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HarvestPlus Program
Agreement #2018H8506.BAU
May 15, 2018

HarvestPlus Program

Agreement Number: 2018H8506.BAU

This is a letter of agreement (the "Agreement") between the International Food Policy Research Institute ("IFPRI"), acting on behalf of the donors to the HarvestPlus Program - jointly led by IFPRI and Centro Internacional de Agricultura Tropical ("CIAT") - as an integral part of CGIAR Agriculture for Nutrition and Health (A4NH), and Bihar Agricultural University (BAU) (the "Collaborator"), for a grant in the amount of USD 50,000 (the "Grant") as provided by various donors to support the project - HarvestPlus Program (the "HarvestPlus Program"). IFPRI and the Collaborator are hereinafter referred to as "the parties."

I. Purpose of the Grant

The purpose of the Grant is to assist the Collaborator in financing the implementation of its research activities under the HarvestPlus Program.

II. Program of Work

IFPRI hereby agree to provide funding to support, and the Collaborator hereby agrees to perform the program of work set forth in the Statement of Work attached as Annex 1 (the "Project"). It is hereby agreed that the Principal Investigators for the Collaborator shall be **Dr. Suresh Prasad Singh (Rice) / Sudhir Kumar (Wheat) / Dr. Anil Kumar (Lentil)** for the term of the Project. The Collaborator must obtain prior written approval from IFPRI before using a different Principal Investigator. It is hereby agreed that the Project Manager for IFPRI shall be **Parminder Virk** or such other person as IFPRI may designate from time to time by giving written notice to the Collaborator.

III. Term

This Agreement ~~will be for five years starting from July 1, 2018.~~ It is understood that these dates are estimates and that IFPRI may, at their convenience and upon written notice to the Collaborator, postpone, shorten or extend these dates. The Collaborator must obtain written approval from IFPRI for any extension of the term of the Agreement.

Deleted: will
Deleted: begin on January 1, 2018 and continue until December 31, 2018

IV. Payment

The total payment to be made for work under this Agreement is **USD 50,000 for year 2018**, based on the budget indicated in the attached Annex 1, which will be met with funds drawn from HarvestPlus Program Account (104-06-02/ 306005.006.006). ~~The workplan will be discussed every year and budget will be allocated accordingly.~~ All payments shall be made in U.S. currency, upon receipt of invoices bearing the contract number and a brief description of work completed. It is hereby agreed that IFPRI will be the Administrative Center of this current Agreement and will be responsible for disbursing of funds. The Agreement is subject to the availability of Grant Contributions to be made by the donors.

Payments shall be made according to the schedule set forth below; provided, however, that IFPRI shall have the right to defer or withhold payment of any installment if the Project Manager determines that the Collaborator has not made satisfactory progress toward the accomplishment of the program of work described on Annex 1:

- USD 30,000- Upon receipt of signed Agreement.
- USD 16,000- Upon receipt and approval of Progress Report, including Financial Report showing expenditures of at least 50% of the initial payment;

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USD 4,000– Upon receipt and approval of Final Report, including Final Financial Report showing total expenditures.

V. Implementation

The Collaborator shall: (a) carry out the Project with due diligence and efficiency; (b) promptly provide the funds, facilities, services and other resources required for the Project; (c) furnish all information covering the Project and the use of the Grant proceeds as IFPRI, acting on behalf of donors to the HarvestPlus Program, may reasonably request; and (d) from time to time exchange views with IFPRI representatives on the progress and results of the Project.

Without limitation on the foregoing, the Collaborator shall prepare and furnish to IFPRI promptly upon completion of the Project a report, in form and substance satisfactory to IFPRI, on the results and outputs of the Project.

VI. Financial management, audits, and reporting

The Collaborator shall maintain a financial management system, including records and accounts, in accordance with generally accepted accounting practices, and for CGIAR centers, in accordance with CGIAR Financial Guideline Series No. 1 (Financial Management). In addition, the CGIAR center Collaborators shall prepare financial statements, which are in accordance with CGIAR Financial Guideline Series No. 2 (Accounting Policies and Reporting Practices Manual).

The Collaborator shall: (a) have the records, accounts and financial statements referred to above externally audited; (b) furnish to IFPRI, not later than three months after the year-end, a copy of its externally audited financial statements, together with the opinion of the external auditors on such statements. Such financial statements should indicate the receipt and use of Grant funds. Unless otherwise notified by IFPRI, the Collaborator's records and sub-recipient records that pertain to this agreement must be retained for a period of three years from the date of submission of the final expenditure report.

IFPRI or any of its authorized representatives, must have the right to access documents, papers or other records of the Collaborator, which are pertinent to the agreement, in order to make audits, examinations, excerpts, and transcripts. The right also includes timely and reasonable access, if applicable, to the Collaborator's personnel for the purpose of interview and discussion related to such documents. If any litigation, claim, negotiation, audit or other action involving the records has been started before the end of the 3-year period, the records shall be kept until all issues are resolved, or until the end of the regular 3-year period, whichever is later.

VII. Reports

In addition to the reports mentioned in Clause IV, the Collaborator shall submit the following reports to IFPRI on behalf of the donors, on the implementation of its work on the HarvestPlus Program:

1. Semi-annual Technical Reports- due no later than June 30 and December 31 of each year.
2. Semi-annual Financial Reports- due no later than 30 days following submission of aforementioned technical reports.

Guidelines for the preparation of reports are attached as Annex 2.

VIII. General Provisions

This Agreement includes the General Provisions attached as Annex 3, which is incorporated herein by reference.

Please confirm your agreement to the foregoing on behalf of the Collaborator by signing, dating, and returning to us the enclosed copy of this Agreement.

IN WITNESS WHEREOF, THE PARTIES HAVE SIGNED THIS AGREEMENT AS INDICATED BELOW. THIS AGREEMENT WILL NOT BE EFFECTIVE UNTIL DULY SIGNED.


FOR
COLLABORATING
ORGANIZATION:

Bihar Agricultural University (BAU)



Dr. Ajoy Kumar Singh
Vice - Chancellor

Date:


Director of Research
Bihar Agricultural University
Sahar Bhagalpur (BIHAR)
PN - 813210

FOR:

International Food Policy Research Institute (IFPRI)



Arun Baral

Chief Financial Officer
HarvestPlus Program

Date: June 20, 2018



German Gavino

Head, Contracts and Grants

Date: June 22, 2018

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Annex 1
Statement of Work
Work Plan and Budget Details

1. General Information		
1. Total Contract Cost: USD 50,000	Start Date: 1 Jan 2018	Duration: 12 months
1.1 Source of Funding: W3-BMGF		
1.2 Research Activity Title		
Title: Biofortification of Rice, Wheat and Lentil		
2. Institutional Review Board (IRB) and Ethical Committee for Care and Use of Animals in Research		
Institutional Review Board Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
IRB Approval Letters Submitted:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>Note: If applicable: IRB and EC approval letters should be submitted together with the workplan document.</i>		
3. Project Leader(Principal Investigator)		
Name: Dr. Suresh Prasad Singh (Rice) / Sudhir Kumar (Wheat) / Dr. Anil Kumar (Lentil)		
Street/Address: Dept. of Plant Breeding & Genetics Bihar Agricultural University, Sabour		City: Bhagalpur
State/Country: Bihar (India)		Zip Code:
Tel: +91 7903213610	Fax: 0641-2452604	Email: sps2007bau2011@gmail.com
Tel: +91 8092221922		Email: sudhir.hzb@gmail.com
Tel: +91 7903917822		Email: dranilbau@gmail.com
4. Participating Institutions		
4.1 Leading Institution		
Name: Bihar Agricultural University (BAU)		
Street/Address: Sabour		City: Bhagalpur
State/Country: Bihar (India)		Zip Code:
Tel: 0641-2452606	Fax : 0641-2452604	
Name of Signature Authority (will sign this contract): Dr. Ajoy Kumar Singh		
Position: Vice - Chancellor		Email: vcbausabour@gmail.com
Government Agency: (if any)		
5. Contributing Sub-Collaborators (if any sub-agreement is concluded)		
Name:		
Street/Address:		City:
State/ Country:		Zip Code:
Name of Signature Authority:		
Tel:	Fax:	E-mail:
Name of Contact Person:		
Tel:	Fax:	E-mail:

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Annex 1
Statement of Work
Work Plan and Budget Details

1. General Information		
1. Total Contract Cost: USD 50,000	Start Date: 1 Jan 2018	Duration: 12 months
1.1 Source of Funding: W3-BMGF		
1.2 Research Activity Title		
Title:	Biofortification of Rice, Wheat and Lentil	

2. Institutional Review Board (IRB) and Ethical Committee for Care and Use of Animals in Research		
Institutional Review Board Required:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
IRB Approval Letters Submitted:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
<i>Note: If applicable: IRB and EC approval letters should be submitted together with the workplan document.</i>		

3. Project Leader(Principal Investigator)		
Name: Dr. Suresh Prasad Singh (Rice) / Sudhir Kumar (Wheat) / Dr. Anil Kumar (Lentil)		
Street/Address: Dept. of Plant Breeding & Genetics Bihar Agricultural University, Sabour		City: Bhagalpur
State/Country: Bihar (India)		Zip Code:
Tel: +91 7903213610	Fax: 0641-2452604	Email: sps2007bau2011@gmail.com
Tel: +91 8092221922		Email: sudhir.hzb@gmail.com
Tel: +91 7903917822		Email: dranilbau@gmail.com

4. Participating Institutions		
4.1 Leading Institution		
Name: Bihar Agricultural University (BAU)		
Street/Address: Sabour		City: Bhagalpur
State/Country: Bihar (India)		Zip Code:
Tel: 0641-2452606	Fax : 0641-2452604	
Name of Signature Authority (will sign this contract): Dr. Ajoy Kumar Singh		
Position: Vice - Chancellor		Email: vcbausabour@gmail.com
Government Agency: (if any)		

5. Contributing Sub-Collaborators (if any sub-agreement is concluded)		
Name:		
Street/Address:		City:
State/ Country:		Zip Code:
Name of Signature Authority:		
Tel:	Fax:	E-mail:
Name of Contact Person:		
Tel:	Fax:	E-mail:

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6. Finance Officer (responsible for financial reporting)		
Name: A. K. Sinha	Position: Comptroller	
Street/Address: Bihar Agricultural University, Sabour	City: Bhagalpur	
State/Country: Bihar (India)	Zip Code:	
Tel: 0641- 2452608	Fax:	E-mail: comptrollerbausabourbhagalpur@gmail.com
Name of Contact Person: (if other than Finance Officer)		
Tel:	Fax:	E-mail:

II. Specific Information

I. Synopsis/Abstract of Research Activity and Expected Results

The project involves five major activities for rice. **Firstly**, screening and estimation of micronutrients (Zinc) will be taken up in improved germplasm and less adapted germplasm (Core germplasm at BAU). **Secondly**, validation or varification studies of high-Zinc trait in the adapted genotypes will be carried out. **Thirdly** crosses will be initiated utilizing high-Zinc donors in order to transfer enhanced zinc content from diverse sources into locally adapted and agronomically superior genotypes. **Fourthly** efforts will be made on development and selection of promising early, intermediate and final products with high-yield and high-micronutrients (Zn) followed by nomination to national breeding programs. **Fifthly** multi-environment testing will be conducted to identify stable and best genotypes with respect to yield and micronutrients across environments.

The expected outcome will be identification of promising genotypes combining higher yield and enhanced micronutrients. Further, new nutrient dense donors will be identified for utilization in the zinc breeding program. Superior nutritionally rich adapted genotypes will be found after validation. Various early, intermediate and final zinc/iron rich products will be generated. Stable and potential nutrient dense genotypes will be identified and evaluated in AICRIP trials for varietal release.

For Wheat and all the activities will be carried out in due course. However for lentil activities one, two and five will be initially carried out.

III. Schedule of Deliverables/Payments and Tasks

I. Schedule of Deliverables/ Payments

1.1 Schedule of Deliverables and Payments	Completion Date	Amount (USD)
- Upon acceptance of signed contract	Not Applicable (N/A)	30,000
- Semi-annual Technical Report and Financial Report (including financial report showing expenditures of at least 50% of the initial payment)	June 30, 2018	16,000
- Final Report (including financial report showing total expenditures)*	December 31, 2018	4,000
TOTAL:		50,000

*Financial reports are due no later than 30 days following submission of technical reports.

1.2 Schedule of Tasks

Tasks	Estimated Completion Date	Amount (USD)
Task 1: Germplasm Screening & Enabling Technologies	December 2018	12,000

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Task 2a: Validate Trait Expression in Adapted Genotypes	December 2018	12,000
Task 2c: Crosses and early product development	December 2018	6,000
Task 4: Performance in GxE Trials in target environments	December 2018	20,000
Task 5 : Providing office space to the IFPRI-Harvest Plus staff working under the program		For five years
Task 6 : Providing lab equipment for micronutrient analysis to BAU		
TOTAL:		50,000

2. Scope of Activities	
To reach the goals of the project the following tasks will be solved:	
2.1. Task 1 Germplasm Screening & Enabling Technologies	
Task description and main milestones	Participating Institutions
Milestones Rice 1 a. Screen a set of ≥ 100 rice accessions obtained from NBPGR/BAU for grain Zinc using X-ray Fluorescence spectrophotometer (XRF) at HP-MAL-Hyderabad. 1 b. Evaluate ≥ 10 donor genotypes provided by IRRI in at least one location for adaptability and Zinc concentration. Wheat 1 a. Screen a set of ≥ 100 wheat accessions obtained from NBPGR/BAU for grain Zinc using X-ray Fluorescence spectrophotometer (XRF) at HP-MAL-Hyderabad. Lentil 1 a. Screen a set of ≥ 50 lentil accessions obtained from NBPGR/ICARDA/BAU for grain Iron and Zinc using X-ray Fluorescence spectrophotometer (XRF) at HP-MAL-Hyderabad.	BAU, Sabour
Description of Deliverables	
Rice 1a. Accessions possessing high Zn, if any, identified 1b. ≥ 10 donor genotypes provided by IRRI evaluated in at least one location for adaptability and Zinc concentration. Wheat 1 a. A set of ≥ 100 wheat accessions obtained from NBPGR/BAU screened for grain Zinc using X-ray Fluorescence spectrophotometer (XRF) at HP-MAL-Hyderabad. Lentil 1 a. A set of ≥ 50 lentil accessions obtained from NBPGR/ICARDA screened for grain Iron and Zinc using X-ray Fluorescence spectrophotometer (XRF) at HP-MAL-Hyderabad.	
2.2. Task 2 Crop Improvement	

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Task description and main milestones

Participating Institutions

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<p>2a Validate Trait Expression in Adapted Genotypes Milestones</p> <p>Rice , Wheat and Lentil 2a.1 Evaluate ≥ 10 genotypes in replicated trials at ≥ 5 locations as HPYT and record field data 2 a.2 Harvest the genotypes from HPYT and analyze for micronutrients (Zn) using XRF</p> <p>2b Pre-breeding and Parent Building : No activity</p> <p>2c Crosses and Early Product Development :</p> <p>Rice and Wheat Hybridization work would be taken up involving the donors which are crossed to popular rice/wheat varieties. Further selection would be exercised in the segregating generations and superior cultures/varieties/genetic stock would be developed in due course with enhanced nutritional value.</p> <p>Milestones</p> <p>Rice and Wheat 2c.1 Attempt ≥ 25 single crosses involving high Zn donors and low Zn recipient varieties/elite lines. 2c.2 Testing of hybridity to identify true F1s/ hybrids & Evaluate ≥ 25 single crosses in the field</p> <p>2d Intermediate Product Development =(H +IP/BMGF activity 4.3) No Activity</p> <p>2e Final Product Development No Activity</p> <p>2f. Molecular marker development/gene mapping No activity. However it is ongoing in other research projects</p>	<p>BAU, Sabour</p>
<p>Description of Deliverables</p>	
<p>Rice , Wheat and Lentil</p> <p>2a.1 ≥ 10 genotypes in replicated trials at ≥ 5 locations evaluated as HPYT and field data recorded. 2 a.2 Zn concentration from 2a.1 estimated using XRF</p> <p>Rice and Wheat</p> <p>2c.1 ≥ 25 single crosses involving high Zn donors and low Zn recipient varieties/elite lines attempted. 2c.2 Hybridity F1s/ hybrids tested & ≥ 25 single crosses evaluated in the field.</p>	
<p>2.3. Task 3 Test Genotype x Environment Interactions</p>	
<p>Task description and main milestones</p>	<p>Participating Institutions</p>

3a Performance in G x E Trials in target environments

BAU, Sabour

Milestones

Rice

3.a.1 Evaluate HPAN 2018 trial constituted by IIRR with ≥ 10 promising genotypes along with checks and high zinc released varieties at 5 locations in *Kharif* season for yield and micronutrient levels.

3.a.2 Evaluate MET1 2018 trial constituted by IRR1 with ≥ 10 promising genotypes along with checks and high zinc released varieties at one location in *Kharif* season for yield and micronutrient levels.

3.a.2 Evaluate MET2 2018 trial constituted by IRR1 with ≥ 10 promising genotypes along with checks and high zinc released varieties at 5 locations in *Kharif* season for yield and micronutrient levels.

Wheat

Evaluate 9th HPYT trial constituted by CIMMYT/HarvestPlus with 50 promising genotypes (2 replications) along with checks at 5 locations in *Rabi* season for yield and micronutrient levels.

Evaluate 2018 HPST trial constituted by HarvestPlus with ≥ 10 promising genotypes along with checks at 5 locations in *Rabi* season for yield and micronutrient levels.

Lentil

Evaluate popular and released varieties recommended for Bihar in replicated trials at 5 locations in *Rabi* season for yield and micronutrient levels.

Description of Deliverables

Rice

3.a.1 HPAN 2018 trial constituted by IIRR with ≥ 10 promising genotypes along with checks and high zinc released varieties evaluated at 5 locations in *Kharif* season and data generated for yield and micronutrient levels.

3.a.2 MET1 2018 trial constituted by IRR1 with ≥ 10 promising genotypes along with checks and high zinc released varieties evaluated at one location in *Kharif* season and data generated for yield and micronutrient levels.

3.a.2 MET2 2018 trial constituted by IRR1 with ≥ 10 promising genotypes along with checks and high zinc released varieties evaluated at 5 locations in *Kharif* season and data generated for yield and micronutrient levels.

Wheat

9th HPYT trial constituted by CIMMYT/Harvest Plus with 50 promising genotypes (2 replications) along with checks evaluated at 5 locations in *Rabi* season for yield and micronutrient levels.

2018 HPST trial constituted by HarvestPlus with ≥ 10 promising genotypes along with checks evaluated at 5 locations in *Rabi* season for yield and micronutrient levels.

Lentil

Popular and released varieties recommended for Bihar in replicated trials evaluated at 5 locations in *Rabi* season for yield and micronutrient levels.

3. Role of Contributing Collaborators (if any)

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4. Technical Approach and Methodology (max. one page, if above \$150,000 instead attach detailed proposal)

Zinc quantification will be done using XRF technology. Hybridization between donors and elite genotypes would be undertaken followed by pedigree/bulk methods for handling the segregating generations. Multilocation testing of the germplasm will be done to estimate G x E and identify the best stable genotypes with enhanced Zinc content and quantification of micro nutrients would be studied in the project. Stable and potential nutrient dense genotypes will be identified and evaluated in All India Coordinated Trials for varietal release.

5a. Labor Cost Analysis - Rice

Name	No. of Staff	Title	Function in Project	Daily Rate (inclusive of fringe)	Total Days	Total USD
Junior Research Fellow (JRF)	1	M.Sc. with NET	Field work and molecular analysis and crossing, assisting in conducting field trials	21.02	240	5,046
Project Fellow	1	M.Sc.	Field/ lab work	9.17	240	2,202
Post Graduate Research Assistantship	1	Assistant	Assist with field trials	6.12	240	1,468
TOTAL						8,716

6a. Financial Items - Rice

TABLE 1

Category	Total Project Budget
Personnel	
1. Junior Research Fellow	5,046
2. Project Fellow	2,202
3. Post Graduate Research Assistantship	1,468
Subtotal-- Personnel-- Labor & Fringe	8,716
Collaborator Costs-CGIAR Ctrs	
1. CG Center 1	
Subtotal--Collaborator Costs- CGIAR Ctrs	-
Collaborator Costs- Other	
1. Non-CG Collaborator 1	
Subtotal-- Collaborator Costs-- Other	-
Supplies & Services	
A. Field/Operational Costs	
1. Field Costs	427
2. Field Labor	2,284
3. Laboratory Costs	750
4. Other Field Costs	-
B. Supplies, Materials, & Facilities	
1. Supplies & Materials (including non-capital equipment or equipment < USD1,000)	600

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2.	Research Support Services (Service Center Charges or Research & Technical Support)	100
3.	Other	-
C. Conferences, Workshops, & Meetings		
1.	Facilities	-
2.	Other Conferences, Workshops, & Meetings	-
D. Other Direct Costs		
1.	Communications/Postage	100
2.	Professional Services/Honoraria	-
3.	Other	-
Subtotal-- Supplies & Services		4,261
Operational Travel		
A. International		
1.	Transport/Airfare	-
2.	Hotels/Meals/Per Diem	-
B. Local (includes field travel)		
1.	Transport/Airfare	500
2.	Hotels/Meals/Per Diem	250
3.	Other Travel	-
Subtotal-- Operational Travel		750
Equipment		
Capital Equipment (Equipment equal or greater than USD1,000)		
1.	Gel Documentation system (with attached camera and computer for Gel scoring and image analysis for genotyping of high Zn segregants in Marker Aided Breeding programme)	9,000
Subtotal-- Equipment		9,000
Total-- Direct Costs		22,727
Overhead (10%)		2,273
Total-- Indirect Costs		2,273
Total-- Contract Costs		25,000

Remarks: Line-items of USD10,000 and above; and Capital Equipment of USD1,000 and above, should include a detailed description explaining the need/use of each sub-item.

5b. Labor Cost Analysis – Wheat

Name	No. of Staff	Title	Function in Project	Daily Rate (inclusive of fringe)	Total Days	Total USD
Junior Research Fellow (JRF)	1	M.Sc. with NET	Field work micronutrient/molecular analysis, crossing	21.02	240	5,046
Project Fellow	1	M.Sc.	Assisting in conducting field trials and data recording	9.17	240	2,202
TOTAL						7,248

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6b. Financial Items – Wheat

TABLE 1

	Category	Total Project Budget
Personnel		
1.	Junior Research Fellow (JRF)	5,046
2.	Project Fellow	2,202
	<i>Subtotal-- Personnel-- Labor & Fringe</i>	<i>7,248</i>
Collaborator Costs-CGIAR Ctrs		
1.	CG Center 1	-
	<i>Subtotal--Collaborator Costs- CGIAR Ctrs</i>	<i>-</i>
	Collaborator Costs- Other	
1.	Non-CG Collaborator 1	-
	<i>Subtotal-- Collaborator Costs-- Other</i>	<i>-</i>
Supplies & Services		
A. Field/Operational Costs		
1.	Field Costs	682
2.	Field Labor	2,000
3.	Laboratory Costs	1,000
4.	Other Field Costs	100
B. Supplies, Materials, & Facilities		
1.	Supplies & Materials (including non-capital equipment or equipment < USD1,000)	500
2.	Research Support Services (Service Center Charges or Research & Technical Support)	200
3.	Other	-
C. Conferences, Workshops, & Meetings		
1.	Facilities	-
2.	Other Conferences, Workshops, & Meetings	-
D. Other Direct Costs		
1.	Communications/Postage	200
2.	Professional Services/Honoraria	-
3.	Other	-
	<i>Subtotal-- Supplies & Services</i>	<i>4,682</i>
Operational Travel		
A. International		
1.	Transport/Airfare	-
2.	Hotels/Meals/Per Diem	-
B. Local (includes field travel)		
1.	Transport/Airfare	600
2.	Hotels/Meals/Per Diem	300
3.	Other Travel	-
	<i>Subtotal-- Operational Travel</i>	<i>900</i>

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Equipment		
Capital Equipment (Equipment equal or greater than USD1,000)		
1.	Gel electrophoresis system (with powerpack and UPS for molecular marker analysis)	5,352
Subtotal-- Equipment		5,352
Total-- Direct Costs		18,182
Overhead (10%)		1,818
Total-- Indirect Costs		1,818
Total-- Contract Costs		20,000

Remarks: Line-items of USD10,000 and above; and Capital Equipment of USD1,000 and above, should include a detailed description explaining the need/use of each sub-item.

5c. Labor Cost Analysis - Lentil

Name	No. of Staff	Title	Function in Project	Daily Rate (inclusive of fringe)	Total Days	Total USD
Dr. Anil Kumar	1	M.Sc. with NET	Field work and analysis		In Kind Support	
TOTAL						

6c. Financial Items - Lentil

TABLE 1

Category	Total Project Budget
Personnel	
1. Dr. Anil Kumar	In-Kind
Subtotal-- Personnel-- Labor & Fringe	-
Collaborator Costs-CGIAR Ctrs	
1. CG Center 1	-
Subtotal--Collaborator Costs- CGIAR Ctrs	-
Collaborator Costs- Other	
1. Non-CG Collaborator 1	-
Subtotal-- Collaborator Costs-- Other	-
Supplies & Services	
A. Field/Operational Costs	
1. Field Costs	545
2. Field Labor	2,000
3. Laboratory Costs	200
4. Other Field Costs	100
B. Supplies, Materials, & Facilities	
1. Supplies & Materials (including non-capital equipment or equipment < USD1,000)	500
2. Research Support Services (Service Center Charges or Research & Technical Support)	200
3. Other	-

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C.	Conferences, Workshops, & Meetings	-
1.	Facilities	-
2.	Other Conferences, Workshops, & Meetings	-
D.	Other Direct Costs	-
1.	Communications/Postage	100
2.	Professional Services/Honoraria	-
3.	Other	100
	Subtotal-- Supplies & Services	3,745
	Operational Travel	
A.	International	
1.	Transport/Airfare	
2.	Hotels/Meals/Per Diem	
B.	Local (includes field travel)	
1.	Transport/Airfare	500
2.	Hotels/Meals/Per Diem	300
3.	Other Travel	-
	Subtotal-- Operational Travel	800
	Equipment	
	Capital Equipment (Equipment equal or greater than USD1,000)	
1.	N/A	-
	Subtotal-- Equipment	-
	Total-- Direct Costs	4,545
	Overhead (10%)	455
	Total-- Indirect Costs	455
	Total-- Contract Costs	5,000

Remarks: Line-items of USD10,000 and above; and Capital Equipment of USD1,000 and above, should include a detailed description explaining the need/use of each sub-item.

7. Project Location and Equipment		
7.1	Institution	Location, Facilities and Equipment
	Bihar Agricultural University	1. Location – Bihar 2. Facilities – i. Well developed farm and laboratory facility ii. Economical human resource 3. Equipment – Well equipped MAB facility

-----/-----

Annex 2

GUIDELINES FOR SEMI-ANNUAL, PROGRESS AND FINAL REPORTS

Technical Reports: Semi-annual, Progress and Annual Reports should specify the progress, any actual or proposed deviations and modifications to the Work Plan, and the results obtained. The Reports should provide sufficient information to allow for assessment of the Project's progress.

A suggested format for Semi-annual, Progress, and Final Reports is as follows:

- I. Summary of Technical Progress (By task in the Work Plan)
- II. Milestones Completed
- III. Summary of Personnel Commitments
- IV. Major Equipment Acquired
- V. Description of Significant Travel
- VI. Current Technical Status (on schedule, behind schedule, ahead of schedule)
- VII. Delays, Problems, Suggestions

Technical reports should be submitted to the Project Manager (the HarvestPlus staff member in charge of project oversight).

Financial Reports: Financial Reports should be submitted according to Clause VII-Reports of the Main Agreement and to the Schedule of Deliverables and Payments table shown in Section III of Annex 1- Statement of Work. Financial Reports should be submitted and signed by the Principal Investigator (Project Leader) and the Finance Officer and should be aligned with source of funding (i.e. W1/W2, Various W3, Bilateral).

A Financial Report Template will be provided upon issuance of the contract and should be used when preparing the Financial Reports. This template includes three tabs: Financial Report, Equipment Report, and General Guidelines. Financial Reports should include a list of all Capital Equipment purchased as part of the agreement with a value of USD1,000 or more.

Financial Reports should be submitted electronically to the Project Manager (the HarvestPlus Project Manager in charge of project oversight) and the Budget and Contracts Team (HarvestPlusBudgetandContracts@cgiar.org). When submitting Financial Reports, the contract number should be indicated in the subject line.

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Annex 3
International Food Policy Research Institute (IFPRI)

GENERAL PROVISIONS

The following General Provisions are incorporated into the attached Agreement as though fully set forth therein.

1. Independent Contractor Status

(a) It is understood and agreed that Collaborator's relationship to IFPRI is that of an independent contractor and that neither this Agreement nor the performance of the Project provided for herein shall, for any purpose whatsoever or in any way or manner, create an employer-employee relationship between the parties. Collaborator shall not hold himself/herself/itself out as an employee of IFPRI. Collaborator will not be eligible for any benefits that are or may be granted by IFPRI to its employees, including, but not limited to, participation in any pension or profit sharing plans, unemployment insurance, life insurance, medical insurance, disability or other insurance, or fringe benefits of any kind.

(b) Collaborator shall have the right to control the manner and timing of the Project, subject to the provisions of this Agreement specifying the dates for delivery and payment.

(c) Collaborator shall assume and be responsible for any financial obligations which are required for performance of this Agreement, including but not limited to the employment of assistants, travel expenses, and any other related expenses (except as otherwise provided in Clause IV of the attached Agreement). Collaborator shall be responsible for hiring persons to assist in the performance of this Agreement, and such persons shall be and remain employees of Collaborator and not of IFPRI. Collaborator shall be solely liable for the payment of wages and benefits (including tax withholding) and for the supervision of such employees. Collaborator shall have no authority to hire employees on behalf of IFPRI, or to incur any expenses or other financial commitments on behalf of IFPRI.

(d) Payments made by IFPRI under this Agreement shall be made without withholding or other deductions for federal, state or local taxes except to the extent any such withholding or deduction may be required by law. Collaborator shall be responsible for any and all taxes owed with respect to said payments, and shall hold harmless and indemnify IFPRI for any and all liabilities that IFPRI might incur as a result of his/her/its failure to pay taxes upon said sums.

2. Confidentiality

For the purposes of this Agreement, "Confidential Information" is all information that is disclosed from one party to another in connection with the Project that is/was (i) disclosed in tangible form and marked "Confidential," "Proprietary" or the like; or (ii) disclosed in non-tangible form, identified as "Confidential" at the time of disclosure and summarized in tangible form marked "Confidential," "Proprietary" or the like within 30 days of the original disclosure by the disclosing party. During the term of this Agreement and for a period of five (5) years thereafter, each party shall treat all such Confidential Information with the same internal confidentiality procedures and with the same degree of care regarding its confidentiality as the party receiving the disclosure treats similar information of its own within its organization. Confidential Information does not include information that (i) is or later becomes available to the public through no fault of the receiving party; (ii) is obtained from a third party who had the legal right to disclose the information; (iii) as of the date of the disclosure, is already in the possession of the party to whom disclosure is made (and such prior possession can be properly demonstrated by the receiving party); (iv) is required to be disclosed by law, government regulation, rule, act or court order (but only to the extent so required); or (v) is independently

developed by a party (and such independent development can be properly demonstrated by the receiving party).

3. Intellectual Property

(a) Definitions

“HarvestPlus Program Intellectual Assets or Property” refers to any result or product of research and development activities of any nature whatsoever, whether or not they are protected by Intellectual Property Rights. This also means and includes all technical information, inventions, plant cultivars, plant varieties, developments, discoveries, concepts, software, manuscripts, know-how, methods, techniques, formulae, data, processes, logos, and other proprietary ideas, whether or not patentable or copyrightable, that are first conceived, discovered, developed, or reduced to practice by the Collaborator during the course of the Project.

“Intellectual Property Rights” means ownership rights (or applications for protection) of Intellectual Assets, whether registered or not, granted in any jurisdiction, including but not limited to, copyright and related rights, database rights, patents, industrial design rights, plant variety rights, trademarks and service marks, geographical indications, and trade secrets.

As used herein, “Developing Countries and Territories” refer to a country or territory listed in the “DAC (Development Assistance Committee) List of ODA (Official Development Assistance) Recipients– As at 1 January 2015,” a copy of which is available in Annex 4 and at www.oecd.org/dac/stats/daclist.htm. In general, Developing Countries and Territories are countries and territories with a low income average, a relatively undeveloped infrastructure and a poor human development index when compared to the global norm.

As used herein, “More Developed Countries and Territories” means all countries and territories not included in the list of Developing Countries and Territories as defined immediately above. In general, More Developed Countries and Territories are countries and territories with a modern infrastructure (both physical and institutional) and economic systems based on continuous, self-sustaining economic growth.

In addition to the provisions specifically set forth below, the parties shall work together in good faith to manage all intellectual assets in accordance with the CGIAR’s Principles on the Management of Intellectual Assets (the “CGIAR IA Principles”), and CGIAR’s Open Access and Data Management Policy (the “CGIAR OA Policy”), which can be found at: [[Data Principles](#)]. The CGIAR IA Principles and the CGIAR OA Policy (as each may be updated from time to time) are incorporated by reference into, and made a part of, this Agreement. At all times, the parties will be responsible for complying with the then-current versions of the CGIAR IA Principles and the CGIAR OA Policy. In the event of any conflict between the provisions of this Agreement and the provisions of the CGIAR IA Principles and/or the CGIAR OA Policy, the provisions of the CGIAR IA Principles and/or CGIAR OA Policy (as applicable) will govern, but solely with respect to such conflicting terms, and the specific intellectual assets relevant to such conflicting terms.

(b) Reporting of HarvestPlus Program Intellectual Property

Collaborator shall in a timely manner provide the Director of the HarvestPlus Program with a complete written disclosure of all HarvestPlus Program Intellectual Property.

(c) Ownership of HarvestPlus Program Intellectual Property

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Agreement #2018H8506.BAU
May 15, 2018

Unless a separate agreement by the parties specifies otherwise, ownership of the rights to the HarvestPlus Program Intellectual Property shall be owned by the Collaborators that developed it, subject to conditions specified herein. Any and all costs and fees associated with obtaining and maintaining any intellectual property protection for the HarvestPlus Program Intellectual Property, such as via patents or copyrights, shall be the sole responsibility of the Collaborator.

(d) Access and Licensing of HarvestPlus Program Intellectual Property

Regardless of the ownership of HarvestPlus Program Intellectual Property as specified under 3(c), Collaborator shall, and does hereby grant to IFPRI a royalty free, irrevocable, perpetual, worldwide, non-exclusive, transferable license to use the HarvestPlus Program Intellectual Property in any and all of its/their own programs; provided that such use is for non-commercial purposes and/or in a manner otherwise consistent with its/their mission.

In addition, Collaborator shall, and does hereby grant to IFPRI a royalty free, irrevocable, perpetual, worldwide, non-exclusive right to sublicense to: (i) its/their respective affiliates and donors, and (ii) any and all present and future collaborators of the HarvestPlus Program, the right to use the HarvestPlus Program Intellectual Property for any and all current and future projects of the HarvestPlus Program; provided that such use is for non-commercial purposes and/or in a manner consistent with its/their mission.

This Section 3(d) shall survive termination of this Agreement.

(e) Commercialization of HarvestPlus Program Intellectual Property

It is recognized by the Collaborator that the Project will generate predominantly international public goods, particularly for use in the Developing Countries and Territories. However, subject to the conditions herein, Collaborator shall have the right to commercialize the HarvestPlus Program Intellectual Property in one or more of the More Developed Countries and Territories, as defined above. If Collaborator seeks to commercialize the HarvestPlus Program Intellectual Property, then Collaborator must submit a written commercialization plan (the "Commercialization Plan") for each commercialization opportunity to the Director of the HarvestPlus Program for review.

The Director of the HarvestPlus Program shall have 90 days within which to provide Collaborator with instructions, if any, for amending the Commercialization Plan. Collaborator will consider the instructions and either revise the Commercialization Plan accordingly or enter into discussions with the Director of the HarvestPlus Program regarding reaching a compromise on revising the Commercialization Plan. Collaborator will then submit a Revised Commercialization Plan to the Director for further recommendations and/or approval. If no response is received from the Project Director within 90 days, then licensing/commercialization may proceed.

The HarvestPlus Program Advisory Committee ("PAC") shall retain authority to approve licensing/commercialization arrangements up to five years after a patent is granted to Collaborators. If HarvestPlus is terminated as a program within this five-year time frame, the PAC may assign authority to approve licensing/commercialization to an appropriate non-profit entity.

This Section 3(e) shall survive termination of this Agreement.

(f) Royalties

Collaborator shall pay four per cent (4%) of the gross receipts, realized from the commercialization of the HarvestPlus Program Intellectual Property in the More Developed Countries and Territories in

accordance with the commercial objectives of the Commercialization Plan. Such payment will be made on a yearly basis and shall be sent to the Project Manager payable to either IFPRI or CIAT, depending on the Project Manager's parent organization. This Section 3(f) shall survive termination of this Agreement. The royalty payments will be used to further the goals of the HarvestPlus Program.

(g) Respect of Third Party IP rights

Collaborator warrants respecting the intellectual property and proprietary rights of others, for any and all methods, materials and other goods which are used in conjunction with this Agreement.

4. Dissemination of Knowledge

Collaborator shall promptly make knowledge gained through the Project available to the broader scientific community. Such public disclosure may be temporarily delayed so that appropriate measures may be taken to protect intellectual property as required for commercialization of the HarvestPlus Program Intellectual Property in the More Developed Countries and Territories, as provided for in Section 3.

5. Legal and Regulatory Approvals

The Collaborator agrees that for each venue in which the Project is conducted (either by your organization or sub grantees or subcontractors) all legal and regulatory approvals necessary for the activities being conducted will be obtained in advance of commencing the regulated activity. Research involving recombinant DNA or any organism, substance or material considered to be a biohazard, the use, transport or release of modified insect vectors, genetically altered plants or other genetically modified organisms, or of substances or organisms classified as "select agents" by the U.S. government must adhere to internationally recognized best industry practices, as applicable and necessary to conduct all the activities and achieve the anticipated outcomes described in the proposal. All regulated activities must comply with or exceed applicable regulations in the country where activities are to be conducted.

6. Human and Animal Subjects

For activities involving clinical trials on human and animal subjects, the Collaborator agrees that the appropriate Institutional Review Boards ("IRBs") and ethical committees will review and approve the clinical protocols prior to trial initiation. The Collaborator agree to conduct clinical trials under the generally accepted principles of "Good Clinical Practices" as defined by the International Conference on Harmonization (ICH) E-6 Standard, the United States Food and Drug Administration (FDA) or the European Agency for the Evaluation of Medicinal Products (EMA), as applicable. The Collaborator specifically agrees that no funds will be expended to enroll human subjects until the necessary regulatory and ethical bodies' approvals are obtained. The Collaborator agrees to obtain the review and approval of the appropriate Institutional Biosafety Committee for research involving biohazards and recombinant DNA. The Collaborator agrees to provide prompt notice to IFPRI if the facts and circumstances regarding the approval status of the IRBs or ethical committees change.

In keeping with "Good Clinical Practice" standards, the Collaborator will disclose to subjects and the IRBs what care and/or referrals will be available through participation in the studies." Institutional policies regarding the level of care to be provided to any personnel who may be injured as a result of their work during the Project should be developed, approved, and implemented with notice to the Collaborator's employees.

7. Access to Research Data

(a) Research Data Definition

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Research Data is defined as the recorded factual material commonly accepted in the scientific community as necessary to validate research findings. It does not include preliminary analyses; drafts of scientific papers; plans for future research; peer reviews; communications with colleagues; physical objects (e.g., laboratory samples, audio or video tapes); or commercial information.

(b) Sharing Research Data

Organizations/Collaborators that receive HarvestPlus funds through agreements (or contracts) have the obligation to preserve research autonomy, safeguard suitable authorship, and ensure timely disclosure of their scientists' research results by presentations at scientific meetings and prompt effective access of research data by posting it in an appropriate databank.

8. Standard Citation

All publications, videos, or other information /media products funded or partially funded by HarvestPlus shall acknowledge the contribution made by HarvestPlus. The product(s) shall state that the views expressed by the author(s) do not necessarily reflect those of HarvestPlus.

Wording for acknowledgement:

"Financial support for this study was provided by HarvestPlus (www.HarvestPlus.org), a global alliance of agriculture and nutrition research institutions working to increase the micronutrient density of staple food crops through biofortification. The views expressed do not necessarily reflect those of HarvestPlus."

9. Use of IFPRI and the HarvestPlus Program names, trademarks and logos

Use of the IFPRI and the HarvestPlus Program names, trademarks, and logos by the Collaborator in any press release or publicity, requires prior written approval by the Director of the HarvestPlus Program and IFPRI.

10. Termination

(a) Termination by IFPRI for Cause

The failure of Collaborator to perform the program of work required hereunder in a timely and professional fashion, or otherwise to comply with the terms and conditions of this Agreement, shall be grounds for termination of this Agreement by IFPRI for cause. Upon such occurrence, IFPRI shall give Collaborator notice of intent to terminate, and Collaborator shall have thirty days to cure the defect in his/her/its performance. If Collaborator shall fail to do so, IFPRI may, by written notice, terminate the Agreement and recover from Collaborator any loss or damage suffered by IFPRI.

(b) Termination by IFPRI for Convenience

IFPRI may, at any time by written notice to the Collaborator, suspend or terminate this Agreement in whole or in part for its convenience. Upon receipt of such notice, Collaborator shall cease or reduce work according to the tenor of the notice and shall use his/her/its best efforts to mitigate consequential losses or any kind of liability to IFPRI. Collaborator may submit a claim for compensation and IFPRI shall pay to Collaborator such amounts as are fair and reasonable in respect of any costs incurred and unavoidable commitments reasonably and necessarily incurred by Collaborator, provided, however, that:

- (i) Collaborator shall not be entitled to compensation for loss of prospective profits;

(ii) IFPRI shall not be liable to pay any amount which, when added to the amounts payment under the Agreement, would exceed the total payment amount set forth in the Agreement; and

(iii) IFPRI shall not be liable to Collaborator for any amounts that Collaborator is entitled to recover from any insurance.

11. Dispute Resolution

All disputes arising between IFPRI and Collaborator, or relating to this Agreement, or the breach, termination or invalidity thereof, which cannot be resolved through direct negotiation, shall be settled by arbitration in the District of Columbia, by three arbitrators, in accordance with the International Arbitration Rules of the American Arbitration Association. IFPRI and Collaborator shall each appoint one arbitrator, and the two arbitrators so appointed shall appoint the third, who shall act as chairman. In lieu of the above procedure, the parties may agree to appoint a sole arbitrator. Judgment upon the award by the arbitrator(s) will be final and binding, and may be entered in any court having jurisdiction thereof.

12. Vehicles and Equipment

(a) Ownership and Insurance of Vehicles and Equipment

It is understood that all vehicles or equipment purchased with funds provided by IFPRI, whether procured by the Collaborator shall be regarded, at the time of delivery, as property belonging to the Collaborator receiving the equipment. In the event that it is the practice of the Collaborator receiving the equipment to insure its own vehicles or equipment, the Collaborator shall arrange to insure any vehicles or equipment purchased with funds provided by IFPRI.

(b) Use of Vehicles and Equipment Purchased by the HarvestPlus Program

The Collaborator shall insure that any vehicle and equipment purchased with grant funds shall be used exclusively for carrying out the objectives of the HarvestPlus Program and only made available to personnel working on the HarvestPlus Program for their official use. A suitable log book shall be maintained to record vehicle use, and IFPRI reserves the right to examine this travel log book.

(c) Sale Cession or Disposal of Vehicles and Equipment

During the course of the HarvestPlus Program, no vehicles or equipment purchased with funds provided by IFPRI shall be sold, ceded, or otherwise disposed of without the prior approval of IFPRI.

13. Indemnity

The Collaborator shall hold harmless and indemnify IFPRI and its employees from all claims, demands, costs, expenses, liability, and causes of action by third parties for death, personal injury, property damage, infringement of intellectual property, or any other cause of action arising out of or in connection with the Collaborator's performance under or as a result of this Agreement. In the event that the Collaborator learns of an actual or potential claim by a third party against IFPRI and/or the Collaborator in connection with this Agreement, the Collaborator shall promptly notify IFPRI in writing of such claim. IFPRI reserves the right to retain counsel of its choice, at the Collaborator's expense, to defend against any such claim. This indemnification clause shall survive termination of this Agreement.

14. Force Majeure

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If the performance by either party of any of its obligations under this Agreement (including a payment obligation) is delayed or prevented by circumstances beyond its reasonable control, that party will not be in breach of this Agreement because of that delay in performance. However, if the delay in performance is more than 3 months, the other party may terminate this Agreement with immediate effect by giving written notice to the other party.

15. Use of Funds

(a) The Collaborator shall exercise care in the administration of the Grant having due regard to economy and efficiency and the need to uphold the highest standards of integrity in the administration of Grant funds including the prevention of fraud and corruption.

(b) Collaborator agrees that in case the actual costs, including audited indirect cost rate, are lower than budgeted amount, only actual costs will be reimbursed.

(c) In the event that the Grant is not fully spent by the end of the term of the Agreement or used for purposes or in a manner other than as provided in the terms and conditions of this Agreement, the Collaborator shall promptly return the unspent funds to IFPRI without request or use such funds for such other purposes, as IFPRI shall have agreed.

(d) Investment of Grant funds. The Collaborator agrees that all yet- to- be spent or committed Grant funds which have been disbursed to the Collaborator must be invested in highly liquid investments (such as an interest- bearing bank account), with the primary objective of preserving principal so that they remain available for funding of activities under this Agreement, in the manner described in this Agreement. Any interest or other income generated by such Grant funds, including currency conversion gains, shall be (i) used only for the purposes described in this Agreement, or (ii) if not needed for such purposes, returned to the IFPRI. The Collaborator may freely exchange Grant funds into other currencies as may facilitate their use and disbursement. Any currency conversion losses that are incurred in implementation of the PROGRAM will be taken into account as a reasonable, allocable and allowable expense of the PROGRAM.

(e) MATERIAL CHANGES

e.1 Changes by the Collaborator. The Collaborator agrees to seek approval from IFPRI to make material revisions to the program, including for the following reasons: (i) to change the scope or the objectives of the program or to add any new material activity; (ii) to change any budget line item of the total Collaborator's budget under this PROGRAM by more than 10 percent; (iii) to request an increase in the total budget.

e.2 Changes by IFPRI. IFPRI reserves the right to modify the Annual Work Plan for the Collaborator, the Annual Budget(s) and the reporting schedule. The reasons for such modifications include, but are not limited to, additional funds being available to the Collaborator for activities conducted under this PROGRAM, and requests for additional reporting from funding agencies. Any such change shall be communicated to the Collaborator in a timely manner and shall be included in the relevant annexes and attachments to this Agreement.

(f) Procurement. The Collaborator agrees to carry out all procurement activities using best practices set with reference to internationally accepted practices. (e.g. Uniform Commercial Code; CGIAR Procurement of Goods, Works and Services Guidelines No.6). Procurement activities shall adhere to the highest professional, ethical, moral and legal standards. They must be conducted in a manner