

Sustainable Aquaculture – Feeding Africa

AQUACULTURE AFRICA 2021

Alexandria Egypt • December 11-14, 2021



The 1st Annual International Conference & Exposition of the African Chapter of the World Aquaculture Society (AFRAQ2021)

Egypt is the biggest aquaculture producer in the continent. Both local and international aquaculture delegates will converge for the event at the beautiful City of Alexandria, the Pride of the Mediterranean Sea.



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and
AFRAQ 2021 Gold Sponsor



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Conference Sponsor
Egyptian Aquaculture Society (EgAS)





Conference Venue

The venue will be the famous Bibliotheca Alexandrina, one of the most fascinating touristic and cultural attractions in the world. The conference offers a great opportunity for aquaculture researchers, practitioners, decision makers and other stake holders to meet, network and discuss all aspects of aquaculture in Africa. Exhibitors from all over the globe are expected to exhibit their products in the amazing exhibition Center. Visits to the most famous touristic attractions in Egypt will be arranged. Special excursionary visits will also be arranged to nearby fish farms, fish feed mills and local research facilities. Be sure to schedule time for this unique scientific, business and social event.

AFRAQ2021 Programme Themes

AFRAQ2021 technical program will aim to cover developmental issues including latest research on aquaculture in Africa. The thematic plenary and technical parallel sessions will comprise submitted oral and poster presentations. AFRAQ2021 will feature an international trade exhibition, industry forums, student sessions and activities, satellite workshops (and training sessions) and various meetings/forums on aquaculture development in Egypt and Africa. The theme for this inaugural event will be "Sustainable Aquaculture - Feeding Africa".

Sample topics will include: (This is an initial theme list, subject to change)

- Feed, Nutrition & Physiology
- Genetics & Reproduction
- Aquatic Animal Health
- Biotechnology, Nanotechnology in Aquaculture
- Environmental Management
- Sustainability , Livelihood & Nutritional Security
- Processing and Value Addition
- Food Quality & Safety
- Economics, Marketing, Trade & Policy
- Human Resource Development
- Food Quality & Safety
- Aquaculture Investment issues
- Human Resource Development
- Aquaculture Engineering
- Freshwater Aquaculture
- Brackishwater Aquaculture
- Mariculture
- Ornamental Fish Culture
- Innovative Systems and Practices
- Seed production

Possible special sessions relevant to aquaculture development in Africa will be included and announced in due course

Details regarding online submissions of abstracts (including full guidelines for abstract preparation and an abstract sample will be available soon on:

www.was.org

CALL FOR PAPERS- DEADLINE: September 30, 2021

AFRAQ2021 encourages the submission of high quality oral and poster presentations. We strongly encourage authors to consider poster presentations because poster sessions will be an integral part of the program. Papers submitted for "oral presentation only" may not be accepted as oral presentations due to the limited number of available time slots. English encouraged, but 2 official languages (English or French) accepted. Power Point Presentation – Slides - same as above – English strongly encouraged. Oral Presentation: any of the 2 official languages. At the conference, the abstracts may be presented in English or French. Title the same language as presentation.

Each oral presenter shall be entitled to no more than 20 minutes comprised of 15 minutes for a presentation, plus 5 minutes for questions. Authors of studies involving proprietary products or formulations should present this information in workshops or the trade show. Oral presentations can only use Power Point. Overhead projectors, slides and video players will not be available or allowed

All presenters are required to pay their own registration, accommodation and travel expenses. AFRAQ2021 cannot subsidize registration fees, travel or hotel costs

INSTRUCTIONS FOR PREPARATION OF ABSTRACTS

Extended Abstract Format – Please refer to the sample.

- TITLE OF PAPER :** The paper title is printed in CAPITAL LETTERS, with the exception of scientific names which should be Upper/lower case and italicized. Scientific names should not be preceded or followed by commas or parentheses or other markings.
- AUTHOR(S) :** The first name should be the presenting author. Use *after the presenting author. Type in upper/lower case.
- ADDRESS AND EMAIL :** Type only the presenting author's institution, address and email. Type in upper/lower case.
- MAXIMUM LENGTH :** One Page
- PAGE SIZE :** Standard 210mm x 297mm A4 paper (portrait)
- MARGINS :** 1-inch margin throughout(left/right/top/bottom)
- SPACING :** Single spaced
- PARAGRAPHS :** Paragraphs should be separated by a blank line and should not be indented.
- FONTS :** Character fonts should be 12 point type.
- FIGURES & TABLES :** Figures and tables are highly recommended. They should be reduced to the appropriate size for a one page abstract and should be clearly readable at the reduced size in black print only. The reduced figures and tables should be included in the abstract in camera-ready form.
- MEASUREMENTS :** Use metric units of measurement. When needed, English equivalents may be given in parentheses.

1 inch margin

EVALUATION OF JUVENILE AUSTRALIAN RED CLAW CRAYFISH *Cherax quadricarinatus* FED PRACTICAL DIETS WITH AND WITHOUT SUPPLEMENTAL LECITHIN AND/OR CHOLESTEROL

Laura A. Martinic*, Kenneth R. Thompson, Tracy Christian, Carl D. Webster, Lukasz Manowicz, and David H. Rouse

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Red claw crayfish (*Cherax quadricarinatus*) are one of more than a hundred Australian freshwater crayfish. However, because of its rapid growth rate, ease of spawning, wide temperature tolerance, and lack of a larval stage, red claw may be the best candidate for aquaculture in the United States. Red claw are only being investigated in an aquaculture species in the very early stages of development. Information on their nutritional requirements and practical diet formulations, however, is very limited. Crayfish require lecithin and cholesterol to be added to their diet, these two nutrients are expensive. Lecithin and cholesterol are very expensive. Since diet costs can be as much as 75% of the total cost of production, it is imperative that the least expensive diet be formulated. The present study was conducted to determine if cholesterol and lecithin needs to be added to a practical diet for red claw crayfish.

An 8-week feeding trial was conducted in a recirculating system with aerated, dechlorinated tap water. Juvenile red claw weighing 0.2 g were stocked at 10 fish per 10 L within fibreglass tanks, each receiving a different diet. Water was recirculated through a biofilter and mechanical filter. Water temperature was maintained at 27-28°C and lighting was provided by a 12-hour photoperiod. Ammonia, nitrite, and nitrate were monitored daily. Crayfish were fed three times per week. The growth performance of juvenile red claw when fed four practical diets with or without cholesterol and lecithin. Other practical diets included menhaden fish meal, soybean meal, shrimp meal, wheat flour, vitamin and mineral mix, pellet binder, cod liver oil, and corn oil (Table 1).

After 8 weeks, red claw crayfish fed a practical diet with or without cholesterol (Diet 1) had significantly ($P < 0.05$) lower final weight, percentage weight gain, and specific growth rate (SGR) compared to crayfish fed all other diets (Table 2). These results indicate that a practical diet containing 2% cod liver oil and 1% corn oil and having no lecithin appears to be sufficient and that lecithin may not be necessary for juvenile red claw diets.

1 inch margin

8.5 inches wide

11 inches long

TABLE 1. Formulation of experimental diets fed to red claw crayfish.

	1	2	3	4
Menhaden fish meal	25.0	25.0	25.0	25.0
Soybean meal	35.0	35.0	35.0	44.5
Lecithin	0.0	0.5	0.0	0.0
Cholesterol	1.0	1.0	0.0	0.0
Other	38.5	29.0	39.5	30.5

TABLE 2. Final weight, percentage weight gain, specific growth rate (SGR), and percentage survival of red claw crayfish fed four practical diets. Means in a column with different letters were significantly different ($P < 0.05$).

	1	2	3	4
Final weight (g)	0.97 ^a	0.05 ^a	3.65 ^b	5.13 ^b
Weight gain (%)	234 ^a	287 ^a	1775 ^b	2434 ^b
SGR (day ⁻¹)	1.74 ^a	2.65 ^a	4.69 ^b	5.41 ^b
Survival (%)	76.0	64.0	56.0	99.0

PLEASE SUBMIT YOUR ABSTRACT ONLINE

Submit abstracts via the internet at the meeting website : www.was.org Follow the complete instructions on the online submission.

If you are unable to submit your abstract online, contact the Conference Manager for alternative methods at : worldaqau@was.org or Fax: +1-760-751-5003



AFRAQ2021

December 11 - 14, 2021

Register online at: www.was.org

Return address for international payments in USD:
Conference Manager
P.O. Box 2302
Valley Center, CA 92082 USA
Tel: +1 760 751 5005
Fax: +1 760 751 5003
Email: worldaqua@was.org

Online registration is preferred at www.was.org OR fax or mail both sides with payment. Use one form per person.

PLEASE PRINT CLEARLY OR TYPE ALL REQUESTED INFORMATION

BADGE INFORMATION: (As you want your name badge to read – No titles, please)

First Name _____ SURNAME (FAMILY NAME) _____

Company or Institution _____
(Limited to 40 Letters & Spaces)

City _____ State/Prov _____ Country _____

MAILING INFORMATION: Email _____
(*please* include email address)

Postal Address _____

City _____ State / Prov _____ Postal Code _____ Country _____

Phone _____ Fax _____ Title: (circle one) Dr. Mr. Ms. Mrs.
(Include country and city code) (Include country and city code)

REGISTRATION FEES: In order to receive the discount rates as listed below, this form and payment must be received by the date listed. See brochure for what is included in registration fees.

TYPE OF REGISTRATION	Register by Oct. 3, 2021	Register after Oct. 3, 2021	
FULL CONFERENCE & TRADE SHOW In order to receive the Pre-Registration discount rate, this form and payment must be received by the date above			
EGYPTIAN NATIONALS			
MEMBER RATE*	<input type="checkbox"/> EGP 2100	<input type="checkbox"/> EGP 4000	* To qualify for Member Rate you <u>must</u> complete the Association Memberships section on the reverse side. • • • • • Trade Show is <u>included</u> in the Full Conference Registration Rate.
STUDENT MEMBER RATE*	<input type="checkbox"/> EGP 800	<input type="checkbox"/> EGP 1600	
Non-Member Rate	<input type="checkbox"/> EGP 2650	<input type="checkbox"/> EGP 4000	
Student Non-Member Rate	<input type="checkbox"/> EGP 1200	<input type="checkbox"/> EGP 1600	
For Egyptian attendees, please complete your registration for the conference online at www.was.org – then click on meeting picture. You can pay the Egyptian rate by credit card online or if you want to pay in Egyptian Pounds in Egypt, mark pay later and the Egyptian bank information will be sent to you.			TOTAL REGISTRATION FEE US\$ _____

TRADE SHOW PASS (Trade show pass is included with the Full Conference Registration)
Good for 3 days admission to exhibits only – December 11-14, 2021 ☐ US\$ 30 **TOTAL TRADE SHOW PASS** US\$ _____

INDUSTRY TOURS – Details to come **TOTAL INDUSTRY TOURS** US\$ _____

MEMBERSHIP DUES – Enter amount from Membership Application on other side if applicable. **TOTAL MEMBERSHIP DUES** US\$ _____

Do not mail registration after Oct. 3, 2021 or fax after Oct. 3, 2021
After October 3, bring this form with you to register at the show.

➔ TOTAL AMOUNT US\$ _____

Registration Confirmation and Receipt will be emailed after processing.

CANCELLATION POLICY: Cancellation of registration must be received - in writing - no later than October 3, 2021. Refunds for registration fees will be subject to a 20% handling fee. Refunds are processed after the conference. No refund will be made for cancellations received after October 3, 2021⁹ or for “no shows”. After October 3, 2021, no refunds will be made for professional or personal emergencies, flight cancellations, denied visa, weather related cancellation or other travel emergencies. Fees for memberships are non-refundable.

PAYMENT METHOD: All fees must be paid to the order of AFRAQ2021.

For bank transfer details, contact us.

☐ Check # _____ ☐ Visa ☐ Mastercard ☐ American Express ☐ Discover ☐ Diners Club

Card # _____ Expiration Date _____ Sec Code _____

Name on Card _____ Date _____ Signature _____

Credit Card Billing Address _____

REGISTRATION FORM - SIDE 2

Name _____

ASSOCIATION MEMBERSHIPS: Please check all boxes for associations for which you are a current member. Membership in any of those associations qualifies you for the Member Rate* on the Registration Fees. You can join an association at any time before registering to qualify for the Member Rate.

MEMBERSHIPS: ☐ WAS ☐ USAS ☐ APC ☐ Korean ☐ LACC ☐ WAS AC

AFFILIATE MEMBERSHIPS:

- | | |
|--|--|
| <input type="checkbox"/> African Chapter WAS | <input type="checkbox"/> Indonesian Aquaculture Society |
| <input type="checkbox"/> Aquabio | <input type="checkbox"/> Korean Aquaculture Society |
| <input type="checkbox"/> Aquaculture Association of Canada | <input type="checkbox"/> Korean Society of Fisheries and Sciences (KOSFAS) |
| <input type="checkbox"/> Aquaculture Association of South Africa | <input type="checkbox"/> Malaysian Fisheries Society |
| <input type="checkbox"/> Aquaculture Without Frontiers | <input type="checkbox"/> Sociedad Brasileira de Acuicultura |
| <input type="checkbox"/> Asian Fisheries Society | <input type="checkbox"/> Society of Aquaculture Professionals (India) |
| <input type="checkbox"/> China Society of Fisheries | <input type="checkbox"/> South African Aquaculture Society |
| <input type="checkbox"/> Egyptian Aquaculture Society | <input type="checkbox"/> Spanish Aquaculture Association (SEA) |
| <input type="checkbox"/> European Aquaculture Society | |
| <input type="checkbox"/> Global Aquaculture Alliance | |
| <input type="checkbox"/> IAFI International Association of Fish Inspectors | |

MEMBERSHIP APPLICATIONS ☐ NEW APPLICATION ☐ RENEWAL

WORLD AQUACULTURE SOCIETY (WAS) APPLICATION www.was.org

For details on the different types of memberships and options, please contact the WAS home office at

Tel: +1-225-578-3137 Fax: +1-225-578-3493 Email: judya@was.org

MEMBERSHIP CATEGORY: (Indicate only one)

- ☐ **Individual** (Electronic JWAS) (USD 65/yr) Applies to an individual only
- ☐ **Individual** (Printed JWAS) (USD 110/yr) Applies to an individual only
- ☐ **Individual** (E Access) (USD 45/yr) Applies to an individual only
- ☐ **Student** (Electronic JWAS) (USD 45/yr) (Copy of Student ID or Signature of Professor required)
- ☐ **Student** (Printed JWAS) (USD 90/yr) (Copy of Student ID or Signature of Professor required)
- ☐ **Sustaining** (Electronic JWAS) (USD 105/yr) Applies to any one individual from a company
- ☐ **Sustaining** (Printed JWAS) (USD 150/yr) Applies to any one individual from a company
- ☐ **Corporate** (Electronic JWAS) (USD 255/yr) Allows all employees of one company to attend meeting at Member Rate
- ☐ **Corporate** (Printed JWAS) (USD 300/yr) Allows all employees of one company to attend meeting at Member Rate
- ☐ **Lifetime** (Electronic JWAS only) (USD 1000 with no chapter) Applies to an individual only

CHAPTER OPTIONS:

One chapter included in membership. Mark the chapter you choose.

- ☐ **Africa**
- ☐ **Asian Pacific**
- ☐ **Korea**
- ☐ **Latin American/Caribbean**
- ☐ **United States (USAS)**
- ☐ **None** (deduct USD 5)

You can add extra Chapters for USD 5

Total Amount for WAS Membership USD _____

Fees for memberships are non-refundable.

Please enter this amount under "Membership Dues" section on opposite side of this form.

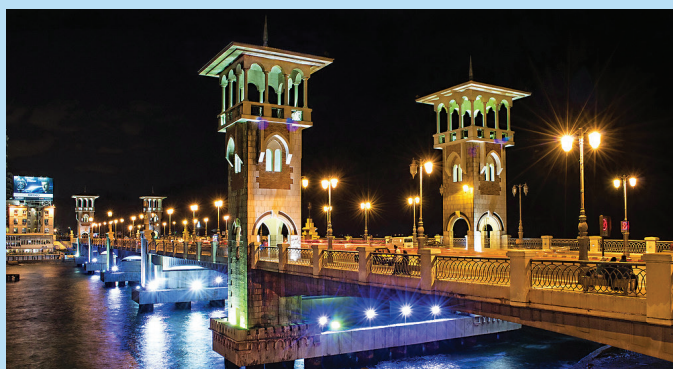
For membership in other associations, please contact them directly.
If you need a phone number, contact the Conference Manager (+1-760-751-5005).

Engaging with Industry

The Aquaculture Africa events are all about communication with the sector. AFRAQ2021 will feature a special international trade exhibition, where Egypt and international companies will present their latest technologies, products and services. Both Standard and Corner booths will be available and each booth is 6m² (2x3m) and features walls, carpet, two chairs and one table, spotlights, one power outlet, fascia identification sign and two free passes for the conference. We can provide meeting points for industry associations, organization/industry panels or B2B meetings, platforms for satellite workshops of African aquaculture projects and other events. Organization/industry panel meetings will take place around the trade exhibition, and technical tours will be organized.

Networking for Students

Special forums and events will be arranged for students attending AFRAQ2021 to enable networking and exchange of ideas. The forums/ events will have a dedicated programme and include a special student reception. Students receive the full registration package plus the student reception. To qualify for the student rate, a copy of your student I.D. is required.



FULL CONFERENCE REGISTRATION INCLUDES:

- Admission to all sessions (including reception), seminars and the trade show.
- Conference bag and Show Directory
- Refreshment breaks (including lunch)
- Abstract APP (No Abstract Book will be printed)

*To qualify for Member Rate, you must be a WAS member in good standing

Trade Show Pass only –
Valid whole period: USD30

AFRAQ2021 Tentative Programme Overview

Saturday, December 11

Registration Open & Exhibit Set-up	1200 - 1700
WAS AC Board/Business Meeting	1300 - 1700
Farm tours	

Sunday, December 12

Registration Open	0730 - 1700
Welcome Words & Awards	0900 - 0920
Plenary Sessions	0920 - 1020
Opening Ceremony	1020 - 1040
Official opening exhibition	1040
Break	1040 - 1100
Trade Show	1000 - 1800
Sessions	1100 - 1220
Lunch	1220 - 1320
Sessions	1320 - 1540
Break	1540 - 1600
Sessions	1600 - 1740
Posters	1030 - 1800
Student Reception/Workshop	1900 - 2100

Monday, December 13

Registration Open	0730 - 1700
Sessions	0900 - 1020
Break	1020 - 1040
Trade Show	1000 - 1800
Sessions	1040 - 1200
Lunch	1200 - 1300
Sessions	1300 - 1540
Break	1540 - 1600
Sessions	1600 - 1740
Posters	1030 - 1800

Tuesday, December 14

Registration Open	0800 - 1500
Sessions	0900 - 1020
Break	1020 - 1040
Trade Show	1000 - 1600
Sessions	1040 - 1200
Lunch	1200 - 1300
Sessions	1300 - 1540
Break	1540 - 1600
Sessions	1600 - 1740
Posters	1030 - 1600
Exhibit Move-out	1600 - 1900

AFRAQ2021 Steering Committee and National Organizing Committee

AFRAQ2021 Conference Chairs:

- WAS African Chapter President & Egyptian Aquaculture Society Vice-President, EGYPT
– Dr. Sherif Sadek
- Chairman of General Authority of Fisheries Resources Development (GAFRD), EGYPT
– Prof. Salah Mesalhy Aly

AFRAQ2021 Steering Committee (SC):

- President of SC and Prof. Emeritus of Fish Breeding and Genetics, Central Laboratory for Aquaculture Research (CLAR), EGYPT - Dr. Hussein Elghobashy
- OIE of WorldFish, EGYPT – Dr. Ahmed Nasr-Allah
- General Director: Central Laboratory for Aquaculture Research (CLAR), EGYPT
– Prof. Amira Elhanafy
- Professor: Alexandria University, EGYPT - Prof. Abdel Fatah El Sayed
- Associate Prof: National Institute of Oceanography and Fisheries (NIOF), EGYPT
– Dr. Eman Mamdouh
- Chairperson: Egyptian Union of Fishermen Co-operatives, EGYPT - Mr. Mohamed El-Feky
- Co-ordinator: Zambia Aquaculture Development Programme (ZAEDP), ZAMBIA
– Dr. Alexander Shula Kefi
- WAS African Chapter Secretariat, SOUTH AFRICA – Mr. Blessing Mapfumo

AFRAQ2021 National Organizing Committee (NOC):

- Dr. Ghada Shalaby, International Relations Department (GAFRD)
- Mr. Khaled El-Agroudi, Public Relations Department (GAFRD)
- Dr. Amr Moneer Helal, National Institute of Oceanography and Fisheries (NIOF)
- Prof. Nevine Abou Shabana, National Institute of Oceanography and Fisheries (NIOF)
- Prof. Ahmed Barrania, Egyptian Union of Fishermen Co-operatives (EUFC)
- Prof. Abdel-Hamid Eed, Suez Canal University
- Eng. Aymen Rostom, Skretting, Egypt
- Eng. Hussein Mansour, Aller-Aqua, Egypt
- Ms. Sara Ossam, Alexandria University Student Coordinator

AFRAQ2021 Program Co-Chairs:

- Prof. Salah Moselhy, GAFRD Chairman, Suez Canal University, EGYPT
- Prof. Peter Britz, Rhodes University, SOUTH AFRICA
- Dr. Jean-Michel Mortillaro, CIRAD, MADAGASCAR



Location – Alexandria City

Aquaculture Africa (AFRAQ2021) will be held at the Bibliotheca Alexandrina in Alexandria City, Egypt.

For more information about the Bibliotheca Alexandrina, visit: www.bibalex.org

For more information about Alexandria City, visit <http://www.touregypt.net/alexandria/>

Conference Proceedings at AFRAQ2021

AFRAQ2021 will produce a Conference Proceedings made up of Full Papers from authors who submit an abstract and make a poster or oral presentation at AFRAQ2021. For more details and paper submission guidelines, visit the Proceedings page on the Conference website at www.was.org

AFRAQ2021 Contacts

For more information, please stay in touch with AFRAQ2021 Conference Management Team or visit our website www.was.org



Conference Management

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Trade Show, Exhibition and Sponsorship

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