



GRAIN  
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## IRRI Inc

### Consultative Group's rice research institute goes into business

The International Rice Research Institute (IRRI) has worked harder than any other institution, outside of China, to put hybrid rice<sup>1</sup> in Asia's paddy fields. For over twenty years now, the CGIAR<sup>2</sup> centre has bred parental lines, shared these with national agricultural research stations (NARS) and campaigned to the best of its ability to convince policy-makers of their importance. And now, after years of frustrating failures, hybrid rice is finally enjoying a mini-boom, with several countries in Asia now bankrolling their commercialisation and production and with the world's biggest seed companies, along with some emerging seed tigers in Asia, making big moves to take-over the market.<sup>3</sup>

The problem for IRRI though is that the boom is leaving them in the dust. Most of the deals happening in Asia are with Chinese corporations, utilising Chinese hybrid varieties. The few others are deals between the NARS and private companies, with the NARS collecting royalties on germplasm initially supplied by IRRI. To top it off, IRRI's own funding for hybrid rice has completely dried up, with no signs of any donors coming to the rescue; even long-time supporters like the Asian Development Bank are no longer interested in hybrid rice.<sup>4</sup>

Not wanting to close-up shop on its hybrid rice work, IRRI decided that something needed to be done to restore its central place in the hybrid rice world. One option, on the table for several years, was to take a more aggressive approach and start selling exclusive licenses to its hybrid parental lines. In other words, start acting like a regular seed business. ICRISAT, another CGIAR centre, had already gone in this direction-- creating a consortium of private sector companies that could bid for the rights to its hybrid lines for sorghum, pigeonpea and other crops.<sup>5</sup> But IRRI refused to follow.

"We will not give anybody exclusive rights to our seeds," IRRI's lead hybrid rice breeder SS Virmani told GRAIN in September 2004. "We want to keep them in the public domain."<sup>6</sup>

IRRI's now had a change of heart. On November 9, 2007, in the midst of the Asian Seed Congress, it announced the formation of its Hybrid Rice Research and Development Consortium.

IRRI's consortium is, for all intents and purposes, indistinguishable from ICRISAT's. It lays the foundation for a direct relationship between IRRI and private seed companies: IRRI supplies the

parent lines and corporations, who gain exclusive rights to the varieties, handle the marketing. Even though IRRI says that the "primary beneficiaries" of the funds raised by the consortium will be the national public programmes working on hybrid rice, the money flows entirely to IRRI, and it keeps control of the background information on the parental lines.<sup>7</sup> This way, IRRI cuts the NARS out of the royalty stream and ensures that it remains the central hub for the development of new parental lines (See box).

### **Details of the Hybrid Rice Research and Development Consortium<sup>8</sup>**

#### **Structure**

- Membership is open to the private sector, the public sector and NGOs.
- The private sector will pay membership fees; membership is free for the public sector
- Special rules for NGOs are being considered.
- The Consortium will be managed by an Advisory Council, with 3 members from the private sector, 3 members from the public sector and 2 members from IRRI.
- The council will finalise a terms of reference for how consortium funds will be spent. However, the three main components for the allocation of funds have already been established. They are, in order of importance:
  - IRRI hybrid rice plant breeding
  - Research to improve the agronomics of hybrid rice production
  - Scholarships for hybrid rice breeding training at IRRI

#### **Rules**

- Members bid for rights to evaluate the hybrid parental lines that IRRI makes available to the consortium.
- The winning bidder has a 2-year time limit to evaluate the hybrid and make a final decision on whether to license it.
- Rights are allocated according to countries and rights holders can only market in the countries for which they have purchased the rights.
- The rights holder gets exclusive rights to the varieties in the countries where the rights are purchased
- The background information of the hybrid parental lines remains with IRRI and is not disclosed to those purchasing the rights
- Those who purchase the rights are responsible for registering the varieties and taking out plant breeders rights in the corresponding countries if they so desire.
- One member cannot win rights to more than two hybrids in a given year.

IRRI justifies this major move into business by saying that it is the only way to salvage their work on hybrid rice. It believes that hybrid rice will be key to raising yields in the intensive, irrigated land areas and it argues that it is the only institution capable of carrying out the necessary research for the sub-tropical countries. The coordinator of the consortium, IRRI's Achim Dobermann, says they are "very concerned" by the promotion of Chinese hybrids in Asia's sub-tropics. He says that this germplasm was not developed for the region and, as a result, many of the hybrids will fail - "threatening the overall development of hybrid rice".<sup>9</sup>

To date, however, the evidence that IRRI's hybrid rice varieties increase yields is sketchy at best. Most evidence points in the other direction-- with embarrassing farmer drop-out rates from national hybrid rice programmes despite heavy subsidies.<sup>10</sup>

What hybrid rice has achieved, however, is the development of a private rice seed industry. From practically nothing a decade ago, corporations and their local partners are now investing millions of

dollars to get into the rice seed market, with nearly all of this money flowing into hybrid rice. In 2007, all of the top 5 global seed companies announced major moves in Asia's hybrid rice seed industry. The largest being Vilmorin's purchase of a 46.5% stake in Yuan Longping High-tech Agriculture—one of China's largest hybrid rice seed companies and a major player outside of China.<sup>11</sup>

It is not the performance of hybrid rice that attracts seed companies; it's that farmers can't save seeds from these varieties, thus guaranteeing the companies a captive market. With the Consortium, they can leave the difficult basic breeding to IRRI while still getting the exclusive rights to the major markets in the end. The next step will of course be to modify these lines with their patented GM traits—something not precluded by the terms of reference of the Consortium.

What about the obligation to the "public" that Virmani emphasised three years ago? The varieties that IRRI develops are based on the seeds that it holds, "in trust" for humanity, in its extensive seed collection. It bears repeating that these seeds were collected from farmers' fields. While it may be that the parental lines involved in the consortium have undergone considerable breeding by IRRI breeders, through the Consortium IRRI is still exercising monopoly privileges over the germplasm it holds and making money off of it—by selling off the exclusive rights to it. IRRI can talk all it wants about the public benefits, but this cannot gloss over the betrayal at the heart of this operation.

### Going further

- Visit the GRAIN web pages on hybrid rice where you will find a blog tracking developments in hybrid rice, a list of key on-line publications about hybrid rice and a table listing the companies investing in hybrid rice. See: <http://www.grain.org/hybridrice/>
- GRAIN, Biopiracy by another name? A critique of the FAO-CGIAR trusteeship system, *Seedling*, October 2002, <http://www.grain.org/seedling/?id=207>
- GRAIN, Jargon Buster - Trusteeship, <http://www.grain.org/jargon/?id=8>

### References

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<sup>1</sup> Hybrid rice is similar to hybrid maize and other hybrid crops, in that it utilises a controversial phenomenon called heterosis, which, among other things, prevents farmers from saving seeds from their harvests.

<sup>2</sup> Consultative Group on International Agriculture Research

<sup>3</sup> GRAIN, "Killing fields: The global push for hybrid rice continues," *Seedling*, October 2007: <http://www.grain.org/seedling/?id=510>

<sup>4</sup> Interview with Achim Dobermann, leader of IRRI's Sustaining Productivity in Intensive Rice-based Systems Programme, 14 November 2007.

<sup>5</sup> GRAIN, "ICRISAT leads the charge to the private sector," *Seedling*, July 2004: <http://www.grain.org/seedling/?id=296>

<sup>6</sup> Interview with SS Virmani, September 2004.

<sup>7</sup> New hybrid rice group aims to raise rice yields in the tropics," *The Hindu*, 10 November 2007: <http://www.hindu.com/thehindu/holnus/015200711101550.htm>

<sup>8</sup> Precisions were provided by Achim Dobermann (Interview with GRAIN, 14 November 2007).

<sup>9</sup> Interview with Dobermann.

<sup>10</sup> GRAIN, "Philippines: World Bank condemns hybrid rice programme," *Hybrid Rice Blog*, 28 August 2007: <http://www.grain.org/hybridrice/?lid=190>

<sup>11</sup> See GRAIN's regularly updated table on hybrid rice seed companies: <http://www.grain.org/hybridrice/?id=399>

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