

LAQUA 16

“Innovative Aquaculture under Environmental Challenges”

Sheraton Convention Centre

Lima, Peru

November 28 - December 1, 2016

Organised by the Latin American & Caribbean Chapter of WAS



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Welcome To LACQUA16

Dear participant,

It is my pleasure to welcome you to LACQUA16, the annual convention of the Latin American & Caribbean Chapter of the World Aquaculture Society. LACQUA will bring international attention to the aquaculture industry of Peru and South America. We are honored to host this conference in Lima, Peru, and we hope that you have a very productive and fun time while in here. The steering committee has worked very hard over the past two years to produce an attractive convention, and to maximize its scientific, technical and commercial value for all participants.

The theme of this year's convention, "Innovative Aquaculture under Environmental Challenges" highlights the need to promote environmentally responsible aquaculture using technology and innovation. We have assembled an attractive program of sessions and conferences that we believe will be enriching for scientists, commercial aquaculturists, and government representatives. We trust you will find the conference venue comfortable and convenient, and that the trade show will be the start of many successful business relationships. We encourage you to have fun while in Lima, both during the social events we have organized as part of the conference and on your own while touring the many attractions of the city and its surroundings.

The plenary speaker for LACQUA16 will be Dr. Juan Pablo Lazo, current president of the World Aquaculture Society and former president of the Latin American & Caribbean Chapter. The focus of his presentation will be the current status and future outlook of Global Aquaculture, with special emphasis on sustainability and the potential that Peru offers for the aquaculture industry.

This conference would not have been possible without the enthusiastic support of the Peruvian government and of our commercial sponsors. Our thanks to them and to all that contributed to make LACQUA16 a reality, and our wishes that the convention results in more and more sustainable aquaculture in Peru and in all of Latin America and Caribbean region.

I hope you enjoy your time in Lima.



Lorenzo M. Juarez

President, Latin-American and Caribbean Chapter of the World Aquaculture Society

Bienvenido a LACQUA16

Estimado participante,

Me es grato darle la bienvenida a LACQUA16 la convención anual del Capítulo Latinoamericano y del Caribe de la Asociación Mundial de Acuicultura. LACQUA traerá atención internacional a la industria de la acuicultura de Perú y Suramérica. Es de gran honor para nosotros el realizar esta conferencia en Lima, Per, y esperamos que tenga una experiencia muy productiva y divertida. El comité organizador ha trabajado arduamente en los últimos dos años para producir una conferencia atractiva y maximizar el valor científico, técnico y comercial para todos los asistentes.

El tema de la conferencia de este año es “Acuicultura Innovadora Frente a los Retos Ambientales” dando énfasis a la necesidad de promover acuicultura ambientalmente responsable utilizando tecnología e innovación. Hemos ensamblado un interesante programa de sesiones y conferencias que creemos será enriquecedor para científicos, acuiculturitas comerciales y representantes gubernamentales. Estamos seguros encontrará el Centro de Conferencias confortable y conveniente y que el área de exposición comercial será el inicio de muchas exitosas relaciones comerciales. Lo alentamos a que se divierta en Lima tanto en los eventos sociales que hemos organizado siendo parte de la conferencia como por su propia cuenta visitando las atracciones turísticas de la ciudad y sus alrededores.

El ponente plenario para LACQUA16 será el Dr. Juan Pablo Lazo, actual presidente de la World Aquaculture Society y ex presidente de Latin American & Caribbean Chapter. El enfoque de su presentación será el estatus actual y panorama futuro de la Acuicultura Global con énfasis especial en sustentabilidad y el potencial que Perú ofrece para la industria de la acuicultura.

Esta conferencia no podría haber sido posible sin el entusiasta apoyo del gobierno de Perú y los patrocinadores comerciales. Agradecemos su apoyo así como a todos los que ayudaron a hacer LACQUA16 una realidad, deseamos que la conferencia dé como resultado una acuicultura sustentable para Perú y toda la región de Latinoamérica y el Caribe.

Espero que disfrute su estancia en Lima.



Lorenzo M. Juarez

Presidente, Latin-American and Caribbean Chapter of the World Aquaculture Society

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LAQUA 16

ABSTRACTS

EVALUATION OF COLOR PATTERN AS A SEXING METHODOLOGY FOR PIRARUCU *Arapaima gigas*

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Pirarucu is one of the native species with great potential to fish farming in Brazil. However, the increase in production is limited by the lack of knowledge about its reproductive biology, resulting in a low availability and high juvenile costs in the market. During the reproductive period, pirarucu breeders present a behavior of forming couples. Regarding that this specie does not have a consistent external sexual dimorphism, the induction to artificial couple formation is difficult to be performed by producers, as they do not identify the fish gender. In some species, the color pattern is used to sexual differentiation, as occurs with pirarucu in natural environment. It has been reported as a feature that enables sexual differentiation, specifically the red color patterns scales. Although, it is known that the color pattern varies widely among same aged fish, fish from the same population and from captivity towards natural environment. Therefore, this research aimed to evaluate the color pattern of pirarucu breeders maintained in captivity as a tool for sexual differentiation. The study was performed with 84 breeders from two fish farms (A and B) of different regions in Brazil. A photographic register was made in each fish for further color pattern analysis and its relation with the fish gender. The fish blood was collected and used to evaluate the presence of vitellogenin and, posteriorly, to confirm the fish sex. Fish from the different fish farms showed distinct color patterns between genders, which allowed the division of breeders into two groups (male and female). However, the color pattern that determined the sex was different in each fish farm, with a different distribution of red scales along the fish body. In fish farm A, 70% of female and 64,7% of males had the sex determined by the color patterns. In fish farm B, 76,9% of female and 76,2% of males had the sex set by color pattern. Thus, the evaluation of color pattern is not completely efficient, but it shows a high accuracy, and can be an accessible tool for producers to perform the sexual differentiation in pirarucu.