



LETTER OF AGREEMENT
between
International Rice Research Institute (IRRI)
and
AVA Development Society

I. Project description

Project Title:	Alternative wetting and drying pilot study in Bangladesh
PLA ID:	C-2023-37
Agreement ID:	A-2022-74
Name and address of partner institution:	AVA Development Society Village: Gopalpur, Upazila: Lalpur, Nattore Bangladesh
Name of IRRI Scientist/Project Leader and contact details:	Dr. Humnath Bhandari Country Representative - Bangladesh & Senior Scientist II - Agricultural Economics International Rice Research Institute (IRRI) Email: h.bhandari@irri.org
Collaborating scientists/position title/contact details:	Md. Mesbahul Haque Program Coordinator AVA Development Society Email: mesbahulh@gmail.com
Project Activities:	The pilot study on Alternate Wetting and Drying (AWD) aims to test and develop the expertise with water-level data loggers and to analyze the contribution of these water loggers to establish a standard for other measurement approaches. AVA will support to the measurement of water-level depth at plot level and to measure the farmers and pump owner's attitude towards irrigation in Boro season. Using these automatic water logger devices in the field requires special attention to the most adequate set-up for our specific application and to contend with different logistical issues (e.g. including recruiting farmers), that need to be assessed before launching a full-scale experiment. AVA will perform following activities to execute our experiment:

1 Farmers selection

- a. Recruiting farmers that are willing to have the water loggers in their fields and scheduling a time for installation;
- b. Acquiring the U20 device and other supporting materials for the field deployment.

2 Stilling well installation

All the device needs their own stilling well. The stilling well setup is the same for the barometric pressure meter and the water logger.

- a. The stilling well installation can be done by driving the 2-inch slotted PVC pipe equipped with a pointed tip into the ground with a mallet in very soft soil or by previously digging a hole with the 2-inch bit size powered auger.
- b. The stilling well needs to have 60 cm belowground. A 40 cm of the PVC pipe should remain aboveground. The 2" PVC pipe will have a length of 100 cm.
- c. Attach the stilling well to the cement block. Insert the rebar on the other side the stilling well with the mallet and attach the stilling well the rebar so that the well is stabilized on both sides.

3 Barometric pressure meter installation

- a. The barometric pressure meter should first be installed in the field, prior to the water logger installation. The barometric pressure meter should be installed in its own stilling well.
- b. The location for this meter is in a shaded location, with a stable temperature, that is never flooded (needs to remain dry).
- c. No reference measurement is needed for this device.
- d. The configuration of the barometric pressure should be at the same logging interval than the water logger.

4 Water-level logger installation

- a. Once the stilling well is installed, the logger should be attached to the well cap using the Teflon stainless-steel cable, with a length of 80 cm, which include 5 cm at each end to attachm the sensor with the crimps, for an approximate length of 70 cm.

	b. Install the water-level logger before it starts logging (with the preset delayed logging time) c. Wait 20 minutes after the start of the logging time before collecting the reference measurement, for stabilizing the temperature of the instrument. d. Geo-reference the position of the water-level logger. 5 Collecting the reference measurement a. To capture this reference measurement, the use of a wooden dowel that you can use like an engine oil dipstick to measure the water depth. b. The length should be slightly less than the depth of the stilling well, and should have a stopper at the top that spans the top of the PVC stilling well. c. Put the dowel into the well until is stopped by the top of the well, and then pull it up and measure the distance from the stopper to the wetting line on the dowel. 6 Data retrieval: After the cropping season following steps should be followed for data retrieval from the water loggers: a. Remove the well cap and pull out the logger; b. Remove the black end cap from the device and connect the logger to the shuttle. c. Press the lever to offload the data – you will get a green light when the offload is done. The time of offload should be less than a minute 7 Field level data collection: Work protocol for the Partner (Data collection by Kobo collect)
Research Location (City and Country)	Rajshahi, Bangladesh
Commencement date:	01 April 2023
End date:	31 July 2023
Total budget:	BDT 507,100.00

II. Reporting Schedule

	Due Date	Report Type	Title of Report
1	16 July 2023	Technical	Perception of Farmers and pump drivers on AWD and non-AWD practices

2	31 July 2023	Financial	Expenditure according to cost category
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III. Payment Schedule

	Currency	Amount	Due Date
1	BDT	253,550.00	Upon signing of the letter of agreement
2	BDT	253,550.00	Upon submission of the technical and financial report

- 3.1 Funds shall be used exclusively for the purpose of implementing the project activity. Within thirty (30) days after completion of the activity, **AVA Development Society** shall return to IRRI any unutilized funds, which must be reflected in the financial statements. Financial report must follow the template as in the attached Annex 1 certified correct by the partner's authorized signatory for Finance. All Financial reports must be submitted via email to the following email address: subgrantreports@irri.org.
- 3.2 First payment shall be processed upon receipt of the signed LOA, subject to availability of funds. Subsequent releases, if any, will be subject also to availability of funds from the CGIAR System Organization, liquidation of at least 75% of the released funds, satisfactory delivery of agreed outputs/milestones, and satisfactory narrative and financial reports.
- 3.3 The partner institution shall not spend more than the amount of this agreement unless seconded by an amendment.

IV. General conditions

- 4.1 Results of the collaborative research will be jointly published in the public interest, to maximize impact. In case one of the Parties decides to protect valuable Foreground IP, the Parties will agree on suitable timeframe for publication.
- 4.2 The recipient shall keep all the documents and records related to this grant for the period of four (4) years after termination of the grant. IRRI or its duly authorized representative shall, within the project and aforesaid periods, have access to any of recipient's records related to this agreement to monitor and conduct evaluation of operations which may include: a visit by personnel or designee to observe recipient's structure and a review of financial and other records for the purpose of conducting audits.
- 4.3 The reporting requirements of the main donor **CGIAR System Organization** for the project supporting this subcontract, shall be deemed as incorporated in this LOA. IRRI and **AVA Development Society** shall coordinate and cooperate in gathering documents that may be required by the main donor in approving the costs associated with this LOA.

4.4 Intellectual Property Conditions

- i. All research materials used in the collaboration will be transferred using appropriate Material Transfer Agreements (hereinafter 'MTA') including SMTA¹ in line with CGIAR guidelines. Further, the transfer of biological materials, including breeding materials and germplasm, will be subject to pertinent stewardship, biosafety and bioprospecting laws, rules, and regulations. For incoming materials, IRRI may use such materials for non-commercial research and/or education purposes, and in this case, will give full credit to the source of the materials.
- ii. All Foreground IP, joint R&D results including data gathered in the course of, and as a result of, the implementation of the project such as, but not limited to reports, articles, research papers, data bases, tri-media presentations including joint R&D project outputs, joint R&D discoveries, joint R&D inventions and its digital copies (soft copies), shall be subject to the CGIAR Principles on the Management of Intellectual Assets ("CGIAR IA Principles")²:

Management of such IP shall also be in accordance with IRRI's Intellectual Property and Commercialization (IP&C) Policy.

- iii. The ownership of the intellectual property that existed prior to the commencement of this LOA ("Background IP"), held by one Party, shall remain the full property of that Party, and shall not be altered or transferred by virtue of this Agreement. This LOA does not confer any right on the use of the Background IP of either Party.
- iv. IRRI and **AVA Development Society**, agree that the results of the collaborative research and/or the Foreground IP can be used:
 - a. for non-commercial research and training conducted by IRRI and by 3rd party public research institute (hereinafter referred to as "Research Exemption"); or
 - b. for use in the event of a national or regional food security emergency limited to the duration of the emergency (hereinafter referred to as "Emergency Exemption"); or
 - c. for use in teaching activities by academic organizations (hereinafter referred to as "Teaching Exemption").
- v. Foreground IP generated in collaborative research shall be managed with the aim of reaching and achieving the greatest positive impact for the benefit of the rice farmers and rice food security
- vi. Each of the parties is free to use all data and information developed under this Agreement for the enhancement of their respective academic and research programs. Whenever applicable, the principal authors, researchers, and project leaders from both Parties shall be identified, recognized, and included in any publications arising from the joint R&D projects.

4.5 Confidentiality

- a. A receiving Party (hereinafter "Recipient") shall not disclose Material marked "Confidential" or "Proprietary" to any third party nor use such Confidential Information for any purpose other than that given without written permission from the other Party.

¹ <http://www.fao.org/3/a-bc083e.pdf>),

² <https://library.cgiar.org/bitstream/handle/10947/4486/CGIAR%20IA%20Principles.pdf?sequ%20ence=1>

- b. The Recipient shall use the same degree of care to protect Confidential Information received under this Agreement as it uses to protect its own information of a similar nature, but in any event not less than reasonable care under the circumstances.
- c. The Confidential Information shall be excluded from confidentiality if the Recipient can demonstrate that (a) it had possession of the information prior to disclosure; or (b) the information generally is available to the public at the time of disclosure, or becomes generally available, after disclosure, through no fault of Recipient; or (c) Recipient receives the information from a third party having the right to the information and who does not impose confidentiality.

4.6 Termination

Either Party may terminate this agreement unilaterally by giving notice of its intention to terminate at least thirty (30) days in advance of the intended effective date of termination. The **AVA Development Society** will refund to **IRRI** the grant funds if **AVA Development Society** terminates this agreement before it expires.

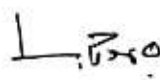
The parties have hereunto affixed their signatures on the dates indicated below to signify their conformity to the conditions set forth in this Letter of Agreement.

For the
International Rice Research Institute (IRRI)


Mr. Alvin Poncin
Chief of Staff & Head, Portfolio Development & Management Office

Date: 06 April 2023

For the
AVA Development Society


Mr. Md. Moklasur Rahman
Executive Director

Date: 09-04-2023

Bank information:

Payment for the account of:	AVA Development Society
Bank Account Number:	09712100020081
Currency:	BDT
Bank Name and Address:	Exim Bank Limited, Lalpur Branch, Lalpur, Natore, Bangladesh, code: 097
Swift Code:	EXBKBDDH