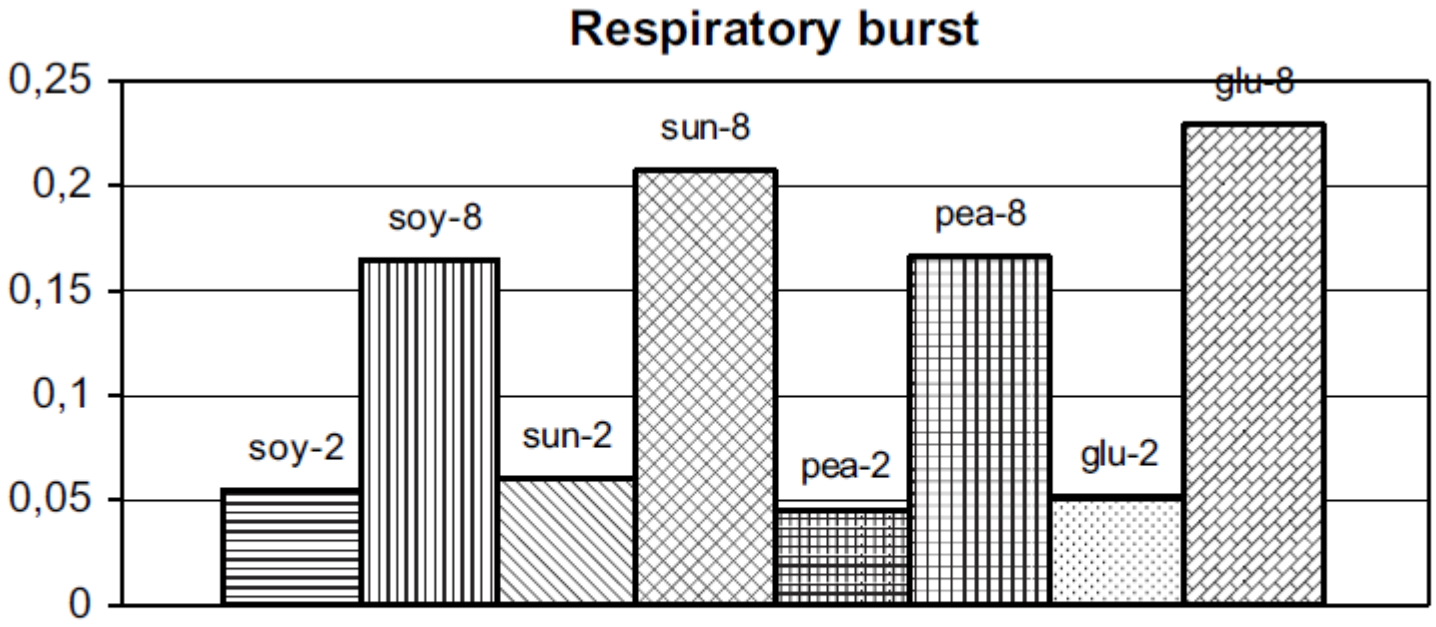
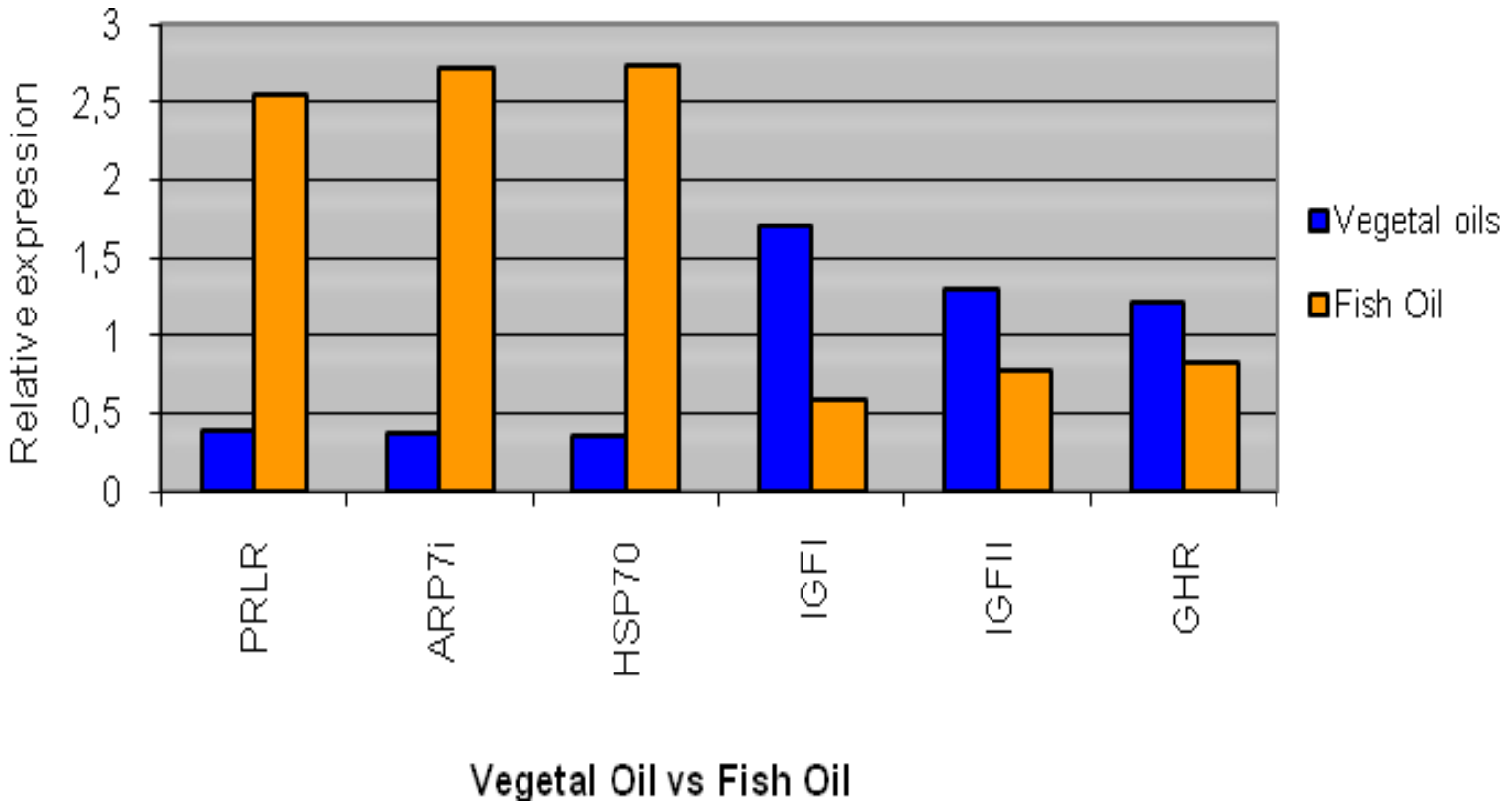


Fig. 2. Results of the respiratory burst assay from the four feed types and the two feeding frequencies studied. Data represent mean of 4 replicate wells from each of duplicate tanks.

Expresión genética



Expresión genética y desarrollo

Expresión genética y desarrollo

P.J. Steenbergen et al. / Progress in Neuro-Psychopharmacology & Biological Psychiatry xxx (2010) xxx–xxx