

REQUEST FOR PROPOSAL

SUBMISSION DEADLINE

5:00 PM CST, 1/30/2023

RFP TITLE: Technical Bulletin on the Description, Availability, Production, Use, and Utility and of Fermented Soy Products for Aquaculture Species

RFP CONTACT:

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PROPOSAL DEADLINE: JANUARY 30, 2023

INTRODUCTION:

Through a global network of international offices and strong support in the U.S., USSEC helps build a preference for U.S. soybeans and soybean products, advocates for the use of soy in livestock and aquaculture feed and human consumption, promotes the benefits of soy use through education and connects industry leaders through a robust membership program.

The aquaculture sector is growing and expected to significantly grow in the next 10 years. Fish meal as a *primary* protein source for aquafeeds is not sustainable as the availability of fish meal and other marine proteins is limited in volume. Soy is a very good source of sustainable protein for the aqua industry, and soybean meal (SBM) as an aquafeed ingredient is increasing in use due to its large production volume, year-round availability, and the fact that it is well understood as an ingredient for aquaculture species. Unfortunately soybean meal may have some limitations because of anti-nutritional factors that may impact some of aquatic species. For this reason, fermented soy, which seems to have less anti-nutritional factors (and has some interesting practical and function properties) may become more important. Currently production of fermented soy is increasing worldwide and may find a greater role in aquafeeds. This presents opportunities for U.S. soy in aquafeeds, as the U.S. crush capacity for production of SBM is increasing and SBM is used to make fermented soy. Fermented soy products are already being produced in the U.S.

PURPOSE OF RFP:

USSEC seeks a contractor(s) to identify, consolidate and detail the most current information on fermented soy products for various species, for example shrimp, carps, tilapia, *Pangasius*, trout and marine fish to create an initial technical bulletin. Based on this, targeted research proposals in FY24 and beyond on possible incorporation into specific species trials could be determined. The contractor USSEC is seeking for should have:

- Good understanding about fermented soy, key issues to consider when it is used, and whether fermented soy is a single product or a *range* of products with different production methods etc.
- Good understanding on how fermented soy is being produced, if production can be done successfully at a small-scale and/or what is the most economical minimum production for commercial use.
- Good understanding on nutritional values of fermented soy; for example, less anti-nutritional factors, more digestible, functional aspects for health, etc.?
- Knowledge on worldwide production of fermented soy, specifically where it is currently being produced, what kind of fermented products are being produced, and at what volume?
- Knowledge about some current reference costs of the product(s) in specific markets, and its usage in different species.
- Knowledge on the current best approach to using fermented soy products in aquafeeds and what formulators should be aware of when using these products?
- Ability to provide suggestions on future targeted research using fermented soy products with key species (and suggestions where this type of research might be accomplished).

BACKGROUND & PURPOSE OF PROJECT:

Historically the USSEC Global Aquaculture Program has been proactive on the topic of new products developed from soy. Technical materials were developed by USSEC prior to the perceived need of SPC by aquaculture, and therefore when the aquaculture industry started thinking of using SPC, USSEC already had information ready for them. Fermented soy products seem to be in a similar situation to SPC in the industry, with some interest but little information. For this reason, there is demand but due to lack of enough knowledge, use and supply for aquaculture may be limited.

There may already be comprehensive fermented soy resources available that we are unaware of, but USSEC AQ has a unique position in industry where we are seen as a trusted information source and would be able to help highlight this product to industry in a comprehensive and informative manner. This work could help also increase the types of soy products used by industry, and therefore volume. It could also help add more information on this soy product group into the International Aquaculture Feed Formulation Database (IAFFD, www.iaffd.com).

With the creation of initial technical bulletin, USSEC is seeking to identify, consolidate and detail the most current information on fermented soy products for various species, for example shrimp, carps, tilapia, *Pangasius*, salmonids (trout and salmon), and marine fish such as seabass,

seabream, and tropical marine species. Based on the information detailed in this planned technical bulletin, targeted research proposals in FY24 and beyond on possible incorporation into specific species trials would be determined. The information desired in the initial technical bulletin will be (including, but not limited to):

- Description: What is fermented soy and is it one product or a range of products and formats (these should be detailed, including nutrient parameters).
- Availability: Who is producing it and where, and at what volume? Reference cost of the product(s) in specific markets? This would likely identify current commercial producers, such as Hamlet, Prairie Aquatech, DaBomb, etc.
- Production: How is it being produced and is this something that makes sense only at commercial scale (what is that in terms of cost/equipment)? Who are the possible best fermented soy equipment manufacturers to work with. (Are there any US fermented soy equipment manufacturer etc.) Can production be done successfully in small-scale approaches and what does that look like?
- Use: How is this product currently being used in aquaculture formulation and in what species? Are there any key issues to consider when using fermented soy products that users should be aware of?
- Utility: Do fermented soy products have any key attributes that make it specifically useful in some way? For example, less anti-nutritional factors, more digestible, functional aspects for health, etc.?
- Future follow-up: Suggested research that should be accomplished on fermented soy products and with what species/where? (This is to inform possible future research proposals by U.S. soy.)

TARGET AUDIENCE:

The target audience for the technical bulletin includes USSEC global and regional aquaculture teams, aquaculture producers, aquaculture nutritionists, feed millers, investors, soy crushing companies, and government representatives.

SCOPE (SERVICES) OF WORK:

The anticipated project timeline is about three months (targeting end of May 2023). It is desired for this technical bulletin be completed in time to share and develop potential follow-on proposals for research. The technical bulletin is expected to contain the needed information and representative figures, tables, and images. A list of references will be required and any images should not be copyrighted (or permission to use image should be obtained). Example technical bulletins may be found at <https://ussec.org/aquaculture-20-technical-bulletins-to-dive-into/> More specific information on paper development can be found in the appendix:

DELIVERABLES:

Completion Date	Description of Deliverables
February-April 2023	Gather, consolidate and prepare the current best-known information about fermented soy.
May 1, 2023	Draft version of the technical bulletin submitted in Microsoft Word (Version 2010 or later, in English) submitted to USSEC for initial review and comments by USSEC experts.
About May 8, 2023	Online meeting to discuss the draft version of the technical bulletin
May 31, 2023	Final version of the technical bulleting submitted in Microsoft Word (Version 2010 or later, in English) submitted to USSEC. Figures and images included in the text should also be sent separately as well in high resolution .jpeg format.

PROJECT TIMELINE:

The project will be completed by end of May 2023.

RFP TIMELINE:

- **RFP Distribution:** January 15, 2023
- **Last Day to Submit Questions:** January 26, 2023
- **Project Proposals Due:** January 30, 2023
- **Selections Made By:** February 10, 2023
- **Prospective Contractors Notified By:** February 13, 2023

INSTRUCTIONS:

Proposals must contain at a minimum the specific criteria listed below:

1. Please email the proposal to RFP@USSEC.ORG by **5:00 Central Time** on January 30, 2023.
2. A description of Prospective Contractor's capabilities, resources and experience. Emphasis should be placed on experience related to this RFP.
3. A thorough proposal outlining Prospective Contractors planned work, deliverables and timeline to complete the work.
3. Resumes for each of the Prospective Contractor's personnel assigned to work directly on the implementation of the contract.
4. Provide a minimum of two names and contact information for other similarly sized clients for reference purposes.

5. Detailed Budget

- All bids for services must provide a breakout of how the fee was derived including but not limited to a breakdown of hourly rate and the amount of effort they anticipate to do the work.

6. Proposals should be no longer than **10 pages** (8 ½" x 11").

NOTES:

- Prospective Contractors are hereby notified that proposals will be duplicated for internal review only. Every effort will be made to maintain confidentiality of all information presented. The appropriate representatives from staff and legal counsel will review proposals. Proposals will not be returned.
- USSEC reserves the right to retain all proposals submitted. Submission of a proposal indicates acceptance by the submitter of the conditions contained in the request for proposal, unless clearly and specifically noted in the proposal submitted and confirmed in the contract between USSEC and the contractor selected.
- Confidentiality - Without USSEC's prior written consent, Prospective Contractors and its officers, employees, agents, representatives, affiliates, and subcontractors shall not disclose to any third party any documents, materials or information that the Prospective Contractors learns from or is provided in relation to the RFP request.
- During the evaluation process, USSEC reserves the right to request additional information or clarifications from proposers, or to allow corrections of errors and omissions.
- USSEC reserves the right to reject any proposal that is in any way inconsistent or irregular. USSEC also reserves the right to waive proposal defects or deficiencies, to request additional information, and/or to negotiate with the Prospective Contractor regarding the proposal.
- Prospective Contractor agrees that Fees are in lieu of any and all other benefits, including, but not limited to, repayment of any and all taxes related to contractor service fees, health and life insurance, administrative costs and vacation.
- Prospective Contractor agrees that any income taxes, value added taxes or any other form of direct or indirect taxes on compensation paid under the contract shall be paid by Contractor and not by USSEC or Funding Sources.
 - Prior to any payment to a Contractor, a contractor must provide a W-9, W-8, or W-8BEN upon agreement signature
- Non-Competition. Contractor shall not act as agent or representative for any product or service directly or indirectly competitive with U.S. soybeans or soybean products for the length of the contract.
- USSEC and Prospective Contractor agrees to comply with the provisions of Equal Employment Opportunity (EEO). USSEC provides EEO to all employees and applicants for

employment without regard to race, color, religion, gender, sexual orientation, gender identity or expression, national origin, age, disability, genetic information, marital status, amnesty, or status as a covered veteran in accordance with applicable federal, state and local laws.

Appendix: Technical Bulletin Style Guidelines

Paper:

Although this is flexible, USSEC would prefer technical bulletins to be “easily digestible” by the reader. The length should be only what is needed (comprehensive, yet succinct), and formatted to A4 pages of single-spaced text in 12-point font. Please include figures, tables and images as they increase value to the reader. Photos in particular must be captioned. All materials must be free from copyright restrictions (or specific written permission must be obtained and provided for use and attribution provided in the text).

- Shorter is preferable.
- Use clear understandable English. Simple is better.
- Please include important tables, figures and other information that will help inform the audience.
- Please email us the material (or USSEC can supply a link to an upload site) with text and table files in Microsoft Word. Figures and images included in the text should also be sent separately as well in high resolution .jpeg format.
- An example technical bulletin template may be provided. If any issues with correct formatting, then the material can be provided in technical paper format and USSEC will reformat the text to fit the desired technical bulletin style.

Content:

Please keep your paper and presentation as practical and understandable as possible. Make sound recommendations based on literature and/or experience. Highly scientific concepts are welcome if they are relevant to the industry and can be put into practice. USSEC in particular is interested in applied research, meaning information that can be of immediate benefit to commercial industry.

Nomenclature:

Please use standard metric units and convert where necessary. Materials are targeting a global audience that will not relate to bushels, pounds, acres, Fahrenheit, feet, ounces, inches, etc.

Energy:

- Please use kcal/kg when discussing energy content of feed. If the original paper is in megajoules (MJ), please indicate kcal/kg in parenthesis next to each number.

Nutrients and dry matter:

- Please indicate the dry matter basis for nutrients values mentioned. For soybean meal, 88% dry matter is typical. For feed 88% dry matter would be good to use. Corn may be 13 or 14% DM. Please indicate.
- Typically aquaculture feeds are fed on a 10% moisture level basis. If feeds are significantly different from this please indicate.

Screen sizes:

- Please use millimeter (mm) hole space. If original paper or data is in gauge or mesh, please indicate mm hole space in parenthesis next to each number.

Try to make your message as easy to understand as possible for the reader and audience. Non-technically inclined or commercial target audiences may read these papers, so do not assume that the reader will be familiar with research terms.

References:

You should include references to add credibility and give credit where due. In most cases, five to 15 references should be appropriate. Please follow the example below in citing references. The titles and page numbers of articles should be given.

Examples:

Anderson, J., Ramamurthy, S., Jeffay, K., "Real-Time Computing with Lock-Free Shared Objects," Proceedings of the 16th IEEE Real-Time Systems Symposium, IEEE Computer Society Press, December 1995, pp. 28-37.

Baruah, S., Howell, R., Rosier, L., "Algorithms and Complexity Concerning the Preemptively Scheduling of Periodic, Real-Time Tasks on One Processor," Real-Time Systems Journal, Vol. 2, 1990, pp. 301-324.

Goddard, S., Jeffay, K., "Analyzing the Real-Time Properties of a Dataflow Execution Paradigm using a Synthetic Aperture Radar Application," Proc. IEEE Real-Time Technology and Applications Symposium, June 1997, pp. 60-71.

SUPPLEMENTAL INFORMATION AND BACKGROUND

BUILDING A PREFERENCE FOR U.S. SOY

USSEC's strategy can be found here: <http://ussec.org/about-ussec/vision-mission/>

USB's Long Range Strategic Plan can be found here: <http://unitedsoybean.org/about-usb/strategic-planning/>

We are a dynamic partnership of key stakeholders representing soybean producers, commodity shippers, merchandisers, allied agribusiness and agricultural organizations.

Through a global network of international offices and strong support in the U.S., we help build a preference for U.S. soybeans and soybean products, advocate for the use of soy in feed, aquaculture and human consumption, promote the benefits of soy use through education and connect industry leaders through a robust membership program.

Our 15-member board of directors is comprised of four members from the American Soybean Association (ASA), four members from the United Soybean Board (USB), and seven members representing trade, allied industry, and state organizations.

New board members are seated annually. We are receiving funding from a variety of sources including soy producer checkoff dollars invested by the USB and various state soybean councils; cooperating industry; and the American Soybean Association's investment of cost-share funding provided by the United States Department of Agriculture's (USDA) Foreign Agriculture Service.

The United Soybean Board, created by the 1990 Farm Bill to manage and direct the National Soybean Checkoff, is dedicated to marketing and research for the soybean industry. USB is comprised of 73 volunteer soybean farmers representing the interests of fellow growers nationwide. Each board member is nominated by Qualified State Soybean Boards (QSSBs) and appointed by the U.S. Secretary of Agriculture.

Because of the limitations on administrative and salary costs established in the Act, USB outsources the majority of its program management responsibilities to USB's three primary contractors:

- SmithBucklin-St. Louis for domestic marketing, new uses, production research and Board initiative activities;
- Osborn & Barr Communications for communications/public relations activities and;
- U.S. Soybean Export Council (USSEC), Inc. for international marketing and global opportunities activities.

As one of these three primary contractors USSEC may also undertake initiative activities on behalf of USB. USB considers primary contractor staff (approximately 60 people) as core USB staff. These three primary contractors use a number of subcontractors and, together, these entities carry out approximately 450 projects each year for USB. USB also manages approximately 10 subcontractors.

Non-Discrimination Statement

In accordance with Federal civil rights law and U.S. Department of Agriculture (USDA) civil rights regulations and policies, the USDA, its Agencies, offices, and employees, and institutions participating in or administering USDA programs are prohibited from discriminating based on race, color, national origin, religion, sex, gender identity (including gender expression), sexual orientation, disability, age, marital status, family/parental status, income derived from a public assistance program, political beliefs, or reprisal or retaliation for prior civil rights activity in any program or activity conducted or funded by USDA (not all bases apply to all programs). Remedies and complaint filing deadlines vary by program or incident.

Persons with disabilities who require alternative means of communication for program information (e.g., Braille, large print, audiotape, American Sign Language, etc.) should contact the responsible Agency or USDA's TARGET Center at (202) 720-2600 (voice and TTY) or contact USDA through the Federal Relay Service at (800) 877-8339. Additionally, program information may be made available in languages other than English.

To file a program discrimination complaint, complete the USDA Program Discrimination Complaint Form, AD-3027, found online at [How to File a Program Discrimination Complaint](#) and at any USDA office or write a letter addressed to USDA and provide in the letter all of the information requested in the form. To request a copy of the complaint form, call (866) 632-9992. Submit your completed form or letter to USDA by: (1) mail: U.S. Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410; (2) fax: (202) 690-7442; or (3) email: program.intake@usda.gov.

USDA is an equal opportunity provider, employer, and lender.

Civil Rights Clause

Contractor agrees that during the performance of this Agreement it will not discriminate against any employee or applicant for employment because of race, color, religion, gender, national origin, age, disability, political beliefs, sexual orientation, marital or family status, parental status or protected genetic information. Contractor further agrees that it will fully comply with any and all applicable Federal, State and local equal employment opportunity statutes, ordinances and regulations, including, without limitation, Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, the Age Discrimination in Employment Act of 1967, and the Equal Pay Act of 1963. Nothing in this section shall require Contractor to comply with or become liable under any law, ordinance, regulation or rule that does not otherwise apply to Contractor.