



# The problem solver

*After 26 years at Cornell University in the United States, Nyle C. Brady became the International Rice Research Institute's (IRRI's) third director general in 1973. During 8 years at the helm, he pioneered new cooperative relationships between the Institute and the national agricultural research systems in Asia. After IRRI, he served as senior assistant administrator for science and technology at the U.S. Agency for International Development from 1981 to 1989 and was also a senior international development consultant for the United Nations Development Programme (UNDP) and the World Bank in Washington, D.C. Born in Colorado in the U.S., he earned his BS in chemistry from Brigham Young University in 1941 and his PhD in soil science from North Carolina State University in 1947. Now an emeritus professor at Cornell, he is the co-author (with Ray R. Weil) of the classic textbook, The nature and properties of soils, now in its 14th edition. He and his wife Martha are retired and live near Albuquerque, New Mexico.*

## Coming to IRRI

**H**aving worked at the nearby University of the Philippines at Los Baños as a visiting Cornell professor, I knew of the area and the plans of Bob Chandler [IRRI's first director general] and his group to set up the Institute in the early 1960s. In 1972, Frosty [Forrest F., Ford Foundation vice president of overseas development] Hill, chairman of IRRI's Board of Trustees, asked me if I wanted the job of director general [DG]. I had been working at Cornell University as director of research in the College of Agriculture. I asked a few friends what they thought and they said that it would be a good thing. So, I decided to try it. Of course, I also had to get permission from my wife [Martha] and she was delighted to go back to the Philippines with me.

## Challenges and achievements

In those days, I thought the greatest challenge for IRRI was to influence, to the degree it could, quality research for our collaborators in

developing countries. IRRI had made great progress, but it did not always communicate well. [We needed to foster] international cooperation between IRRI scientists and those in the developing world's rice countries.

This also involved interdisciplinary collaboration to increase rice production around the world. When I arrived [at IRRI], there were four separate rice improvement research programs—i.e., in plant breeding, entomology, plant pathology, and agronomy. This was good because it was competitive, but I said, "Let's see what we can do if we can get together to develop a truly interdisciplinary collaborative research program." And we did, making full use of the thousands of genetic accessions [seed samples] in IRRI's germplasm bank.

Back then, the germplasm bank holdings were in paper bags! A fire could have destroyed everything. So, the first thing we had to do was to build [in 1976–77] a truly modern facility to store the seeds [see photo]. Second, we began evaluating those cultivars [housed

in the new Rice Genetic Resources Laboratory, which on 24 October 1981 would be named the N.C. Brady Laboratory] for their resistance to different insects and diseases and for their tolerance of acidic, saline, and toxic soils and drought. Every department was involved. The plant breeders' products were evaluated by the entomologists, the plant pathologists, the agronomists, and the social scientists in terms of what was useful to them and to the farmers whom they were representing. This is how the Genetic Evaluation and Utilization Program (GEU as it was known) came into existence. I think it really revolutionized, internally, our ability to provide the world with products that could be used in breeding programs elsewhere.

The GEU was basically a plant breeding and genetic improvement program that the whole Institute was concerned with. And as far as I was concerned, it was fantastic! When we first started working on [this concept], there were some in the group who were not exactly enthusiastic, at least in dealing with me on this. But

very soon, I began to listen to them as they gave speeches talking about this Institute-wide genetic evaluation and utilization program, which basically involved evaluation of rice lines the breeders had developed.

### Not the most popular DG

I wasn't always the most popular DG. You could ask anyone who stayed there for a while. Some thought maybe I was too demanding when I called them late at night for something. As a manager, I could have probably used more kid gloves. Sometimes, I was rather adamant on what I wanted done and, I guess, if I could do it again I'd be a little more gentle in my interactions with people and in working with them.

But what is of interest to me is that when I called upon scientists to go out of their way to do extra work or to take on an assignment over the weekend, I was never turned down. This was not because they were afraid of me, but because they loved their work and they loved IRRI. They were dedicated to the Institution and it was a great joy for me to see that happen.

### Challenges for IRRI today

I think IRRI needs to make effective use of biotechnology and other modern research tools to help the plant breeders develop rice lines that efficiently utilize plant nutrients, that tolerate adverse conditions such as drought, and that are resistant to insects and diseases, thereby reducing the need for pesticides.

To do this, IRRI must have linkages with scientists in both the developing and the more developed countries. This is advice the whole CGIAR [Consultative Group on International Agricultural Research] system [which includes IRRI] could accept. I recognize the political reasons why this is difficult because some countries don't want to use biotechnology. But the developing countries need the improved crops much more than we do in the U.S. So, I think this is the direction in which IRRI and other such centers should and could go.

IRRI must also continue to push

what it has been doing lately—more after I left than when I was there—to recognize the consequences of what we do to the environment in terms of pesticide use and fertilizer use, i.e., nitrogen getting into the water causing troubles later on. I think this is an opportunity for IRRI to develop high-yielding, quality rice in such a way that the soil, water, and atmosphere will not be adversely affected. It's a real challenge to know exactly how to do this, but I think it can be done. I'm not suggesting that the Institute is not doing it; it has already made remarkable progress.

### We were there to solve problems

My IRRI experience ranks very high. I had three careers: one at Cornell as a professor and a teacher, one at IRRI, and then one in Washington, D.C. with the U.S. Agency for International Development, UNDP, and The World Bank. I won't say which one was the more critical. I will say that my experience at IRRI, not only for me but for my wife and family, was a highlight because we were involved in something that would help humanity. I felt I was working with a group of individuals, men and women, who wanted to improve the lot of people. They were not there just to do research and write papers; they were there to solve problems.

I remember one time, I think, grassy stunt virus suddenly invaded

the Philippines. What did we do? Within a month, we had already evaluated and found certain lines that were resistant to the grassy stunt virus and our plant breeders were already crossing them to develop acceptable rice varieties. That kind of effort really is heartwarming.

### It's IRRI class

I'll tell one story that relates to not the scientists but to a member of the [non-research] staff at the Institute, a Filipino. The CGIAR was holding one of its annual meetings in Manila and the participants decided to visit IRRI on a Sunday. When checking to see that everything was prepared for the luncheon to be served to this group, I approached one young lady who was helping with the service.

"Well, do you think it is first class?" I asked.

"No sir," she said, "it's better than that. It's IRRI class."

This exchange told me that she had pride in IRRI and in being associated with the Institute, which I thought was just great. 🍌

Go to [www.irri.org/publications/today/Pioneer\\_Interviews.asp](http://www.irri.org/publications/today/Pioneer_Interviews.asp) to read the full transcript of the Nyle Brady interview in which he discusses more about his IRRI experience including the establishment of the International Network for the Genetic Evaluation of Rice (INGER) and IRRI in Africa.



ON 9 NOVEMBER 1976, IRRI Director General Nyle Brady ceremoniously sinks the first pile for the Rice Genetic Resources Laboratory, a structure that would officially (unbeknownst to him at the time) bear his name only a few years later.