



# ***INVITATION TO NEGOTIATE***

## ***ITN15-09 - Development of novel, low-chill blackberry cultivars***

In accordance with UF/IFAS policy, Florida Foundation Seed Producers, Inc. (FFSP) is hereby announcing the research agreement opportunity disclosed in this announcement. FFSP invites all interested parties to submit comments and/or proposals for this research agreement opportunity. For more information, please contact FFSP at [jwatson@ffsp.net](mailto:jwatson@ffsp.net).

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## ITN Description and Specifications

- **ITN Title:** Development of novel, low-chill blackberry cultivars
- **ITN No.:** ITN15-09
- **ITN Announcement Date:** September 18, 2015
- **ITN Proposal Due Date:** Friday, November 20, 2015, 12PM EST

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, low-chill blackberry cultivars. In return, FAES will provide the sponsor the first option, for consideration, of an exclusive license of potential cultivars that might result from the described research.

### **Introduction:**

Blackberries (*Rubus* spp., Rosaceae) have long been a favorite fruit in the United States. Consumer demand for blackberries has been on the rise since the mid-1990s. Increased demand has stimulated remarkable expansion of blackberry production in the U.S. It is estimated that the area planted for blackberry production increased by 45% between 1995 and 2005, reaching 17,898 acres in 2005 (Strik et al., 2008). Expansion has been strong in the southeastern U.S. For example, the blackberry-growing area in Georgia tripled since 1995. Strong interest in producing blackberries has been seen also in Florida. Recently, Florida blackberry growers formed their own association to promote exchange of information. Industry sources indicate that blackberry demand has an immense amount of potential to expand in the future.

Improved cultivars with better fruit quality and longer shelf life have played a very important role in the steady expansion of blackberry production. The primary blackberry breeding programs in the U.S. have been those of the USDA-ARS in Corvallis, Oregon and the University of Arkansas (UA) (Clark et al., 2007). The USDA-ARS program has produced numerous new cultivars with trailing growth habits and good climatic adaptation to the Pacific Northwest, while the UA blackberry breeding program has focused on developing new cultivars with erect growth habits, good berry quality, and high crop yield. Field trials have shown that many of the UA blackberry cultivars can yield well in North Carolina, South Carolina, Georgia, and north Florida (Andersen and Crocker, 2011). However, the UA-bred blackberry cultivars generally require 500 to 900 hours of chilling below 45 °F for normal bud breaking and shoot growth (Carter et al., 2006; Clark and Finn, 2011). Except for north Florida, many parts of Florida and the world within 28° north or south of the equator accumulate 300 or fewer hours of chilling. It has been reported that without sufficient chilling hours, blackberries grown in central and south Florida often grow poorly and fruit sparsely, causing a significant challenge for Florida growers. This same challenge exists as blackberry production is expanding in many other areas in the world with warm winters.

Several cultural practices are often used by blackberry growers in low-chill environments to improve bud breaking, plant growth, and crop yield. These include leaf defoliation, pruning, and growth regulator application. However, such practices are labor-intensive and expensive, thus reducing the competitiveness, even threatening the economic viability, of blackberry production.

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A similar challenge has been faced in producing blueberries, peaches, and apples in low-chill environments. Experiments and growers' experiences have shown that the most cost-effective, long-term measure to mitigate this challenge has been developing and using low-chill cultivars. The availability of such cultivars has enabled dramatic expansion of commercial production of these crops in low-chill environments in Florida and many other parts of the world.

The overall goal of this proposed project is to develop low-chill blackberry cultivars that will require 100 to 300 hours of chilling below 45 °F, have improved adaptation to the warm climates in Florida and other areas in the world, yield well, and produce high quality berries.

### **Breeding Approaches:**

We propose to use the recurrent mass selection strategy for developing low-chill blackberry cultivars. This strategy has been most successful in breeding blackberry (and other clonally propagated polyploids) (Clark et al., 2007). It is based on hybridization of superior or complementary parents, followed by selection of the desired progeny for testing and possible cultivar release, and continued crossing among the superior plants for the next round of selection (Bringhurst, 1983). Through repeated cycles of hybridization and selection, desirable traits are combined (or concentrated), resulting in improved cultivars.

Specifically, we propose to use the following two breeding approaches. The **first approach** is to select two to five existing cultivars that require 200 to 300 chill hours, cross them with the best thornless cultivars and primocane-fruited cultivars, and select the earliest progeny in the first generation. Then cross these progeny and select the earliest progeny as advanced breeding lines in the second generation.

Fully developed flowers will be emasculated and pollinated by hand with fresh or stored pollen from female parents. Pollinated flowers will be bagged, ripe berries will be collected, and seeds will be extracted manually. Dry seeds will be scarified with sulfuric acid and stratified at 40°F in a refrigerator for 12 to 15 weeks. After stratification is complete, seeds will be germinated in the greenhouse at 70-75°F under 16-hour day-length for 3 or more months. Seedlings will be set in the field in spring. To accommodate as many seedlings as possible within the available field space, seedlings in the field will be spaced from 2 ft within the row and 10 ft between rows. Progeny evaluation will begin one year after planting and continue for 2-4 years. The top 1% of the seedlings with low chilling requirements, high yield, excellent fruit quality, and good plant growth will be kept as new selections. These selections will be propagated and put into replicated trials, which will be managed similarly to commercial fields. During the replicated trials, the experimental plots will be harvested twice a week and evaluated weekly to assess traits including yield, fruit size, firmness/skin toughness, color, shape, and flavor, ease of fruit separation, plant vigor, and disease or environmental stress problems. The most promising selections will be harvested also for postharvest fresh-market storage or processing evaluation. The top 10% of the advanced selections that have combined low chilling requirements, high yield, good horticultural traits, and excellent fruit quality will be propagated for growers' trials. During this time, botanical data will be collected for filing plant patent and/or plant breeder's rights applications.

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The above-described process will likely proceed in a linear fashion in the first one to three years of this proposed project. Beginning in the fourth year, the whole process will be more like a series of overlapping cycles, and every step will take place every year. The likely scenario will be as follows: seed germination will begin and crosses will be planned in fall. Seedlings will be grown in the greenhouse during the winter months. New plantings will be established in spring. When flowers are mature, flowers will be emasculated, pollen collected, and flowers pollinated. As fruit begins to ripen, seedlings and advanced selections in trials will be intensively evaluated until harvest is complete. Identified selections will be propagated in late summer. Meanwhile, fruit from successful crosses will be harvested. Seeds from crosses will be extracted, scarified, and stratified in late summer for the next cycle to begin (Clark and Finn, 2011).

The **second approach** will be starting from open-pollinated seeds of early-ripening cultivars. Their progeny will be grown and screened in central Florida. Desirable progeny will be used to cross with commercial blackberry cultivars as described above.

### **Facilities:**

The proposed blackberry breeding activities are to be conducted at the University of Florida's Gulf Coast Research and Education Center (GCREC) (<http://gcrec.ifas.ufl.edu>) in western central Florida. These activities will be overseen by Dr. Zhanao Deng and performed by his technician, postdoctoral associate, and OPS employees. Dr. Deng's program has one tissue culture room, one laboratory, one chemical hood room, two greenhouses with a total area of 3600 ft<sup>2</sup>, a pomegranate orchard of 3.5 acres, and has access to 16 growth rooms, a screen house of >20,000 ft<sup>2</sup>, and more than 200 acres of agricultural lands for crop evaluation, trialing, and production. Available equipment in Dr. Deng's laboratory include 2 microscopes (Olympus 41, Olympus BH2), 2 dissecting microscopes (Olympus SZX9 and Bausch & Lomb), 1 inverted microscope, 1 fluorescent stereo microscope (SZX16), 1 flow cytometer (CyFlow Cube 6), 1 BioMate 5 UV-visible spectrophotometer, 1 thermal cycler with 384-well plate (Eppendorf Mastercycler ep), 1 thermal cycler with 96-well plate (Eppendorf), 1 real-time PCR system (Agilent AriaMx), 4 sets of agarose gel electrophoresis units, 1 LI-COR 4300 DNA analyzer, 3 electronic balances, 1 pH meter, 2 ovens, 2 microwave ovens, 2 autoclaves, 2 incubators, 1 incubator shaker, 1 shaker, 3 water baths, 1 Millipore water purification system, 2 refrigerators, 1 freezer, 1 deep freezer, 3 centrifuges, 1 laminar hood, etc. Dr. Deng's laboratory has on-site access to 2 additional deep freezers, 2 biological cabinets, 1 real-time PCR system (BioRadCFX96), 1 NanoDrop, 4 thermal cyclers, 1 gel documentation system, etc.

### **Contact Information:**

Further questions concerning the proposed research should be directed to Dr. Zhanao Deng. UF/IFAS Gulf Coast Research and Education Center, 14625 County Road 672, Wimauma, FL 33598, Tel: (813) 633-4134; Fax: (813) 634-0001; E-mail: [zdeng@ufl.edu](mailto:zdeng@ufl.edu).

## ITN Description and Specifications

### References Cited:

Anderson, P.C. and T.E. Crocker. 2011. The blackberry. UF/IFAS EDIS. 10 pages.

Carter, P.M., J.R. Clark, C. Particka, and D. Crowne. 2006. Chilling response of Arkansas blackberry cultivars. *Journal of the American Pomological Society* 60:187-197.

Clark, J.R. and C.E. Finn. 2011. Blackberry breeding and genetics. 2011 Global Science Books - Fruit, Vegetable and Cereal Science and Biotechnology 27-43.

Clark, J.R., E.T. Stafne, H.K. Hall, and C.E. Finn. 2007. Blackberry breeding and genetics. *Plant Breeding Reviews* 29:19-144.

Strik, B.C., J.R. Clark, C. finn, and M.P. Banados. 2006. World production of blackberries. *Acta Hort.* 209-217.

## ITN Description and Specifications

**Table 1. Major Activities for Blackberry Breeding in Years 1 - 6**

Years	Major activities
Year 1	Stratify 10,000 to 20,000 seeds from open and controlled crosses; Germinate seeds; Screen seedlings; Produce young plants in containers (2,000 to 4,000); Land preparation for 3 acres; install irrigation system; install trellis; prepare rows for planting.
Year 2	Plant about 200 plants from OP seeds in the orchard (1 <sup>st</sup> planting); Plant 1,000 to 2,000 young plants from Year 1 crosses (2 <sup>nd</sup> planting); Manage fertilization and irrigation to promote plant growth; control weeds and pests; Make 10 - 20 additional crosses (2 <sup>nd</sup> group of crosses); produce and stratify 10,000 to 20,000 seeds; germinate seeds; Produce young plants in containers (2,000 to 4,000).
Year 3	Plant another 1,000 - 2,000 young plants from Year 2 crosses (3 <sup>rd</sup> planting), resulting in a total of 2,200 to 4,200 plants in the orchard; Manage the fertilization and irrigation of 3 acres to promote plant growth; control weeds and pests; prune plants; Make additional crosses (3 <sup>rd</sup> group of crosses) based on data from Year 1 and Year 2; produce and stratify seeds; germinate seeds; Screen seedlings; Produce additional 1,000 to 2,000 young plants (from Year 3 crosses) in containers; Evaluate 2,200 to 4,200 plants from Year 1's OP seeds, Year 1's crosses, and Year 2's crosses; Taste berries from up to 3,200 plants; Select desirable breeding lines.
Year 4	Plant another 500 - 1,000 young plants from Year 3 crosses (4 <sup>th</sup> planting), resulting in a total of 2,700 to 5,200 plants in the orchard; Manage the fertilization and irrigation of 3 acres; control weeds and pests; prune plants; Evaluate plants (up to 5,200) from Year 1's OP seeds, Year 2's crosses, and Year 3's crosses; Record flowering time, first & peak harvest date for some breeding lines; Harvest and taste berries for up to 3 months; Select desirable breeding lines; Propagate advanced breeding lines in the greenhouse; grow new plants in containers.
Year 5	Plant new selections in experimental production trials; Manage fertilization & irrigations in the breeding orchard & production plots; control weeds and pests; prune plants; Evaluate plants (up to 5,200) from Year 1's OP seeds, Year 2's crosses, and Year 3's crosses; Record flowering time, first & peak harvest date for selected blackberry breeding lines; Harvest and taste berries for up to 3 months; Select promising breeding lines; Propagate advanced breeding lines in the greenhouse; Grow the breeding lines in containers for experimental production trials, & potentially for experimental growers' trials;
Year 6	Make the second generation of crosses between advanced breeding lines and newly released commercial cultivars (4 <sup>th</sup> group of crosses); stratify & germinate 10,000 to 20,000 seeds; Grow 1,000 to 2,000 young plants in containers (4 <sup>th</sup> group of plants); Continue evaluation of plants (up to 5,200) from Year 1's OP seeds, Year 2's crosses, and Year 3's crosses; Record flowering time, first & peak harvest date for selected blackberry breeding lines; Harvest and taste berries for up to 3 months; Validate promising breeding lines; Evaluate promising breeding lines in experimental production trials; Take data on promising breeding lines in the experimental production trials; Visit growers and evaluate plants in experimental growers' trials; Select and propagate the best 10 advanced promising blackberry lines for experimental growers' trials at multiple sites.



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**Table 3. Proposed Budget.**

Items	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Subtotal
<b>1.</b>							
<b>1.1 Technician wages</b>							
Annual wages	\$31,200	\$32,136	\$33,100	\$34,093	\$35,116	\$36,169	
Full time equivalent (FTE)	0.83	1	1	1	1	1	
Technician wages for this project	\$25,896	\$32,136	\$33,100	\$34,093	\$35,116	\$36,169	
Fringe benefits (@42.9% of wages)	\$11,109	\$13,786	\$14,200	\$14,626	\$15,065	\$15,517	
Yearly total for technician	\$37,005	\$45,922	\$47,300	\$48,719	\$50,181	\$51,686	\$280,813
<b>1.2. Other Personnel Services (OPS)</b>							
Annual wage for OPS	\$29,120	\$29,994	\$30,893	\$31,820	\$32,775	\$33,758	
FTE for this project	0.83	1.5	1.5	1.5	1.5	1.5	
OPS wages for this project	\$24,170	\$44,991	\$46,340	\$47,730	\$49,163	\$50,637	
Fringe benefits (@5.4%)	\$1,305	\$2,430	\$2,502	\$2,577	\$2,655	\$2,734	
Yearly subtotal for OPS	\$25,475	\$47,421	\$48,842	\$50,307	\$51,817	\$53,371	\$277,233
<b>Total personnel and fringe</b>	<b>\$62,480</b>	<b>\$93,343</b>	<b>\$96,142</b>	<b>\$99,026</b>	<b>\$101,998</b>	<b>\$105,057</b>	<b>\$558,046</b>
<b>2.</b>							
Travel	\$2,000	\$1,500	\$1,500	\$1,500	\$1,500	\$1,500	\$9,500
<b>3.</b>							
<b>Materials &amp; supplies</b>							
3.1. Renovating a nursery area for growing breeding populations prior to transplanting to field	\$2,000						\$2,000
3.2. Materials and supplies for making crosses and producing seeds and seedlings		\$2,000	\$2,000			\$1,000	\$5,000
3.3. Materials & supplies for growing progeny in pots before planting	\$3,000	\$4,000	\$4,000			\$3,000	\$14,000
3.4. Materials and supplies for evaluating and screening progeny in the orchard		\$2,000	\$4,000	\$6,000	\$6,000	\$6,000	\$24,000
3.5. Materials and supplies for trellis construction	\$10,500						\$10,500
3.6. Mulch	\$9,000						\$9,000
3.7. Ground cover	\$3,000						\$3,000



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**Table 3. Proposed Budget (continued).**

	<b>3.8. Materials and supplies for orchard maintenance, fertilizers, herbicides, insecticides, fungicides, ground cover, etc.</b>	<b>\$5,700</b>	<b>\$11,400</b>	<b>\$11,400</b>	<b>\$11,400</b>	<b>\$11,400</b>	<b>\$11,400</b>	<b>\$62,700</b>
	<b>3.9. Fertilizer injectors</b>	<b>\$500</b>						<b>\$500</b>
	<b>3.10. Rotary mower</b>	<b>\$2,000</b>						<b>\$2,000</b>
	<b>3.11. Fruit scale</b>		<b>\$300</b>					<b>\$300</b>
	<b>3.12. Hand-held refractometer</b>		<b>\$300</b>					<b>\$300</b>
	<b>Yearly total for all materials and supplies</b>	<b>\$35,700</b>	<b>\$20,000</b>	<b>\$21,400</b>	<b>\$17,400</b>	<b>\$17,400</b>	<b>\$21,400</b>	<b>\$133,300</b>
<b>4.</b>	<b>Equipment</b>							
	<b>4.1. Utility refrigerator</b>	<b>\$5,000</b>						<b>\$5,000</b>
<b>5.</b>	<b>Tablet &amp; software</b>		<b>\$1,000</b>					<b>\$1,000</b>
<b>6.</b>	<b>Direct Costs (DC) - Yearly total</b>	<b>\$105,180</b>	<b>\$115,843</b>	<b>\$119,042</b>	<b>\$117,926</b>	<b>\$120,898</b>	<b>\$127,957</b>	<b>\$706,846</b>
<b>7.</b>	<b>Indirect Costs (IDC, 41% MTDC)</b>	<b>\$41,074</b>	<b>\$47,496</b>	<b>\$48,807</b>	<b>\$48,350</b>	<b>\$49,568</b>	<b>\$52,463</b>	<b>\$287,758</b>
<b>8.</b>	<b>Yearly total of DC + IDC</b>	<b>\$146,254</b>	<b>\$163,339</b>	<b>\$167,849</b>	<b>\$166,276</b>	<b>\$170,466</b>	<b>\$180,420</b>	<b>\$994,604</b>

## 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 list:

**Step 1:** Carefully read the General Conditions of this announcement.

**Step 2:** Complete and sign the Acknowledgment Form(s) of this announcement and mail or fax to: Florida Foundation Seed Producers, Inc., Attn: John W. Watson, By U.S. Mail: PO Box 110200, Gainesville, FL 32611-0200, By Express Courier: G022 McCarty Hall D, Gainesville, FL 32611-0200, Fax: (877) 839-9162

**Step 3:** After FFSP receives the Acknowledgment Form(s), you will receive a sample questionnaire which you may use to submit your proposal(s). If you are only interested in commenting, please indicate such on the Acknowledgment Form(s), and submit your comments upon returning the Acknowledgment Form(s) to FFSP. All proposals and comments must be received by FFSP (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 four (4) 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?**
- 4. What is good for world food security?**

**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 research agreement opportunity, please complete and sign this Acknowledgment Form and fax it to FFSP. FFSP will then send your company a sample questionnaire which may be used for submission of your proposal.**

**SUBMIT ACKNOWLEDGEMENT FORM AND COMMENTS TO:**

FLORIDA FOUNDATION SEED PRODUCERS, INC.

ATTN: John W. Watson

By Courier: G022 McCarty Hall D, Gainesville, FL 32611

By U.S. Mail: PO Box 110200, Gainesville, FL 32611-0200

Fax: (877) 839-9162

## Acknowledgment Form



### *INVITATION TO NEGOTIATE*

ITN NO.: ITN15-09	
ITN TITLE: Development of novel, low-chill blackberry cultivars	
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 General Conditions of this ITN and certify that I am authorized to sign this Acknowledgment Form and submit an ITN Proposal for the Proposer.*

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

\_\_\_\_\_  
NAME (TYPED), TITLE