



INVITATION TO NEGOTIATE

ITN13-04—Development of novel, short-stature female sweet sorghum lines highly resistant to the fungal pathogen *Collectotrichum sublineolum*.

Florida Foundation Seed Producers, Inc. (FFSP) invites all interested parties to submit comments and/or proposals for the exclusive research agreement opportunity disclosed in this announcement. For more information, please contact FFSP at beutt@ffsp.net.

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ITN Description and Specifications

- **ITN Title:** Development of novel, short-stature female sweet sorghum lines highly resistant to the fungal pathogen *Collectotrichum sublineolum*, for the production of hybrid sweet sorghum seed.
- **ITN No.:** ITN13-04
- **ITN Territory:** None Specified—As Proposed by ITN Respondents
- **ITN Announcement Date:** Tuesday, April 30, 2013
- **ITN Proposal Due Date:** **Wednesday, May 29, 2013 (12PM EST)**
- **ITN Description:**

On behalf of the Florida Agricultural Experiment Station (FAES), an agricultural and natural resource research program of the University of Florida's Institute of Food and Agricultural Sciences (UF/IFAS), Florida Foundation Seed Producers, Inc. (FFSP) is seeking a commercial sponsor to collaborate on the development of novel, short-stature female sweet sorghum lines which are highly resistant to the fungal pathogen *Collectotrichum sublineolum*, for the production of hybrid sweet sorghum seed. In return, FAES will provide the sponsor the first option, for consideration, of an exclusive license of potential parental lines that might result from the described research. In addition to high resistance to *Collectotrichum sublineolum*, the potential parental line(s) could be improved for additional traits.

Description

Sorghum is an attractive bioenergy crop for the Southeastern U.S. because of its short establishment time (4-6 months), high biomass potential (up to 100 Mg fresh weight ha⁻¹), potential for sustainable production due to a limited need for irrigation and fertilizer, especially compared to sugarcane, and tolerance to both hot and cool weather. Biomass sorghums are tall (4-6 m) and have thick stems. They can be produced as either sweet or non-sweet types. Sweet sorghums accumulate sugar-containing juice in their stems, with a reported yield of (4000-6000 L ha⁻¹ or 400-600 gal acre⁻¹).

For the immediate future the most promising use of sweet sorghum is to extend the window of operation (in both directions) of biorefineries that process sugarcane. This will be accomplished by planning two sweet sorghum harvests, one prior to and one after the sugarcane harvest. **The fact that sweet sorghum generates both readily fermentable sugars from the juice and lignocellulosic biomass that can be processed for the production of fuels and chemicals make this crop ideal for the transition to cellulosic fuels.**

ITN Description and Specifications

Description (cont):

One of the major challenges is the development of high-biomass sweet sorghum germplasm that is well adapted to the local conditions. Most of the current high-biomass sweet and forage lines were not selected for bioenergy production, and were not developed for use in the Southeastern U.S. As a result, their production is limited by the omnipresence of the aggressive fungal pathogen *Colletotrichum sublineolum*, which causes leaf blight and stem rot in susceptible cultivars. In addition, widespread adoption of sweet sorghum is hampered by the lack of a reliable seed supply, caused in part by the high cost of harvesting seed from tall, pure-line varieties. This is a deterrent for the involvement of seed companies in their production. Commercial seed production requires the mechanized harvest of hybrid seed from short maternal varieties. Understanding of the genetic control of height in biomass sorghums is currently incomplete.

The potential sponsor of this exclusive research agreement opportunity would provide funding for breeding activities aimed at the production of female parental lines for hybrid seed production for bioenergy sorghums, with target markets in the Southeastern U.S. and other humid subtropical areas. The project objective and specific target traits are:

To select appropriate short-stature female lines to produce high-biomass, sweet-stem hybrid varieties adapted to the Southeastern U.S. The females should possess the following characteristics in order to be able to produce high yielding hybrids:

- Exceptional resistance to foliar and stem fungal pathogens, especially anthracnose, and tolerance to bacterial stripe. The resistance should be of dominant nature, so the F1 hybrids produced from those lines will display similar levels of resistance.
- Have juicy stems.
- Able to confer Brix levels of 16 or higher to their progeny resulting from pollination with a sweet sorghum male.
- Able to confer desirable stalk traits to their progeny, including stem diameter larger than 1.5” at the mid-section of the stem under normal planting densities and low lodging percentage.
- Display the stay green trait.

Further questions concerning the proposed research agreement should be directed to Dr. Ana Saballos (Email: saballos@ufl.edu, Phone: 352-273-8396)

ITN Description and Specifications

Facilities & Equipment

The following facilities and equipment will be available for the completion of the research proposed in this announcement:

- A 1,000 square feet laboratory in the University of Florida Genetics Institute. The laboratory is outfitted for molecular biology and cell wall chemistry. Major equipment available for the project include horizontal gel electrophoresis boxes of different sizes and accompanying power supplies, a GE NanoVue spectrophotometer, Denver Instruments analytical balances for small and large samples, a Thermo -80°C freezer, two -20°C freezers and a refrigerator, and MJ Dyad and BioRad C-1000 thermocycler. The lab has a fume hood and has been certified for rDNA research. Personal computers are available for data acquisition, management and analysis.
- The Cancer & Genetics Research Complex that houses the UF Genetics Institute offers state-of-the-art facilities for genetics, biochemistry and molecular biology research, with access to major equipment (cold rooms, ice makers, centrifuges, laminar flow hoods, growth chambers, incubators, gel imaging system, autoclaves, dish washers, microscopes).
- Field experiments are conducted at the UF/IFAS Suwannee River North Florida Research and Education Center (<http://nfrec.ifas.ufl.edu/>) near Live Oak, FL, approximately 70 miles North of the Gainesville Campus and at one of the other Research and Education Centers operated by the University of Florida, either in Ona, FL (382 miles South of Gainesville) or Citra, FL (30 miles South of Gainesville). Additional research centers are distributed across the state, and can be used to conduct trials if deemed necessary. These research and education centers have a dedicated full-time staff and farm equipment to manage the plots.
- A cold storage room where seeds can be maintained for long-term storage is available. A mechanized cane press is available to squeeze juice out of stalks at the Live Oak site, and digital-held refractometers (Atago PAL-1) are available to take Brix readings on-site.

Budget (US \$/year)

Expense	
Principal Investigator (salary and benefits)	\$16,000.00
OPS employee	\$5,000.00
Field Trial Charges (including travel to trial sites)	\$13,490.00
Supplies	\$12,700.00
TOTAL*	\$47,190.00

Funding requested for no less than three (3) years

* Does not include Indirect Costs (25%)

Instructions for Submitting Comments and/or Proposals

If you or your company is interested in commenting on and/or submitting a proposal for this exclusive research agreement opportunity, please complete the three steps on this checklist:

_____ **Step 1:** Carefully read the terms and conditions of this announcement.

_____ **Step 2:** Complete and sign the Acknowledgment Form of this announcement and fax or email to: Florida Foundation Seed Producers, Inc., Attn: John Beuttenmuller, Fax: (877) 839-9162, Email: beutt@ffsp.net.

_____ **Step 3:** After FFSP receives the Acknowledgment Form, you will receive a sample questionnaire which you may use to submit your proposal. If you are only interested in commenting, please indicate such on your Acknowledgment Form, and submit your comments upon returning the Acknowledgment Form. All proposals and comments must be received by Florida Foundation Seed Producers, Inc. (By U.S. Mail: PO Box 110200, Gainesville, FL 32611-0200, By Express Courier: G022 McCarty Hall D, Gainesville, FL 32611-0200) prior to the ITN Proposal Due Date specified in the ITN Description and Specifications of this announcement.

All proposals and comments will be objectively and confidentially evaluated. FFSP is committed to evaluating proposals and comments using the following three (3) principles of the ITN process:

- 1. What is good for the State of Florida and its people?**
- 2. What is good for UF/IFAS?**
- 3. What is good for the breeder and the breeding program?**

NOTICE: Late proposals and/or comments will not be accepted or considered.

Florida Foundation Seed Producers, Inc. (FFSP), a non-profit corporation and direct support organization of the University of Florida (University) offers the following Invitation to Negotiate (ITN).

GENERAL CONDITIONS:

ITN FORM. All proposals should be submitted after submitting the FFSP ITN Acknowledgment Form. All proposals should be submitted with one (1) complete original proposal and three (3) complete photocopies in a sealed envelope, with the following information on the outside of the envelope: ITN number, date and time of ITN closing (as stated on Acknowledgment Form), and company name. All ITN responses must be executed and submitted in a sealed envelope. (DO NOT INCLUDE MORE THAN ONE ITN RESPONSE PER ENVELOPE)

1. EXECUTION OF ITN. The ITN Acknowledgment Form must contain a manual signature of an authorized representative in the space provided. ITN proposals must be typed or printed in ink. Use of erasable ink or pencil is not permitted. All corrections made by Proposer must be initialed. All ITN proposals are subject to the conditions specified herein and those which do not comply are subject to rejection.

2. NO ITN SUBMITTED. If not submitting an ITN, respond by returning only the ITN Acknowledgment Form, marking it "NO ITN RESPONSE", and explain the reason in the space provided along with any comments. Failure to respond three (3) times in succession without justification may be cause for removal of your company's name from the ITN notification list. NOTE: To qualify as a respondent, Proposer must submit a "NO ITN RESPONSE", and it must be received no later than the stated ITN closing date and hour.

3. ITN DELIVERY. If ITN proposals are mailed through the U. S. Postal Service as regular mail, address the proposal to the PO Box as shown on the Invitation to Negotiate Acknowledgment Form; or if the ITN proposal will be delivered by a service other than the U. S. Postal Service regular mail, i.e., Federal Express, Airborne, United Parcel Service, Courier, U. S. Postal Express Mail, etc., address the proposal to the building and room number as shown on the ITN Acknowledgment Form.

4. ITN OPENING. Proposals shall be opened after the closing date and time specified on the ITN Acknowledgment Form. Proposers shall be responsible to assure that the ITN response is delivered at the proper time and place prior to the ITN closing. ITN responses, which for any reason are not so delivered, will not be considered. NOTE: ITN Notice of an unspecified award may be posted electronically at <http://FFSP.net> listed as ITN.

5. PROPOSAL WITHDRAWAL. A Proposer may withdraw a submitted proposal at any time up to the ITN closing. To withdraw a proposal, the Proposer must submit a written request, signed by an authorized representative, to FFSP before the ITN closing. After withdrawing a previously submitted proposal, the Proposer may submit another proposal at any time up to the ITN closing.

6. INQUIRIES. All changes, if necessary, shall be made by written addendum to the ITN. Any explanation desired by Proposers must be requested of FFSP in writing, and if an explanation is necessary, a reply shall be made in the form of an addendum, a copy of which will be forwarded to each Proposer who has submitted an Acknowledgment Form to FFSP. FFSP will not give verbal answers to inquiries regarding the specifications, or verbal instructions prior to or after the award of this ITN. A verbal statement regarding same by any person shall be non-binding. FFSP is not liable for any costs or actions resulting from the Proposer accepting verbal direction.

7. ERRORS. FFSP is not liable for any errors or misinterpretations made by the Proposer in responding to this ITN.

8. AMENDMENT AND CLARIFICATION. FFSP reserves the unilateral right to amend this ITN in writing at any time. FFSP reserves the right to cancel or reissue the ITN at its sole discretion. Proposers shall respond to the final written ITN and any exhibits, attachments, and amendments.

9. ITN INTERPRETATION. Interpretation of the wording of the ITN document submitted by the Proposer will be the responsibility of FFSP and that interpretation will be final and binding.

10. PROPOSAL REJECTION. FFSP shall have the right to reject any or all ITN proposals and in particular to reject a proposal not accompanied by data required by the ITN or in any way incomplete or irregular, including omission of financial considerations. Conditional ITN proposals will not be accepted.

11. PRICES, TERMS. Proposers are expected to examine the project scope, specifications, schedule, proposed terms, and all instructions pertaining to the ITN. Failure to do so will be at Proposers' risk. Prices proposed will govern in the award, however, Fees, Royalties and Price are not the only considerations in selection for the award.

12. CONFLICT OF INTEREST. Proposers must disclose with their proposal any actual or potential conflicts of interest. All Proposers must disclose with their ITN the name of any officer, director, or agent who is also an employee of FFSP or University or any State Employee. Further, all Proposers must disclose the name of any State employee who owns,

directly or indirectly, an interest of five percent (5%) or more in the Proposer's firm or any of its branches.

13. PERFORMANCE INVESTIGATIONS. As part of the proposal evaluation process, FFSP may make inquiries and investigations, including verbal or written references from Proposer's customers, to determine the ability of the Proposer to offer service.

14. INDEPENDENT CONTRACTOR. Nothing herein is intended or shall be construed as in any way creating or establishing the relationship of co-partners between the parties or in any way making the Proposer an agent or representative of FFSP for any purposes in any manner whatsoever. Proposer is, and shall remain, an independent contractor with respect to all services performed under any License or Research Agreement awarded as a result of this ITN.

15. SELECTION. As the best interest of FFSP acting as a direct support organization of the University may require, the right is reserved to make selections by individual item, group of items, all or none, or a combination thereof; to reject any and all ITN proposals or waive any minor irregularity or technicality in ITN proposals received. Proposers are cautioned to make no assumptions of acceptance, until receiving written notice. Fees, Royalties and Price are not the only considerations in the award.

16. AWARD. Award shall be made to the responsive Proposer whose proposal is determined to be the most advantageous to FFSP. Price, although a consideration, will not be the sole determining factor. FFSP or University is under no obligation to award a contract as a result of this ITN.

17. CANCELLATION. FFSP, by written notice, may terminate this ITN without penalty or cause, in whole or in part, when such action is deemed by FFSP to be in the best interest of FFSP.

18. INTERPRETATIONS/DISPUTES. Any questions concerning conditions or negotiation considerations shall be directed in writing to FFSP. Inquiries must reference the date of ITN closing and the ITN number. No interpretations shall be considered binding unless provided in writing by the FFSP in response to requests in full compliance with this provision.

19. LEGAL REQUIREMENTS. This ITN and any contract resulting from this ITN, and any disputes thereunder, shall be construed exclusively in accordance with the laws of the State of Florida without regard to conflict of laws provisions and enforced in the courts of the State of Florida. FFSP and Proposer hereby agree that venue shall lie exclusively in Alachua County, Florida.

20. ADVERTISING. In submitting an ITN proposal, the Proposer agrees not to use the results therefrom as a part of any commercial advertising.

21. ASSIGNMENT. Any contract issued pursuant to this ITN and the monies, which may become due hereunder, are not assignable except with the prior written approval of FFSP.

22. LIABILITY and INDEMNITY. The Proposer shall indemnify and hold FFSP, the University of Florida Board of Trustees, the Florida Board of Governors, and their respective employees, directors, officers, and agents harmless from all costs, expenses, claims, damages, penalties and losses (including without limitation reasonable attorneys' fees and experts' fees) arising out of, relating to, or resulting from any contract awarded as a result of this ITN and from the Proposer's or third persons' use of the FFSP licensed materials.

23. FACILITIES. FFSP reserves the right to inspect the Proposer's facilities at any time with prior notice.

24. TERMINATION. Upon termination of the agreement that may result from the ITN, FFSP shall give notice with instructions for return of plant materials. Upon receiving a written request from FFSP, Proposer agrees to return to FFSP plant material as instructed. If no instructions are received from FFSP, the Proposer shall give fifteen (15) days notice to destroy all plant material to FFSP. After fifteen (15) days, all plant material shall be destroyed by the Proposer, without exception for other options or hold backs.

25. RESERVATION OF RIGHTS. FFSP retains sole rights, titles and ownership of the supplied plant material and associated information provided in performance of the project, including all Intellectual Property (IP) and all current and future patents, plant variety protection (PVP) certificates, copyrights, trademarks, and other intellectual property rights. No one is permitted to file for IP protection, except University, FFSP or their designees. FFSP is enabled by University to file for IP protection and to contract out all forms of IP to commercial entities. Breeding, selection, or modifications to the plant materials and IP supplied are prohibited.

26. CONFLICT BETWEEN DOCUMENTS. If any terms and conditions contained within the documents that are a part of this ITN or resulting contract are in conflict with any other terms and conditions contained therein, then the various documents comprising this ITN or resulting License or Research Agreement, as applicable, shall govern in the following order of precedence: amendment, contract and addendum(s), addenda to invitation to negotiation, special conditions, general conditions, invitation to negotiate.

27. EXPENSE. All proposals submitted in response to this ITN must be submitted at the sole expense of the Proposer, whether or not any agreement is signed as a result of this ITN. Proposers will pay all costs associated with the preparation of proposals and necessary visits to FFSP and other required site visits.

28. NO WARRANTIES. FFSP MAKES NO REPRESENTATIONS OR WARRANTIES WHATSOEVER WITH RESPECT TO THE MATERIALS, INCLUDING, WITHOUT LIMITATION, (I) THAT THE USE OF THE MATERIALS DOES NOT OR WILL NOT INFRINGE ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHTS OF ANY THIRD PARTY, (II) THAT A THIRD PARTY'S INTELLECTUAL PROPERTY RIGHTS DO NOT INFRINGE ANY PATENT OR OTHER INTELLECTUAL PROPERTY RIGHTS OF THE MATERIALS, OR (III) THAT THE USE OF THE MATERIALS IS SAFE AND WITHOUT HAZARD. FFSP IS UNDER NO OBLIGATION TO OBTAIN OR PROVIDE LICENSES THAT MAY BE REQUIRED FOR THE USE OF THE MATERIALS BY PROPOSER. IN ADDITION, PROPOSER SHALL ASSUME ALL RISKS RELATING TO, RESULTING FROM OR ARISING OUT OF THE USE OF THE MATERIALS.

SPECIAL CONDITIONS:

29. USE OF TERMS. The terms proposer, cooperator, firm, vendor, company, and contractor are used synonymously in this ITN unless otherwise indicated.

30. CONTRACT. This ITN, the written proposal submitted, and modifications to terms as negotiated and agreed to by the parties shall be incorporated into the final contract for consideration.

If you or your company is interested in commenting on and/or submitting a proposal for this exclusive research agreement opportunity, please complete and sign this Acknowledgment Form agreeing to the terms and conditions of the ITN and fax it back to Florida Foundation Seed Producers, Inc. FFSP will then send your company a sample questionnaire which may be used for submission of your proposal.

SUBMIT ITN RESPONSE AND COMMENTS TO:
 FLORIDA FOUNDATION SEED PRODUCERS, INC.
 G022 McCarty Hall D
 PO Box 110200
 Gainesville, FL 32611-0200
 Fax: (877) 839-9162

Acknowledgment Form



INVITATION TO NEGOTIATE

ITN NO.: 13-04	
ITN TITLE:	
PROPOSER NAME/COMPANY NAME:	PROPOSER CONTACT (NAME):
PROPOSER'S MAILING ADDRESS (Phys.):	CITY – STATE – ZIP CODE - COUNTRY:
TELEPHONE NO.:	EMAIL:
ALTERNATE TELEPHONE NO.:	WEBSITE:
FAX NO.:	

Is it acceptable to send your ITN sample questionnaire via e-mail? _____ Yes _____ No

If no, what method should be used? _____

I certify that this ITN Proposal is made without prior understanding, agreement, or connection with any corporation, firm, or person submitting an ITN Proposal for the same materials and is in all respects fair and without collusion or fraud. I agree to be bound by all terms and conditions of this ITN Proposal and certify that I am authorized to sign this ITN Proposal for the Proposer.

SIGNATURE

DATE

NAME (TYPED), TITLE