all about rice

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rice is life
INTERNATIONAL YEAR OF RICE 2004

All About Rice is a quarterly centering on current issues on rice. We hope this publication will enlighten our leaders in agriculture, education, extension and media, our policymakers and the general public. We believe that information and knowledge empower people to reason, decide, act and innovate, which make a dynamic and progressive rice industry.

We welcome comments and views on issues tackled in the articles, suggestions to improve the publication, and for ideas on topics to be covered in succeeding issues.

The Asia Rice Foundation is a regional nonprofit organization that works for an Asia that can feed itself, treasures the rich heritage of its rice cultures, cares about the well-being of both its rice consumers and producers, and values its rice-growing land as a precious commodity to be shared with future generations.

The Richness of Philippine Rice Fields

Marie Cddyqa Jaya G. Rogel

Summary

Rice fields produce rice, the cereal grain that feeds half the planet. But there is much more to rice fields than its use for growing rice. Rice fields are economically important as well as ecologically valuable. A wide range of plant and animal species exist in rice fields. Rice fields are one of the biggest ecosystems that can be found in the tropics. They accumulate large amounts of water, become a source of groundwater, and help keep our environment healthy by lowering temperature and reducing pollution.

Getting to Know Our Rice Fields

- **Rice fields have high animal biodiversity (*maya, tikling,* and many more*).***

The area of natural wetlands in the Philippines has declined, so have the wetland plant and animal populations. The rice field, one of the most common landscapes in the Philippines, is a man made ecosystem that serves as an alternative home to many wetland animals. Various birds thrive in rice fields. The most popular are the *maya, tagak, pipit, bato-bato,* and *tikling. Maya* and *pipit* feed on the rice plant, particularly rice grains, and on insects and small invertebrates that inhabit rice fields. Many birds migrate or stop over Philippine rice fields during the winter season in the north.

Aside from birds, the rice field is home to other vertebrates like rats, snakes, turtles, frogs, and fish. Edible frogs are usually found in irrigation canals. But alarmingly, many frog species have disappeared.

Ricefields also serve as ponds for growing *tilapia* and *hito* (catfish), and other freshwater fish. Many farmers grow fish in these areas. *Sawa* (phyton) is also found in the ricefield. A popular delicacy, *sawa* is a source of medicine and its skin is made into shoes and bags.

Large vertebrates feed on plants and invertebrates that are diversely living in rice fields. Large invertebrates found in rice paddies include snails, shrimps, leeches, and crickets. Some rice fields even have freshwater crabs.

Insects have the largest number of species present in the rice field. There are more than a thousand insect species found in Philippine rice fields. Some of the most familiar insects are the greenhorned caterpillars, mealybugs, rice bugs, spiders, planthoppers, and ants. Many insects are food for the larger animals, while some are used as medicine.

The plants and animals in rice fields are all linked together in what is known as a food chain. The plants serve as food for the insects, while larger animals like frogs and birds eat insects. Snakes eat the frogs, and man kills snakes for food or medicine. Man also eats birds and fish, which feed on algae.

The plants and animals in rice fields are all linked together in what is known as a **food chain** (Figure 1). The plants serve as food for the insects, while larger animals like frogs and birds eat insects. Snakes eat the frogs, and man kills snakes for food or medicine. Man also eats birds and fish, which feed on algae. Algae are the main sources of food for fish, and are abundant in the rice field.

- **Many different plants exist in rice fields**

Rice is the only cereal plant that can be grown in standing water. However, there are other aquatic plants and weeds that grow in rice fields that can be eaten or used as medicine. *Kangkong* (water spinach) and *gulasiman* (purslane) are some examples of other edible plants found in rice fields. Other plants present in rice fields have medicinal value, including *takip-kohol* (pennywort), *quiapo* (water lettuce), and *pulang-puet* (jungle rice). *Takip-kohol,* besides being edible, helps cure skin diseases, arthritis, hemorrhoids, and tuberculosis. This plant is said to cure cancer and leprosy. Perhaps there are many more untested aquatic plants with medicinal value.

The water lily and floating ferns look like ordinary plants, but are actually important roles in rice fields. Water hyacinths produce not only high biomass and increase soil organic matter but can also choke the growing rice plant. The plant is used for handicraft making and mushroom culture. The floating fern Azolla helps add nitrogen to the soil and functions as fertilizer.

Diverse microorganisms in rice fields thrive on water, the soil surface, and below the soil surface that is almost depleted of oxygen. These organisms are dynamic and change many aspects of the soil and organic matter. Medical drugs have been isolated from these microorganisms and further research may yield other important uses.

- **Rice fields help maintain a well-balanced environment.**

After a strong rainfall, additional water flows into rice fields - a great way of conserving water and soil. Water stored in rice fields enter aquifers, groundwater that is clean enough for human consumption. But because of the decline in the number and area of rice fields, water stored in aquifers is decreasing. Refilling of these aquifers is becoming slower and slower. Another problem is, converting rice fields into industrial parks and subdivisions has resulted in more pollutants making their way into rice fields. Heavy metals and other toxins carried by run-off water affect plants and animals. These heavy metals and toxins can seep into aquifers, thus polluting available groundwater.

Rice fields are very important because they are environmental buffers. They are a dynamic ecosystem that helps balance temperature and wind. They provide a moderating effect on the surroundings. One can feel the refreshing coolness of rice fields as opposed to the oppressive heat in the concrete jungle of the city. Rice plants produce oxygen during the day, and air moving in rice fields helps circulate the oxygen produced and hastens carbon dioxide exchange. Places with or near rice fields have cooler, fresher air compared with crowded and polluted locations where the air is hot and dirty.

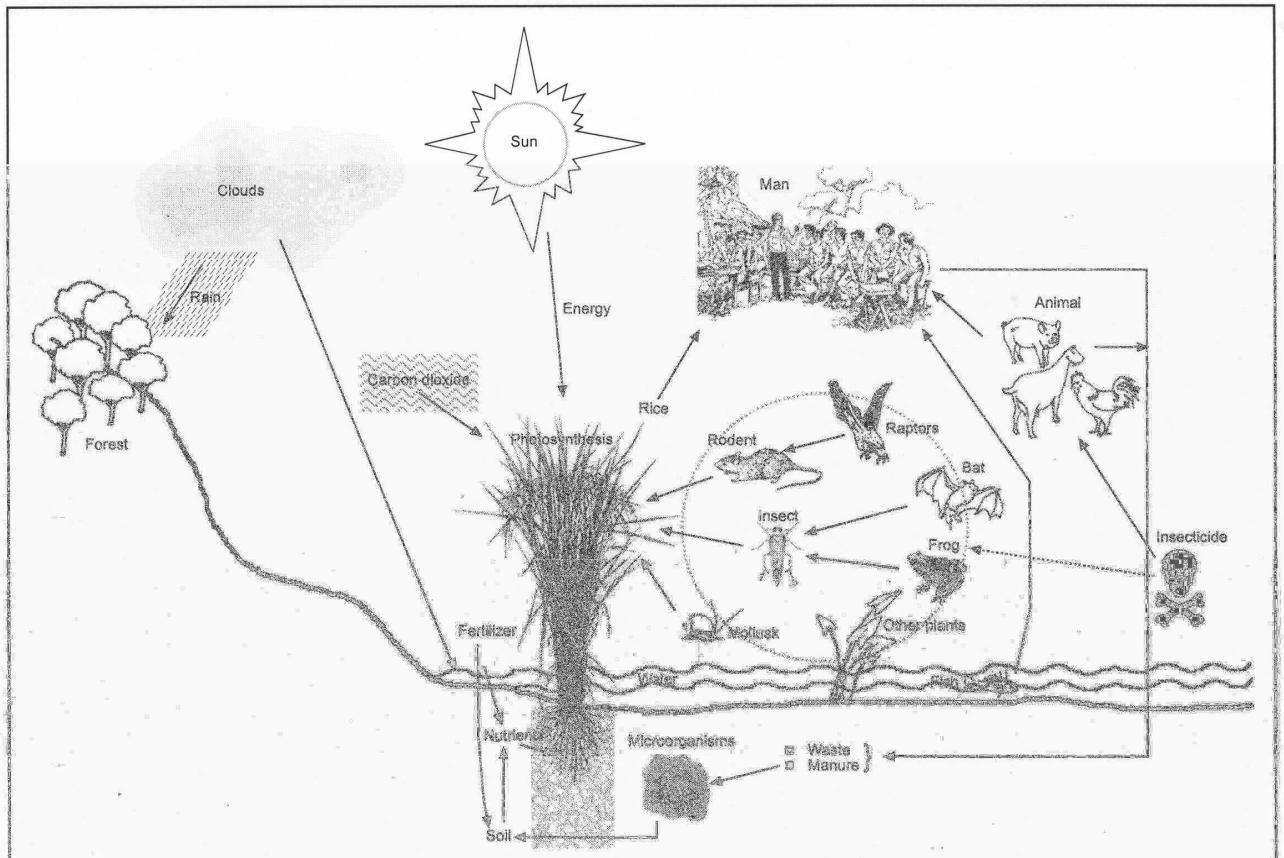

Figure 1. The rice wetland ecosystem

Conclusion

The physical and biological components of our environment are all interrelated. When one component is damaged, sooner or later the other components will also be affected—from the tiniest organism to the biggest of animals. Thus, the rice fields need to be given the attention they need and deserve. Many of our rice fields are converted to commercial lands that destroy many plant and animal habitats.

Our government should promote education about rice fields and their importance in our lives. All citizens should be made aware of their responsibility in maintaining our food and income source. Issues and problems about rice fields should be taught in schools. Students should understand what is happening to a vital ecosystem such as rice fields so that they could make a stand and help preserve an important part of our environment and economy. Instead of turning rice fields into real estates and subdivisions, we must improve, cultivate, and take care of them. Rice fields offer many benefits for all of us, like better rice and more food, and better environmental quality. Discover this diversity of plants and animals next time you are in a rice field.

Paper edited by Ms. Katherine Lopez and reviewed by Dr. Benito Vergara and Dr. Perry Ong.

A note to contributors

All About Rice encourages submissions dealing with timely, relevant, and exciting issues and new developments on rice. This paper will come out quarterly. Submissions should provide additional information that will help readers understand specific issues, mobilize public support, and increase appreciation for this staple food and important cultural icon.

Please include a brief statement of the objective/s of the article, a short description of the issue being highlighted, and a discussion of the important points. Limit each submission to approximately three to four pages of double-spaced, typewritten text. Illustrations and photos are encouraged.

Send manuscripts, correspondence, and comments or suggestions by mail or e-mail to:

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ARF News

Luneta Park Rice Garden

On 13 August 2004, four hundred elementary and secondary students from Torres, Mariano Marcos Memorial, Araullo High Schools and Lucban, Aurora Quezon Elementary Schools, all from National Capital Region (NCR)-Dept. of Education came to participate in the ceremonial rice harvesting at the Luneta Park Rice Garden.

The program included folk dances depicting rice production operations from planting to harvesting. Department of Education Undersecretary Dr. Fe Hidalgo, and Dr. Edith Burgos gave their inspirational messages. Special guests and selected students did the actual harvesting in the rice plots.

The Rice Garden is a joint project of PhilRice, Presidential Commission for the New Century and the Millenium, Bureau of Plant Industry, Luneta Parks Development Committee, and the Asia Rice Foundation. It is aimed to instill the importance of rice in the public's mind, especially the youth and city dwellers. It is also part of the legacy project of the International Year of Rice (IYR) 2004. It will be maintained year-round to accommodate students from NCR to visit and observe rice crops.

"Rice Is Life" Photo Contest
in celebration of the International Year of Rice 2004

The Asia Rice Foundation congratulates the winners of the **"**Rice Is Life" photo contest.

A total of 116 professional and amateur photographers from all over the Philippines and one each from Indonesia and the United States submitted their entries. ARF received 523 pictures, of which 31 prints were short listed for the final judging.

The panel of judges were Prof. Emmanuel Torres (Chair), curator of the Ateneo Art Gallery; columnist Jullie Yap Daza, photographer Mandy Navasero, graphic artist Ram Cabrera, documentary producer Kara Magsanoc-Alikpala, Galerie Astra owner Ed Soler, and Dr. Fernando A. Bernardo, ARF Working Group member.

The finalists were: Edwin Bacasmas, Manolo P. Barzabal, Renato L. Bondoc, Samuel P. de Leon, Tina Marie C. De Leon, Alexis dela Vega, Lorenzo Fernandez, Val Handumon, Jose Russell V. Herrera, Art R. Layno, Harley F. Palangchao, Glenn G. Peralta, Ceasar M. Perante, Patricio Roel A. Pira, Marie Therese J. Robles, Manuel P. Rosario, Noel Salcedo, Kym A. Sanchez, Bobby Timonera, James T. Trimanez and Cicero Peter S. Villanueva.

All 31 photographs were exhibited at Galerie Astra, 210 Nicanor Garcia St., Bel-Air II, Makati City from 11-26 September 2004.

The short listed photo entries will again be presented, together with the winning stamp designs, at another Rice is Life exhibit on 15-29 October 2004 at the Main Lobby, Manila Central Post Office Building, Liwasang Bonifacio, Manila.

During the launching of this exhibit, the photo contest winners will receive their prizes: Dave C. Leprozo, Jr., first prize (₱25,000.00), Today newspaper Northern Luzon correspondent for "Harvesting Rice in Sadanga, Mt. Province," Revoli S. Cortez, Philippine Star photographer, second prize (₱15,000.00) "Eating Time of Scavengers," and Reynaldo C. Mondez, third prize (₱10,000.00) "Magtanim ay Di Biro."

PhilRice, IRRI and NCCA Initiate Promotion of Outdoor Installation Art

In 2002, the Asia Rice Foundation and the National Commission for Culture and the Arts (NCCA) collaborated on a symposium on "Rice in the Seven Arts" that was aimed to intensify the link of rice to art and culture. This year, the proceedings is being published in an attractive volume.

Following this lead, PhilRice, IRRI, and NCCA initiated the promotion of outdoor installation art focusing on rice. Three artists from Los Baños who are pioneers in this new art form, Luis E. Yee, Alfredo Aquilizan and Mario Movillon gave illustrated presentations and demonstrations, and supervised the workshop on September 14, at IRRI and PhilRice grounds.

Seminar *cum* Exhibit on Brown Rice

Dr. Roger V. Cuyno of the Asia Rice Foundation and Mrs. Teresita Silo of Los Baños Nutrition Center, both members of ARF Brown Rice Working Group, each gave a talk on the nutritional value and business opportunities in brown rice at the Development Communication class of UPLB on October 1. The seminar *cum* exhibit was a class project of students taking up a course in communication campaign. About 30 mothers from the town of Los Baños attended the seminar.