Special Issue for IRRI's 40th Anniversary

Sandiwà

ONE HEART, ONE SPIRIT, ONE FAMILY

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A novel approach for agricultural research

As early as the 1930s, food shortages were already confronting Asian countries such as Burma, India, Indonesia, Pakistan, Philippines, and Thailand. Even though more land was used for food production, population growth kept increasing to offset it. This resulted in supply shortfalls. As farmers struggled to grow enough food, malnutrition became a serious problem in some regions. In the 1950s, food supply projections seemed glum in the face of growing populations, malnutrition, and limited available resources. To attain and sustain the human race's well-being, new applications of agricultural technology were being continuously explored.

Although science up to that time had helped somewhat, a breakthrough to significantly increase food production had yet to occur. It was at this point that the dilemma gained the attention of the Rockefeller Foundation's J. George Harrar and the Ford Foundation's Forrest F. Hill. Looking to alleviate global hunger, these two visionaries took the lead in proposing a novel research approach for the times. Since rice was—and still is—critical to the caloric intake of a large segment of the world's poor, particularly in Asia, it seemed appropriate to attempt making an impact in Asia first.

Hence, negotionations between the Rockefeller and Ford Foundations began in earnest to establish an international institute for rice research. Logically, it was decided that an Asian country should be the strategic location for a research institute that would tackle the challenge of increasing rice production with centralized laboratories, experimental plots, and a high-powered international team of experts. It was this vision that brought the International Rice Research Institute to life in the Philippines and the arrival of Dr. Robert F. Chandler, Jr., to start setting things up in 1959. ■

40 years of accomplishments and memories

In September 1959, Robert F. Chandler, Jr., up to then a Rockefeller Foundation official who shared the vision of Drs. Harrar and Hill, moved into the Manila Hotel with his wife Sunny to establish IRRI's first presence in the Philippines.

Staff members were gradually hired, each one having a significant role in building the institution, both literally and figuratively. The first to be hired by Dr. Chandler was Mel Calderon, who took charge of renovating the Trinity Building on San Luis Street in Manila for IRRI's first official office space.

IRRI's first secretary was Asuncion Nepomuceno. Dr Chandler hired Jose Drilon to be his administrative assistant. IRRI's first driver Teotimo Alorro, had the privilege to chauffeur dignitaries such as President Macapagal in IRRI's first vehicle, a 1959 Ford station wagon (photo below).

One of the first scientists to join IRRI in 1960 was Sterling Wortman, a plant breeder at the Pineapple Research Institute in Hawaii. Others who joined soon after included Robert Letort, chief financial officer, and Faustino Salacup, treasurer/secretary. Lloyd Johnson, hired as an agricultural engineer, was responsible for developing IRRI's experimental fields, buildings, and the new Institute's overall physical structure.

Architects and scientific staff were still being recruited while negotiations for the lease of the land at the then University of the Philippines College of Agriculture (UPCA), and preparations for the Memorandum of Understanding between IRRI and the Philippine Government continued. Finally, the members of the Board of Trustees were selected, meeting for the first time on 13 April 1960. The IRRI office on San Luis Street in Manila moved to Los Baños on 31 July 1961.

IRRI's formal dedication ceremony was held on 7 February 1962 with the unveiling of the bronze plaque in front of the pond. The event was led by John D. Rockefeller (at right in the photo below), Dr. Chandler, and the guest of honor, then Philippine President Diosdado Macapagal (center in photo below). At this time, IRRI had 11 scientists with three more about to join.

From the beginning, IRRI was courted and visited by numerous visitors, both

foreign and local. Some of IRRI's most prominent visitors were Prime Minister Hayato Ikeda of Japan; President Adolfo Lopez Mateos of Mexico (second from right in photo below); Princess (now Queen) Beatrix of The Netherlands (center in upper right photo); and U.S. President Lyndon B. Johnson (at right in lower right photo).

In the early days, IRRI became an entertainment center for the community by showing weekly movies in the auditorium of the future Chandler Hall. Movie buffs would walk along Pili Drive from all parts of the

university and beyond. Watching a movie at IRRI became a Wednesday night ritual. Movies of the time included *Light in the Piazza*, *Tea and Sympathy*, *Boys' Night Out*, *Love Star*, and the famous *Love is a Many Splendored Thing* (see Wednesday Movies, p.8).

As IRRI began to grow, more staff were hired through the years. Many were experts not only in their field of research but also in singing and dancing. Social gatherings served as a break from the hectic work schedule, and special talents were showcased during these occasions. Kompanyang Lakas Loob, better known as KOLL, was established in the 1970s by a group of staff members who had interests in the theatre. Dance groups, choirs, and cultural groups followed. With only more or less half the size of today's staff, IRRI managed a closely knit family atmosphere. The cafeteria, now known as Riceland Cuisine, was also considered the chat room during coffee

KOLL actors before curtain time bringing the theater close to home in 1985.

The Sideliners (from left) Rod Galang, Lolit Lanuang, Lito Cabral, Maria Olofsdotter, Ernie Sumague, Marissa, Hilos, and Noemi Fernandez let it all out as they do a medley of songs from the past during IRRI's 35th anniversary celebration in 1995.

In the early years, IRRI used its own talent for entertainment. Above, Ruby Castro and Ben Vergara do a dance number at a May 1963 party in the Service Building. Below, 33 years later, it appears they had not slowed down a bit.

breaks. It was a venue for informal discussions and meetings, where ideas regarding research and trivial topics and gossip alike were shared. In a more formal setup, staff would gather in weekly seminars. IRRI offered seminars not only on agriculture and rice but also on food and nutrition, sociology, statistics, psychology, and communications. A significant activity that IRRI began offering in 1967 was the International Rice Production Training Course, which continues to be popular event each year.

IRRI has grown and has surpassed the missions and goals it has set. As it celebrates its 40th anniversary, we look back and realize it has come a long way. In the dedication ceremony in 1962, there were only 250 attendees; today, there are almost 1,400 people who are sharing in the glory of IRRI's 40th year. Congratulations to IRRI! ■

Sports activities have always been popular with IRRI staff. In this 1996 photo, IRRI team coordinators receive the trophy for the overall champion award. From left: Mr. Lito Fabregas, IRRI Club Committee Chair; Mr. Nestor Fabellar, volleyball; Dr. To Phuc Tuong, Badminton; Dr. Paul S. Teng, IRS sports committee head; and Dr. Swapan K. Datta, lawn tennis.

Four decades of rice research

IRRI's mark during its first decade will always be known in history as the Green Revolution. It all started with the testing of a line designated as IR8-288-3. The original testing sites were at IRRI's experimental farms. The variety was compared with the best local varieties and promising selections from IRRI's breeding program. With positive results from the experimental stations, testing proceeded on private farms in India, Pakistan, Thailand, Malaysia, and parts of the Philippines. Results were consistently positive on all sites from the different countries. Even during the dry season, IR8-288-3 yielded 10 t/ha in India and the Philippines, while during the monsoon season, yield ranged from 5 to 9 t/ha in both countries.

IRRI produced more than 74 metric tons of the new variety in July 1966 and a seed distribution program was implemented for farmers all over the Philippines. Farmers who came to IRRI were given 2 kilograms of seeds. In return, they were asked to leave their addresses for proper monitoring of the planting. The seed distribution program was successful in introducing the new variety to farmers. More than 60 tons of the variety were planted in the Philippines. The variety was eventually named IR8 in 1966, but was more commonly known to the masses as the miracle rice. Due to wide distribution of the seeds, IRRI was awarded the Ramon Magsaysay Award for International Understanding in 1969 and then President Ferdinand Marcos gave the Institute a Certificate of Award for its contribution to the nation's rice program.

Research on new and improved varieties continued. IRRI explored other possibilities of developing other characteristics that would improve disease resistance and grain quality. There were also changes in the appearance of the experimental rice fields with the introduction of short and nonlodging lines.

Fertilizers and other chemicals were used to optimize the capacity of the varieties. An increase in yield was attributed to a threefold increase in fertilizer use.

Seed collection began during the early 1960s. Most came from the U.S. Department of Agriculture, FAO indica-japonica sites, Japan, and Taiwan. Fifty different characters were recorded and 500 g of each sample were included as part of IRRI's Genebank.

In 1970, IRRI shared the UNESCO Science Award with CIMMYT. During the 1970s, important new varieties IR36 and IR56, resistant to insects and diseases, were released. In 1975, IRRI discontinued its policy of naming and releasing varieties. Instead, it concentrated on its partnerships with national research systems, which would select, name, and release varieties.

Additional facilities were built in the 1970s: the Laboratory and Training Conference Center, the Phytotron (pictured below under construction), and the Genetic Resources Center, the world's largest, most modern facility for the conservation and utilization of rice genetic materials. IRS staff

housing underwent expansion in response to the increasing number of resident scientist from around the world.

IRRI intensified its interdisciplinary team approach to tackle the very complex problems of rice farmers. Research still identified diseases and insects as major constraints to rice yields, but cultural practices were also studied. Rice improvement efforts continued with IRRI's largest programs, the Genetic Evaluation and Utilization (GEU) Program and the International Rice Testing Program (IRTP). IRRI established collaboration with other rice-growing countries in developing methodologies to monitor problems in rice production. These networks included the Asian Cropping Systems Network (ACSN), the International Network on Soil Fertility and Fertilization for Rice (INSFFER), and the International Rice Agro-Economic Network (IRAEN). Machines more suited to small-scale rice farmers were developed through the efforts of the Farm Machinery Development Network. These machines were more adaptable and applicable to local situations and encouraged local manufacture, which brought employment and saved foreign exchange in developing countries.

In 1982, IRRI was awarded the first King Baudouin International Agricultural Research Award during the International Centers Week in Washington, D.C., for its continuing vitality and advances in breeding with the development of IR36. Also in 1982, IRRI received the Third World Prize for its outstanding contributions to the Third World.

IR36 became very popular in the 1980s among farmers in Southeast Asia. More than 10 million hectares of the variety were grown in 1982. IR52, named in 1980, was known to be "drought-tolerant and had all the other desirable characteristics of the modern IR varieties." Other drought-tolerant varieties that showed positive performance during the third decade were IR43, which yielded 4.6 t/ha, and IR5931-110-1, which yielded 3.0 t/ha, both in dryland fields. Research during this decade focused on nonirrigated fields and drought-prone areas. Farmers were successful in applying a multiple cropping system, a technology that allowed production of more than two crops in a single field without irrigation. This application brought positive results in terms of income of many Asian farmers.

Other achievements during the 1980s were improved tissue and cell culture techniques, which were useful in developing new varieties with salinity tolerance, disease and insect resistance, and other desirable characteristics. The germplasm collection identified new sources of tolerance for drought, flooding, low and high temperature, and adverse soil conditions. More efficient use of nitrogen fertilizers was identified as well.

IRRI continued to face the challenge of attaining food security for the growing global population that was dependent on rice. The increase in rice production in the 1990s was mostly from the irrigated land with improved varieties and suitable farming practices. Problems affecting rice production became more complex than ever. IRRI faced concerns other than variety improvement—e.g., weed control and efficient water use. Mechanical technologies were developed and are still being developed with the decline in agricultural labor and concerns about environmental degradation.

Biodiversity became a main focus, giving importance to the ecosystem to which rice belongs. Preserving biodiversity through minimal fertilizer and chemical pesticide use became part of the integrated pest management system. The International Rice Genebank currently has a collection of 90,000 samples of cultivated rice and wild species. In 1997 alone, 6,700 samples were received by IRRI from its national partners.

The cultural practices of rice farmers are being studied as part of the International Network for Genetic Evaluation of Rice (INGER). Social and cultural values are part and parcel of the scientific process of sharing and exchanging seeds. Women's roles in rice cultivation are slowly being recognized since they play a vital role in decision making.

More rice will be consumed by the growing population in Asia and elsewhere. IRRI will play its role in giving life to many who are dependent on rice. IRRI realizes that rice research must continue with new studies on improved varieties as it copes with the evolution in science and technology and limited resources. Thus, IRRI will continue its tradition of scientific excellence in the future as it did over the last 40 years. ■

Successful IRRC 2000 concludes

Nearly 200 leading scientists and researchers from around the world just concluded the 23rd International Rice Research Conference (IRRC 2000), 31 March-3 April. They discussed two of the most important issues facing Asia today—poverty and food security—and reviewed the latest developments in science and research. Above, during one of the conference poster sessions, CREMNET coordinator V. Balasubramanian (right) discusses progress in hybrid rice research with Dr. V. Krisnasamy of Tamil Nadu Agricultural University's Department of Seed Science and Technology.

Captains of the Ship

Dr. J. George Harrar
Co-founder

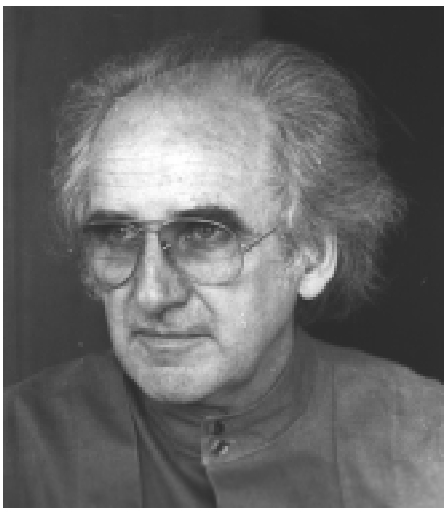
Dr. Forest F. Hill
Co-founder

Dr. Robert F. Chandler, Jr.
Co-founder and Director General, 1960-71

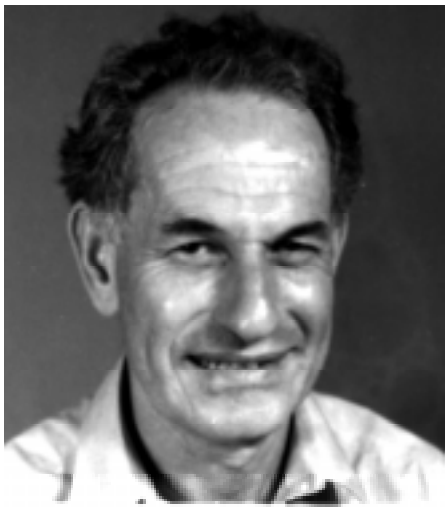
Dr. R.W. Cummings, Sr.
Director General, 1972

Dr. N.C. Brady
Director General, 1973-81

Dr. M.S. Swaminathan
Director General, 1982-88



Dr. K.L. Lampe
Director General, 1988-95



Dr. G.H.L. Rothschild
Director General, 1995-97

Dr. R.D. Havener
Interim Director General, 1998

Dr. R.P. Cantrell
Director General, 1998-

Summary of four decades of International recognition

- Ramon Magsaysay Award for International Understanding (Philippines,1969)
- UNESCO Science Award (1970)
- Third World Prize (China, 1982)
- King Baudouin International Agricultural Research Award (CGIAR, 1982)
- National Research Council Science and Technology Development Award (USAID,1987)
- Top NACTA Media Award (National Association of College Teachers, United States, 1989)
- Golden ARC Award (Agricultural Relations Council, United States, 1993)
- Friendship Order of the Vietnamese Government (1994)
- Recognition Award (Department of Agriculture, Philippines, 1994)
- New plant type: one of the five best environmental stories of the year (*Time* Magazine, 1994)
- Outstanding Professional Skill Award in Publishing (Agricultural Communicators in Education, United States, 1995, 1997, 1999)
- Asian Innovation Awards (Silver Recognition, *Far Eastern Economic Review*, 1998)

Reminiscing. . .

by Mila Ramos

- **Nostalgia.** Having been here longer than most employees, it occurred to me that it might amuse readers to learn how things were at IRRI before. When I came to IRRI, there were only about 200 employees, hence everyone knew everybody. The only buildings were Chandler Hall (then called Administration Building), where all the administrative offices were; F.F. Hill Building (then called the Laboratory Building because it had all the scientific laboratories); Harrar Hall (or the Men's Dorm), which housed the men's dorm, cafeteria, and and lounge; Drilon Hall (then the Ladies' Dorm); the service building; and a few greenhouses. Across from today's Riceland Cuisine was a spacious main lounge with a huge Manansala mural, a piano, upholstered sofas, and chess and billiard tables. Here employees and scholars entertained their guests, held parties, or simply whiled away the time in the evenings or on weekends. If one was staying in the dorm, it was very easy to go back to the office or to the lab to attend to unfinished work. The library, which was open up to ten o'clock in the evening, was located behind the auditorium, which was then surrounded by a pond with lush aquatic plants and gold fish or carp swimming around. Behind the library was a small garden with carpet grass, Plumeria trees, and some ornamentals.
- **Wednesday Movies.** Every Wednesday, scholars and employees and their families were treated to quality movies at the Chandler Auditorium for free. This privilege was also enjoyed by UPCA people, who were allotted a limited number of tickets every week. There was only one bus plying the UP Gate-IRRI route then. To go to IRRI, one had to hire a jeepney for a special trip at the rate of P5. It was very safe to walk along Pili Drive, even late at night. There were two vehicles that dormitory residents used in going to Grove after office hours: the blue electricians' van (without seats at the back) and the security guards' patrol car. The simple things that dormitory residents enjoyed at Grove were banana cue and "pancit guisado" at the Bamboo Grove or the Hongkong Restaurant (there were no fast food joints then).Traffic was not a problem then. In fact, employees who lived in "Bayan" could go home for lunch and return promptly at one o'clock.
- **Bus Service.** From Manila, one could reach IRRI in one and a half hours, or even less, using the old highway. An IRRI bus transported out-of-town employees to Manila every Friday and picked them up again at the Manila Hotel (where the IRRI Manila office was) every Sunday at a very reasonable rate.
- **Salaries.** Our salaries were distributed by an accountant and a security guard, who did not need to look at our IDs to identify us. Just a glimpse of our faces would enable Mang Ayong (the security guard) and Menong Temprosa (the cashier) to retrieve our pay envelopes. Every year, a salary incrase was given based on performance. People who had an excellent rating got a higher chunk of the salary increase budget. Hospitalization and medical and dental reimbursements were based on actual amounts paid. (There were no HMOs before and definitely no brokers.)
- **Dormitories.** Some employees were allowed to live in the dormitories for a very reasonable fee — (P90) for board and lodging whenever there were vacant spaces available. Scholars and employees were very close because of the many social activities on campus. In fact, a number of scholars ended up marrying some of our employees.
- **Christmas Parties.** The annual Christmas party was one event that everyone looked forward to. The children's party, which catered to the 3-9 age group, was held in the morning. There were kiddie rides, games, prizes, lots of food, and gifts. Almost all employees, especially the single ones, were involved in conducting the parlor games and distributing food and gifts. In the evening, there was a Christmas Dance party, where IRS and NRS danced till the wee hours of the morning. Music was provided by an orchestra from a neighboring city.

It is fun to look back and reminisce, but I need to stop because I could go on and on and use up all the space in this paper. I can only heave a sigh and reminisce. Those were the good old days. ■

Sandiwà

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