

## The heirloom rice story: a healthy fusion of science, culture, and market

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Heirloom rice from the Philippines took center stage as celebrated chefs used them to transform local Filipino delicacies into delectable new treats at the [Madrid Fusion Manila](#) held last 24-26 April 2015. Chefs reacted positively on the product as they exclaimed, “What a delightful taste! It goes well with my paella, risotto, arroz valenciana.” “It melts in your mouth.” “It is crunchy and aromatic.” “I can create a gourmet sushi dish with black rice.”



*The IRRI-DA-PhilRice funded project participated in the Madrid Fusion Manila (MFM), held in SMX Convention Center in April 24-26, 2015 where Chefs Robby Goco (middle) of Green Pastures, Shangri-La and Jessie Sincioco (right) of Rockwell Club, Makati, and Ms. Amy Besa (left) of Purple Yam, Malate were paired with the IRRI team and provided them with heirloom rice varieties for the Food Tunnel event.*

Heirloom rice does bring a lot of creative possibilities to the palate; but more than that, it's an interesting product because it has fused or blended, in such an ingenious way, the strengths of culture, science, and a burgeoning niche market.

Heirloom rice is capturing public attention as it has never before. Thanks to the DA-IRRI-funded [Heirloom Rice Project](#) (HRP) titled, “Raising productivity and enriching the legacy of heirloom/traditional rice through empowering communities in unfavorable rice-based ecosystems.” Its slogan is aptly titled, “Capturing Value, Preserving Heritage.” The HRP, which started in February 2014, is funded by the Philippine government and took shape via the established partnership of IRRI and the [Cordillera Highlands Agricultural Resources Management Project](#), an [International Fund for Agricultural Development](#) (IFAD) investment project in the country. It was then under the technical innovation services (TIS) component of the Consortium for Unfavorable Rice Environments (CURE).

## **Understanding the science in heirloom**

The project embodies excellence in science in action. Biological scientists are working hard to characterize and establish the purity of the heirloom varieties. A systematic process of characterizing the varieties is being followed. The project undertakes collection and cataloguing of varieties from 17 project sites covering four provincial areas.

After panicle characterization of 41 varieties at IRRI, the variants (varieties of the same type having distinct traits) reached a total of 74. These indigenous materials or variants were returned to the Cordillera farmers to be grown onsite for further observation of traits, while closely supervised by HRP staff at different growth stages in a process called participatory heirloom rice trial (PHRT).

DNA analysis is used to provide some critical answers to the scientific experiments, such as how related or distant a particular variety is to another variety in a single location or how similar a particular variety found in one province is to that in other provinces.

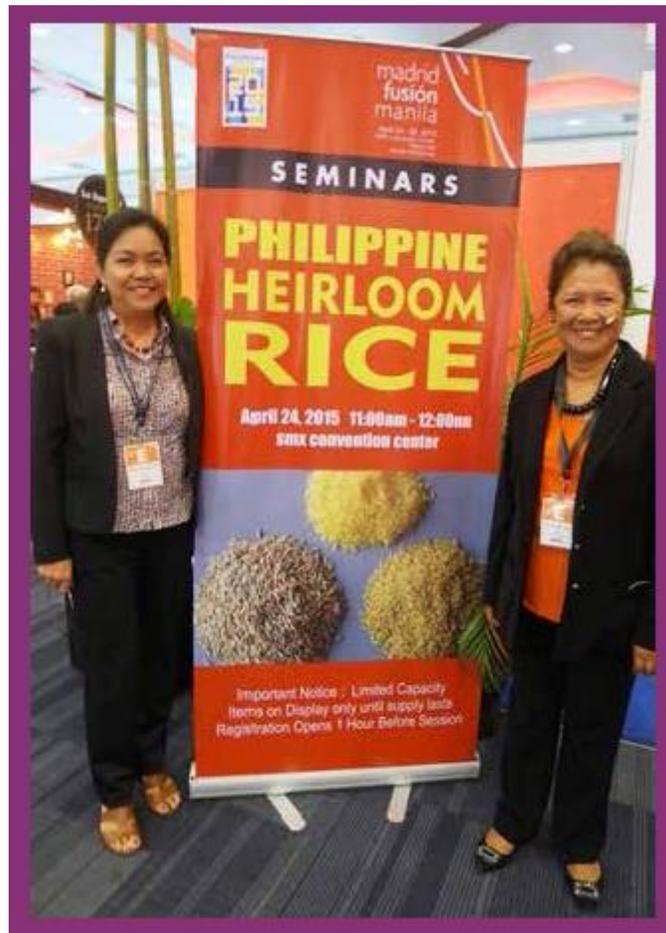
The project will put together the information about the varieties in a community registry, in a pioneering effort and partnership with the DA-Bureau of Plant Industry (BPI). This will protect the indigenous peoples’ (IPs) claim to their traditional varieties and will inform the public of variety ownership.

The project also investigates grain quality and nutrition. Scientists are exploring heirloom rice’s high nutritional values (Fe, Zn, and Mn contents) and antioxidant properties.

As farmers’ cultivation practices, culture, tradition, and aspirations are essential ingredients to the novelty that is the heirloom rice, HRP has likewise assessed the various activities along the heirloom rice value chain through a four province rapid value chain assessment. Participatory needs and opportunities assessment, profiling of self-help groups, gender analysis, and baseline studies have also provided useful

information on who are involved, and where, how and in what capacities are the varieties being grown.

The farmers' chosen heirloom rice varieties are geo-tagged. Site-specific analyses of biophysical and socioeconomic data guide project staff in coming up with appropriate interventions.



*The IRRI-DA-PhilRice funded project participated in the Madrid Fusion Manila (MFM), held in SMX Convention Center in April 24-26, 2015. The two project leaders, Dr. Casiana Vera Cruz (right) and Dr. Digna Manzanilla (left) gave lecture in the Seminars and Food Tastings event of the MFM.*

## **Preserving culture and tradition**

HRP works through collective action among many IP groups to preserve their culture and improve their food values. The project covers 11 self-help groups representing 682 heirloom rice farmers, 75% of whom are women. These farmers cultivate heirloom rice in the Cordilleran rice terraces, which have been included in the UNESCO world heritage site for preservation of cultural landscape and people-scape. The terraces and heirloom rice have become part of their heritage and everyday life.

Vicky Garcia, Director of Revitalized Indigenous Cordilleran Enterprises, Inc. (RICE, Inc.), considers the varieties as gems to the people of Cordillera. “The whole culture is built around them. Farmers have their own seeds, which they own like treasures, handed down from generations. These seeds are gems that go back to the farmers from harvests,” she says.

Amy Besa of Purple Yam Restaurant explains that losing the varieties equates to losing the terraces and, consequently, losing our pride and the reputation established by Filipino farmers. Farmer leaders Sally Donque, Ana Habilling, and Saturnina Wadingan emphasize how valuable the rice and the terraces are. They say that the terraces have to be revered in the same way as their families’ heritage is revered. With the project, they constantly look forward to having good, healthy seeds that translate to good harvest and income for their families.

## **A niche market for heirloom**

There is a niche market. The quality and nutritional benefits as well as the social, cultural, and environmental impacts have created a growing interest in heirloom rice internationally and, more recently, in domestic markets. Health buffs and gourmet cooks have started to pay attention to heirloom rice as an alternative menu in their meals. In fact, with renowned chefs finding distinctive tastes in these varieties that go well with traditional and gourmet dishes, the possibilities of expanding the niche market for heirloom rice are endless.

The farmers’ attachment to their heirloom rice is coupled with their enduring preference for traditional farming practices, which in many aspects is equivalent to organic farming. This poses much potential for heirloom rice to penetrate the steadily growing niche market for organic rice. HRP is working to facilitate the organic certification of its farmer-partners. Likewise, capitalizing on the environment-specific desirable qualities of heirloom rice, the project is also facilitating the protection of select heirloom rice varieties under the geographical identification (GI) protection system. The most important criteria for GI protection are the product’s history and reputation. HRP will be making the most of the site-specific, biophysical, and socioeconomic data collected in its research activities to establish these two important criteria for the Cordilleran heirloom rice, as well as for the construction of corresponding codes of practice. The GI can secure a product’s place in the market and serve as a branding strategy.

## **Strength in partnerships**

The project is conducting activities to build capacity and steer farmers toward good agricultural practices, market competitiveness, and organizational development. The Philippine Rice Research Institute (PhilRice) and the DA-ATI provide training through farmers’ fields schools (FFS) on pre-production, production, processing, and

postharvest. The Department of Agriculture Cordillera Administrative Region (DA-CAR) has been creating opportunities to improve product quality by providing the appropriate machines and equipment. Recently, the project has linked up with the Department of Science and Technology-Industrial Technology Development Institute for the skills needed for packaging, labeling, and prolonging of the shelf life of heirloom rice. HRP is also working with the Department of Trade and Industry-Intellectual Property Office in helping establish Cordilleran heirloom rice's definitive reputation for GI protection. The project's need-based approach led to tieups with local government units, most of whom are considered "local champions," and the state colleges and universities for the research and assessment activities. The non-government organizations (NGOs), RICE, Inc. and the farmers' organizations are partners as well. Finally, HRP is linking heirloom rice farmers to the market through consumer preference research and awareness campaigns. The project continues its partnership with chefs, restaurateurs, traders, NGOs, and other groups in the development of heirloom rice-based recipes and in product promotion. Such linkages reflect the project's value of inclusive partnership for local capacity enhancement of farmers and other stakeholders.

### **Science, culture, and market for a good cause**

The HRP aspires to address productivity and income problems of heirloom rice farmers through interventions that cut across stages of the value chain. It aims for the delivery of preferred heirloom rice varieties that were selected and characterized for food security, increased yield, and market demand; for a highland/upland smallholder heirloom rice enterprise that is linked to value chain; and, most importantly, for conservation of the biodiversity of rice varieties and preservation of cultural heritage in the rice terraces.

It is a good story to tell, a story whose core is to keep our indigenous peoples' traditions alive. Science fulfills its function so well in this endeavour—that of preserving diversity in culture, in people, and in rice that stood the test of time.

*\*The authors are scientists from International Rice Research Institute (IRRI).*

<http://cure.irri.org/cure-matters/theheirloomricestoryahealthyfusionofsciencecultureandmarket>