



## **Guidelines for Public-Private Sector Partnership in the Hybrid Rice Development Consortium (HRDC)**

(Effective: April 2, 2013)



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## **Rationale**

1. Hybrid rice is a key technology for closing yield gaps as well as raising the yield potential, and through that increasing the income of rice farmers as well as that of consumers who depend on buying rice as a staple food.
2. IRRI and its partners in the public and private sectors have led research, development, and use of hybrid rice in the tropics for more than 30 years. A new generation of rice hybrids is now becoming available that will allow farmers to significantly raise rice yields and thus overall rice productivity and profitability. Consistently high-yielding heterosis, good grain quality, tolerance and resistance to key abiotic and biotic stresses, and high yield of seed production are the key targets in both public and private sector hybrid rice research and development.
3. Seed companies in the private sector have a comparative advantage in product-oriented R&D, large-scale commercial production and marketing, an area in which IRRI has no direct involvement and National Agricultural Research and Extension Systems (NARES) are often comparatively weak. However, the public sector has a comparative advantage in many areas of basic hybrid rice research, development of breeding lines and traits specifically suited to the environments, providing information and in capacity building.
4. Closer public-private sector collaboration is required to enhance innovation and widen the access to new germplasm and information on all aspects of hybrid rice technology. The HRDC provides a new operational mechanism for such multi-sectoral collaboration.
5. The HRDC also provides a sustainable support mechanism for further enhancing IRRI's contributions to hybrid rice development. Major strengths of IRRI and contributions to the HRDC include:
  - Basic research on enhancing hybrid heterosis and improving hybrid seed production yields, including research on rice genetics and breeding, rice general management and production practices for specific inbred parents and hybrid combinations;
  - Basic research on the genetic control of key traits for hybrid rice by exploiting rice genome sequence information and advances in gene transformation and bioinformatics;
  - Developing new traits, parental lines, and hybrids with high yield and multiple disease and pest resistance through exploiting IRRI's large germplasm collection and inter-specific hybridization capabilities;
  - Potential capacity to lead the evaluation, registration, licensing, and promotion of value-adding biotech traits for hybrid rice, as well as to provide guidance on best practices for regulatory requirements for biotech traits;
  - Research on improving grain quality, including developing methods for grain quality testing at early stages of hybrid development that require small sample size and are nondestructive;

- Worldwide and regional research collaboration with many national partners, including experience through the International Network for Genetic Evaluation of Rice (INGER), in exchange of germplasm and processing of associated intellectual property, quarantine, biosafety requirements, exchange of scientists and information, and multi-location testing of new parents, hybrids, and breeding lines through various IRRI breeding networks and consortia;
- Soil and crop management research to realize the full yield potential of hybrid rice under both favorable and unfavorable conditions;
- In collaboration with research partners and the rice industry, providing information on hybrid rice technology and associated best management practices to farmers using information and communication technology and other means for technology dissemination;
- Training and capacity-building capabilities, including various training courses, the use of IRRI's Rice Knowledge Bank and e-learning courses;
- Monitoring and evaluating of the economic, social and environmental impact of hybrid rice technologies within and across countries; and
- Policy research to support national advocacy for further development and use of hybrid rice technology.

### **HRDC objectives**

The overarching goal of the HRDC is to make better hybrids more widely available to rice farmers and through this contribute to raising incomes, making rice production more efficient and sustainable, and keeping rice affordable for billions of people who depend on it as a staple food. Hosted by IRRI, the HRDC has three major objectives:

1. Support research on developing parental lines and hybrids for
  - Strengthening hybrid rice product development programs at IRRI and in other public and private sector partner organizations;
  - Enhancing yield heterosis in both dry and wet seasons by more than 20%;
  - Increasing and stabilizing yields of seed production;
  - Improving multiple resistance to abiotic and biotic stresses; and
  - Improving hybrid rice grain quality.
2. Provide better information on the performance of hybrids and develop best management practices through
  - Multi-location hybrid performance trials conducted in collaboration with public and private sector partners; and
  - Local research on hybrid rice seed production and best management practices for key hybrid rice mega-environments.
3. Support information sharing, public awareness and capacity building:

- Conduct assessments of key constraints to hybrid rice adoption and provide science-based information to policy makers;
- Evaluate the socioeconomic and environmental performance and impact of hybrid rice in different regions/countries/environments;
- Make information on hybrid rice more widely available and provide up-to-date content for printed and electronic media;
- Develop the next generation of hybrid rice specialists trained in research and business aspects through training courses, degree and non-degree education, with partners for public and private sector employees;
- Support shuttle scientist programs for among public and private sector scientists to strengthen collaboration among all stakeholders; and
- Support participation of scientists from developing countries in international conferences;

## Membership

- Any government or other public sector organization, non-profit or for-profit non-governmental organization, seed association, or private seed company with demonstrated activities in hybrid rice development or hybrid rice seed production can become a member of the HRDC (*Annex I*).
- In the HRDC, a general distinction is made between:
  - “**Public Sector**” members defined as any not-for-profit institutions that are primarily supported by public funds (e.g., government-funded national research institutions, public universities, international or regional research centers, professional organizations with no direct commercial activities, Civil Society and farmers’ organizations with no direct commercial activities etc.), and
  - “**Private Sector**” members defined as any not-for-profit or for-profit organizations or companies that have commercial activities related to rice R&D and/or selling of seeds and other products and services, including business entities under public organizations.
- The HRDC has **TWO** categories (A and B) for private sector membership and **ONE** category for public sector members. Financial contributions (hereafter referred to as grants) under the consortium structure will depend on the membership category an organization has chosen, based on principles of (i) being simple, fair and transparent, (ii) honoring the different public and private sector roles and interests, and, (iii) providing a sustainable level of support for the wider range of HRDC functions.
- HRDC membership categories and annual membership contributions:
  - a. **Private Sector Category A** membership is designed for private companies or other organizations who wish to provide a higher level of support to the HRDC and, in addition to participating in its activities, may also wish to utilize a wider range of early generation IRRI breeding lines in their own breeding programs.

Annual membership contribution: USD \$30,000

- b. **Private Sector Category B** membership can be chosen by private companies or other organizations who wish to provide support to the HRDC and participate in all its activities, but may have less need for early generation germplasm.

Annual membership contribution: USD \$10,000

- c. **Public Sector** members can join the HRDC under the HRDC Guidelines for collaboration and germplasm exchange between IRRI and the public sector, and participate all HRDC activities.

Annual membership contribution: Voluntary

- **Annex I** describes the procedure for becoming an HRDC member. Private members choose the membership category that best fits with their overall hybrid rice R&D strategy and generally agree to a minimum of membership duration of **five** years. All private sector membership contributions will be paid to IRRI as grants based on a Letter of Agreement.
- During the 5-year membership agreement, an upgrade from **Private Sector Category B** to **Private Sector Category A** is possible and acceptable, but not a downgrade from A to B.
- Members are encouraged to make additional voluntary contributions to the HRDC.

#### **Governance and use of HRDC funds**

- The Director General (DG) of IRRI appoints a HRDC coordinator who shall be a member of the full-time staff of IRRI, with an assistant to manage HRDC daily activities.
- The HRDC has an Advisory Committee (AC) composed of three private sector members, two public sector members, and two IRRI representatives. The members of the AC shall be elected or re-elected from HRDC members and appointed by the DG of IRRI for a term of three years and will meet once a year, preferably during the annual HRDC meeting. The HRDC Coordinator at IRRI will serve as ex-officio member and secretary to the AC. The functions of the Advisory Committee shall be as follows:
  1. Screen applications for membership and recommend acceptance of membership to the IRRI DG;
  2. Review the annual HRDC work plan, and regularly review and recommend changes of the HRDC Guidelines, including formulating improved operational policies for fulfilling the goals of the HRDC;
  3. Establish mechanisms to monitor and evaluate the operations and impact of the HRDC;
  4. Commission and review specific studies on hybrid rice adoption, constraints, and policies; and
  5. Issue media releases and other information for the public.
- The HRDC shall meet annually to
  - a. Review the most recent research results and discuss research priorities;
  - b. Provide the most recent information to its members on new plant genetic resources available or under development (traits, breeding lines, pilot hybrids), and crop management; and

- c. Recommend new HRDC activities related to hybrid rice research and training.
- All HRDC members should support their participation in the HRDC annual meeting at their own cost.
- IRRI in collaboration with HRDC members will propose the general research directions and prioritization for hybrid rice R&D. Any HRDC member is encouraged to contribute suggestions regarding HRDC research prioritization and activities, but is not allowed to place any restriction on the use of HRDC funds or interfere with the actual implementation of the research agenda.

### **Benefits for HRDC members and rice farmers**

- The HRDC will provide a sustainable funding mechanism for accelerating hybrid rice development work in those areas for which the public sector can contribute most. Accelerated research progress will be obtained by fully using IRRI's resources, resulting in a wider range of traits and parental lines available for public and private sectors. The HRDC will significantly enhance capacity for hybrid rice research and product delivery, while providing services and/or support to the private sector in its product development and delivery that will benefit the general public.
- Farmers will benefit from accelerated access to hybrid rice based technologies, quality seed, and, more and better hybrids, as well as knowledge, and services provided by the private and public sectors to increase farm income.
- Public and private sector HRDC members and non-members will have access to IRRI hybrid rice germplasm (*Annex 2*), including selection from early stages breeding nurseries to enhance members' breeding programs (*Annex 3*). Access to four classes of germplasm materials is differentiated by membership categories. Development and handling costs for these materials are recovered from annual membership fees, flat per-line charges, and in the form of non-exclusive or limited-exclusive licenses. Income from this will solely be used to support the whole range of HRDC activities, including IRRI's hybrid rice breeding and associated research, multi-location testing in collaboration with public and private sector partners, socioeconomic impact studies, and capacity building.
- Other IRRI germplasm materials that are not listed in *Annex 2* and that are not subject to specific restrictions on use will continue to be freely available to any individual or organization for research, breeding, or training for food and agriculture under the terms and conditions of a Standard Material Transfer Agreement (SMTA).
- The HRDC organizes a Multi-location Replicated Yield Trial (MRYT) to assist its members in assessing the performance of their products and to enable seed companies, particularly those without multinational testing capabilities, to generate reliable performance data across a set of test locations (*Annex 4*). Each member can contribute hybrids for testing, but the maximum number of entries varies by membership category.
- An annual report on new IRRI germplasm materials, performance data, and crop management research results will be released to the HRDC members in conjunction with the annual HRDC meeting. Other public sector members of the HRDC are encouraged to also contribute such information to the annual report.

- Attendance at the annual meeting of the HRDC enables early access to information on traits, parental lines, hybrid performance in different environments, crop statistics, and environmental characterization that is relevant for hybrid rice.
- Improved crop management practices for maximizing the advantages of hybrid rice will be developed and evaluated through cooperation with other IRRI programs and networks.
- The HRDC will publicize science-based information on hybrid rice technology, including better information for policymakers on defining national hybrid rice development strategies.
- Capacity building will be strengthened for both the public and private sectors.
- The HRDC will provide support to major events such as international or regional scientific workshops on hybrid rice.
- In addition to the general guidelines and benefits associated with being a member of the HRDC, members may also develop additional bilateral or multilateral research agreements with IRRI and its partners in specific areas of mutual interest for collaboration.
- NARES and other public sector organizations engaged in hybrid rice research and development will be among the primary beneficiaries of funds generated by the HRDC. Major benefits for NARES will include support for collaborative research in hybrid rice improvement and management, capacity building at all levels, and professional development of scientists involved in hybrid rice research.
- NARES and other public sector members have the right to submit their own germplasm for testing, licensing, and commercialization through the mechanisms established by the HRDC, and to gain all associated benefits. Any, development fees, or other charges paid by private sector members for the intellectual property provided by public sector members will accrue to the developer of the germplasm.

**Contact for further information and membership (<http://hrdc.irri.org>)**

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## **Annex 1: Become a HRDC Member**

Any public organization (*defined as a not-for-profit institution supported by public funds*) or nonprofit or for-profit nongovernmental organization, seed association, or private seed company with demonstrated activities in hybrid rice development or hybrid rice seed production can become a member of the HRDC.

1. An interested organization sends an inquiry to the HRDC/IRRI for membership information;
2. HRDC sends a copy of the HRDC Guidelines and membership information (*Annex 5*) sheet to the inquiring party for review and filling of the necessary information.
3. After receiving the membership application form from the inquiring party, HRDC sends it to the elected members of the HRDC Advisory Committee (AC) for assessment and recommendation;
4. AC Members are given a period of two (2) weeks to provide their opinions on the information received. Absence of opinion/objection on the part of the Advisory Committee will be an assumption of concurrence with the membership application.
5. After AC members' review/recommendation, the HRDC Coordinator will prepare a Letter of Agreement (LOA) between IRRI and the prospect Private or Public member, and send it to the applying organization for signature;
6. Two (2) signed copies of the LOA should be mailed by courier to IRRI within a period of four (4) weeks; otherwise the membership application will be stopped;
7. Upon receipt of the signed copies of the LOA, the IRRI Director General's office will approve the membership of the applicant to the HRDC.
8. The signed LOA will be sent by e-copy to the new member followed by one copy of the original document by courier or by mail. Another copy of the signed LOA will be kept by the HRDC;
9. For a private organization, an invoice with the necessary bank details will be mailed by IRRI's Finance Department to the new "Member" for payment of the annual HRDC membership fee.
10. Membership should be renewed at the beginning of each year. Membership payment to IRRI is due by **April 1** of each year or one (1) month after a new member's organization has received the signed LOA. Membership benefits will be suspended if the membership fee is overdue.
11. HRDC website log-in details will be assigned to the contact persons of the new member or to whom the new member prefers the log-in details to be assigned to.
12. The new member will be included in all communication pertaining to HRDC, matters concerning every member and their organizations.
13. New members will be entitled to the benefits of being an HRDC member as stated in the guidelines.
14. All incumbent members shall be informed of the recognition of the new HRDC member.



## Annex 2: Access to IRRI Hybrid Rice Germplasm Materials

### 1. The main principles governing the conditions of access include:

- 1) Provide wide non-exclusive or limited-exclusive access to germplasm under development and commercial rice hybrids to HRDC members to accelerate the development and dissemination of new products for farmers;
- 2) Take a demand-driven approach for hybrid rice research at IRRI and NARES to focus on products that the HRDC members want;
- 3) Recover R&D and handlings costs through a transparent mechanism that is consistent with the general business practice in seed industry and to establish improved, sustainable and sufficient support for international public hybrid rice research and capacity building;
- 4) Provides for protection of plant breeders' rights on the released hybrids and their parents based in the form of UPOV-style PVP, including the so-called "breeder's exemption" allowing use of the material for further breeding and research; and
- 5) Access for the purposes of further development will be subject to the SMTA with additional conditions as appropriate, whereas, noting that the SMTA article 6.1 prohibits direct commercial use of germplasm transferred with SMTA, access for the purposes of direct commercial use will be by license. Both instruments will be used where both are necessary.

### 2. Definitions

**"Breeding"** refers to the process of genetic enhancement, including making crosses, selecting the appropriate germplasm at each stage, making combinations between the hybrid parental lines, and conducting the trials and tests required to evaluate candidates.

**"Final development"** refers to all the steps that may or must be undertaken, without further genetic enhancement, with candidate parents and hybrids before they are **commercialized**. These may include final testing and evaluation, filing for and being granted PVP with associated Distinctness, Uniformity and Stability (DUS) testing, registering for commercial sale with associated Value for Cultivation or Use (VCU) testing, and the pre-commercial production of breeder, foundation, registered and certified seed.

**"Plant Genetic Resources for Food and Agriculture under Development"** (PGRFA under Development) has the meaning given in the SMTA. The term applies here to all breeding lines and candidate parents and hybrids up to the moment they are **commercialized**, throughout the process of **breeding** and **final development**.

**"Commercialize"** and **"Commercialization"** have the meaning given in the SMTA. The terms apply here to the sale of a hybrid or its parental lines for monetary consideration on the open market.

### 3. Hybrid rice germplasm available to HRDC members:

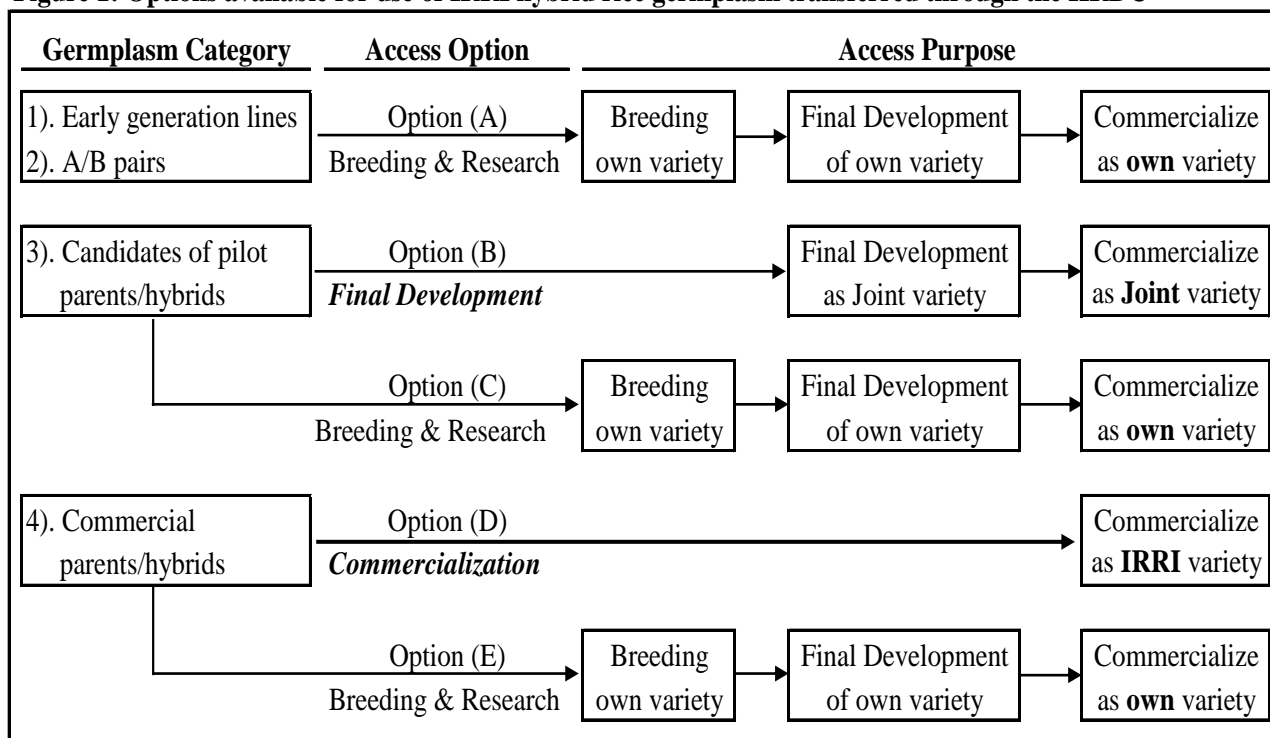
**FOUR** categories of hybrid rice germplasm materials, of which three require further development (research, breeding and testing), are available for HRDC members:

- 1) Early generation hybrid breeding lines: breeding lines from IRRI's hybrid rice breeding program, usually from F2 to F4 stages without testing for agronomic and quality traits. HRDC members are invited to select these breeding lines at IRRI once or twice a year, preferably in the dry season during the annual HRDC meeting (detail in *Annex 3*).

- 2) CMS A/B pairs under conversion: cytoplasmic male sterile lines in pairs at various backcross stages towards BC<sub>4</sub>.
- 3) IRRI designated elite hybrid rice parents and pilot hybrids: promising hybrid parents and pilot hybrids, named as per IRRI nomenclature, which have been fixed and characterized with basic agronomic, yield performance and grain quality information. They have generally been tested in various experimental trials and need no further genetic enhancement, but do need *final development* before they can be available for commercial sale.
- 4) Commercial parents and hybrids: parents and hybrids that are fully developed, having passed all required steps of *final development* and been released officially as commercial varieties.

The four categories of germplasm may be used to develop or commercialize hybrids as shown in Figure 1.

**Figure 1: Options available for use of IRRI hybrid rice germplasm transferred through the HRDC**



#### 4. Access to the Hybrid Rice Germplasm Materials:

Table 1 shows the general conditions for access to hybrid rice germplasm for each of the development pathways in Figure 1.

**Table 1. General conditions for access to hybrid rice germplasm materials**

<b>Germplasm Category</b>	<b>Access Option</b>	<b>General Conditions of Access</b>
1). Early generation and 2). A/B pairs	(A) Breeding & Research	<b>OMTA (+ fee if applicable)</b>
3). Elite hybrid rice parents and pilot hybrids	(B) Final development	<b>CMTA + fee (could include options for a commercial license)</b>
	(C) Breeding & Research	<b>OMTA</b>
4). Commercialized parents/hybrids	(D) Commercialization	Commercialization license with option for limited exclusivity
	(E) Breeding & Research	<b>OMTA or other non-restrictive breeding and research arrangement</b>

The condition details of access for each germplasm category are shown below:

1) Early generation hybrid rice breeding lines and 2) CMS A/B pairs under conversion:

The limitations on access and fees for access to the first two categories of germplasm are given in Table 2.

**Table 2. Conditions for access to 1) Early generation hybrid breeding lines and 2) CMS A/B pairs under conversion**

<b>Membership</b>	<b>1) Early generation</b>	<b>2) A/B pairs</b>
Private A	100 lines/year free. Excess lines \$100/line	\$1000/pair, max. 4 per year
Private B	50 lines/year free. Excess lines \$100/line	\$2000/pair, max. 2 per year
Public	50 lines/year free. Excess lines \$100/line	\$500/pair, max. 2 per year

3) IRRI designated elite hybrid rice parents and pilot hybrids:

The conditions for access to candidate parents and hybrids depends on the use the recipient will make of the material, namely option (B) or (C) in Figure 1.

**Access for *Final Development* (option B)**

Access will be by SMTA with development license including terms for subsequent commercialization. Because of the nature of the final development, necessarily not more than one development license per country can be operative at the same time for one candidate hybrid. Private members pay access fees (Table 3) for ***Final Development***. The access fees are paid annually for a maximum of **five** years until the parents/hybrids are commercialized. Once a product is commercialized, the access fee will be terminated. Public members pay no access fees for final development, but the final product will be considered as a jointly owned product with IRRI, and may thus also be licensed to any third party only with consent of the joint owners.

**Table 3. Access fees for elite parents and pilot hybrids used for *Final Development***

<b>Membership</b>	<b>Conditions</b>
Private A	\$20,000/year/female parent, \$5,000/year/male parent
Private B	\$30,000/year/female parent, \$7,500/year/male parent
Public member	Joint license agreement without access fees

Once *Final Development* is complete, the parents and hybrids are commercialized under license with license fees (see section 5).

#### **Access for further breeding and research (option C)**

The conditions for access to the category 3) germplasm if the materials are used for breeding and research are (1) by a SMTA; and (2) no access fee.

#### 4) Commercial parents and hybrids

##### **Access for commercialization (option D)**

For germplasm category 4) products, a non-exclusive or limited-exclusive license will be used for commercialization, limited to a defined country or group of countries. License fees are a percentage of gross hybrid seed sales (see section 5), chargeable while the hybrid remains protected. This option is not available in countries prohibited by a previous limited-exclusive license. The license to commercialize shall always incorporate the condition that if the licensee wishes to use the hybrid and/or its commercial parental lines for further breeding and research, that breeding and research shall be under an SMTA.

##### **Access for further breeding and research (option E)**

Category 4) germplasm will be subject to the “breeders’ exemption”. The material will be available to all HRDC members and non-members without restriction, pursuant to an SMTA with no additional conditions.

## **5. Licensing of commercial parental lines and hybrids (Table 4)**

### ***Option 1: Direct non-exclusive license from IRRI***

A non-exclusive license is directly signed through an agreement with IRRI (or as a joint license with another public or private partner if the hybrid is jointly developed) with development fee payment based on hybrid seed gross sales and differing according to the Private Membership category chosen.

### ***Option 2: Indirect non-exclusive license issued by a country partner***

A country partner (seed association, NGO, NARES or a private organization) signs a licensing agreement with IRRI to produce and market IRRI-bred hybrid rice parents to interested parties in a particular country. Any seed company in that country can then obtain these hybrids through local agreements with the IRRI country partner. The HRDC will largely follow the model used in India, in which Indian Foundation Seed & Services Association (IFSSA) acts as the country agent for licensing hybrids from public sector institutions and makes them available to multiple seed companies on a non-exclusive basis.

***Option 3: Limited-exclusive (by region, country or duration) license from IRRI***

Limited-exclusive license for particular parents and hybrids will be bided among those interested HRDC members for a specific country or a group of countries. No more than ONE license (hybrid) should be issued to an organization in the same year in one country and for more than three countries. Once a license is granted, it is not allowed to trade or re-sell IRRI hybrids and parental lines to a third party. For a hybrid licensed to a HRDC member, the hybrid can be changed into a company trade name with IRRI's permission, and IRRI will keep the pedigree confidential to other members, and not license the same parents/hybrids to another HRDC member in the licensed country/region.

**Table 4. License fee rates \* for IRRI-bred hybrid rice parents and hybrids directly licensed by IRRI to HRDC members**

<b>Product</b>	<b>Non-exclusive License</b>		<b>Limited Exclusive License</b>
	<b>Private A</b>	<b>Private B or Commercial Entity of Public Member</b>	
Hybrid using unmodified IRRI female line	1.30%	1.50%	2.50%
Hybrid using unmodified IRRI male line	0.30%	0.50%	1.00%

*\* Based on percentage of annual gross seed sales of that hybrid*

These guidelines have been written for compliance with the “breeder’s exemption” of UPOV and similar PVP systems; i.e. that when a variety is protected for commercial use, the breeder has no right to prevent others from using it for further breeding and research.

### **Annex 3: Selection for Early Generation Breeding Lines at IRRI**

To accelerate product development in public and private sector breeding programs and make IRRI germplasm earlier and more widely available, breeders from HRDC members are invited to select plants from early generation breeding lines (F2-F4 stages) generated in IRRI's hybrid rice breeding program.

Access to early stages breeding lines will only be granted to HRDC members, as per the rules described in Annex 2. Up to the defined limits, the development and handling fees for these selections are built into the annual membership fees. For selections in excess to those limits, additional charges apply:

- a. **Private Sector A:** 100 lines/year free, for any line in excess of 100, a fee of \$100/line is charged
- b. **Private Sector B:** 50 lines/year free, for any line in excess of 50, a fee of \$100/line is charged
- c. **Public Sector:** 50 lines/year free, for any line in excess of 50, a fee of \$100/line is charged

The following procedure applies:

1. The selection is conducted once or twice a year at Los Baños, Philippines, in the dry season coinciding with the annual HRDC meeting, or in the wet season if the materials are available;
2. The HRDC at IRRI will provide field tags to participating breeders. Participants will tag the plants they selected in the field;
3. Selection codes will be provided to participants. Codes are confidential to others. Only the HRDC coordinator can decode and identify who made the selection;
4. Participants are NOT allowed to harvest any plants or seeds themselves, no matter whether the plants/seeds are mature or not;
5. As a general rule, about 5 grams of seeds of the selected plant will be sent to the breeder who selected it. If one plant is to be selected by multiple members, the seeds harvested from that plant will be equally shared;
6. The members must submit a record (field book - how many plants selected in what plot #) back to the staff overseeing the field selections at IRRI;
7. A SMTA will be used for all materials transferred;
8. Seeds from the selected plants will be harvested by HRDC staff, and quarantined by IRRI's Seed Health Unit. They will be sent to participants following IRRI seed export protocols.

## **Annex 4: HRDC MRYT Procedures and Protocol**

IRRI-HRDC organizes a Multi-location Replicated Yield Trial (MRYT) of hybrid rice to assist the consortium members in assessing the performance of their products and to enable seed companies, particularly those without multinational testing capabilities, to generate reliable performance data across a set of test locations. The general rules and specific procedures to conduct the yield trial below were discussed and agreed during the HRDC meeting.

The HRDC at IRRI coordinates all activities of assembling seed of entries, including seed health/quarantine-related testing, constituting and dispatching trial sets and field books, receiving data (and monitoring to the extent possible), analyzing data, and sending reports to participating members. Test results will be made available to all HRDC members within four months after harvest, but without revealing the identity of test entries.

### **General Rules**

- Any HRDC member can participate in the yield trial, either by (a) providing testing site(s), (b) nominating own hybrids to be tested in the trials, or (c) both;
- Testing sites are voluntarily provided by members with at least three years of commitment to provide a stable testing environment;
- The HRDC coordinator selects the testing sites based on members' recommendations;
- In each year, the MRYT will be conducted for one or two seasons depending on the trial location;
- Each member may contribute hybrids for each testing season depending on its membership category:
  - Private Sector A: maximum 4 entries per season
  - Private Sector B: maximum 2 entries per season
  - Public Sector: maximum 1 entry per season
- All entries should be tested across all MRYT locations to enable consistent and effective trial management and data analysis.
- All movements of seeds between participants in the MRYT are accompanied by specific binding "MRYT Agreements" with the purposes of ensuring that (1) the materials are used only for the purpose of the servicing the needs of the joint MRYT, and (2) members' confidential information remains confidential.
- For some trial sites hosted by public sector members, the HRDC will sign agreements with host institutes to provide financial support to cover partial expenses related to the trials.

### **Procedures of the HRDC-MRYT**


- (i) In each year, an announcement for nomination of entries and trial sites will be sent to members for consideration and nomination 4 months before start of the MRYT.
- (ii) Members who are willing to provide voluntary testing sites can contact the HRDC at IRRI for becoming a **RECIPIENT** site;
- (iii) **RECIPIENT** of MRYT materials should sign the MRYT agreement.

- (iv) Members (**PROVIDER**) who wish to enter their hybrids for testing in the MRYT need to send their nominations to the HRDC and sign the agreement of MRYT agreement, and obtain the necessary documents from the Provider's country government agency for seed exportation;
- (v) Simultaneous with the dispatch of the MRYT agreement to MRYT participating members, the HRDC will send its application for Philippine Import Permits which will enable the members to send their MRYT seeds to IRRI. The application process takes 15 working days to complete.
- (vi) During the same time, MRYT participating members with approved volunteered sites should submit the application for import permits, which will enable IRRI to send the MRYT materials to the respective volunteered sites.
- (vii) Seed quarantine: All seeds/germplasm import and export at IRRI will follow the laws and regulations of seed quarantine in the Philippines. All operations related to seeds (receiving, inspecting, repacking and shipping) will be handled by IRRI's Seed Health Unit (SHU) with financial support from HRDC.
- (viii) Database of Germplasm Exchange: The HRDC will store all data collected from the MRYT in a confidentially managed local database which will only be accessible to members of the HRDC. The database includes the information of germplasm identity, movement of the seeds, agronomic traits, reaction to biotic stress, and performance of the germplasm. However, information on germplasm identity will only be made accessible to members participating in the MRYT for their own entries. Comparative performance data for other entries will only be reported on anonymous basis. General trial summaries without revealing the identity of individual entries will be made available to all members of the HRDC, including those not participated in the MRYT.
- (ix) Management of the MRYT: a general protocol will be provided to all members with volunteered sites.



**Annex 5**

**Hybrid Rice Development Consortium Membership Application Form**

<b>Organization Name:</b>			
Year of Membership			
<b>Membership Category</b> (please select one – copy  , paste to the selected box) )			
<input type="checkbox"/> <b>Private Category A</b> (USD \$30,000/year)	<input type="checkbox"/> <b>Private Category B</b> (USD \$10,000/year)	<input type="checkbox"/> <b>Public organization</b> (Voluntary Contribution, USD):	
<b>Primary Contact Person</b>			
Name:		Title:	
Address:			
Telephone:		Fax:	
email:			
<b>Secondary Contact Person</b>			
Name:		Title:	
Address:			
Telephone:		Fax:	
email:			
<b>Brief Self-Introduction of the Applicant’s Organization and Possible Contribution to the HRDC</b>			
<u>Advisory Committee comments:</u>			