

## THE ROLE OF RICE IN SOUTHEAST ASIA

By Eric Crystal and Peter Whittlesey



Planting Rice with a Smile, Laos, 2000. Photo by Peter Whittlesey

**T**his essay will explore the significance of rice in traditional Asian culture. Examples will be drawn primarily from Southeast Asia, a region of the world where the majority of the population continues to reside in agricultural villages. The pace of social change has accelerated markedly throughout Asia in recent decades. Urbanization has been increasing and off-farm employment opportunities have been expanding. The explosive growth of educational access, transportation networks, and communication facilities has transformed the lives of urban dweller and rural farmers alike. Despite the evident social, political, and economic changes in Asia in recent decades, the centrality of rice to daily life remains largely unchanged. In most farming villages rice is not only the principal staple, but is the focus of much labor and daily activity. In remote rural locales rice remains the focus of ceremonial as well as economic activity, recalling the earliest of Asian religious traditions.

Wherever it is grown, rice demands intensive labor and careful protection. Farmers not only live near their rice fields, at harvesttime they often reside in their rice fields, the better to protect the crop from marauding wild pigs, voracious seed-devouring birds, and even scavenging monkeys and gibbons, all of which have developed a taste for rice. Rice can be grown on high mountain slopes, in lowland valleys, on river deltas, and on narrow terraced plots. The cultivation of rice in Asia is closely tied to the development of civilization. Although it is true that important food plants were cultivated in the Pacific Rim before rice (millet on rain-fed fields, sago palm in coastal lowlands, and taro in irrigated fields), it was the domestication of rice that facilitated the growth of settled populations, the articulation of social classes, and the efflorescence of state systems.

It is thought that rice was first domesticated in northern Southeast Asia or southwestern China some 8,000 years ago. Oftentimes we forget that during the three-million-year term of modern man (*homo sapiens*), fewer than 12,000 years have been spent in settled communities. Only until relatively recent proto-historical times have most humans abandoned hunting and gathering in favor of settled farming. The agricultural revolution that transformed human societies from bands of wide-ranging animal hunters and vegetable gatherers into settled peasants is thought to have occurred in just a few places on earth. Wheat was domesticated in Mesopotamia, corn was domesticated in Central America, and rice was domesticated in Asia.

When the ancestors of the present day Polynesian inhabitants of Hawaii, Tahiti, and Samoa set out on their voyages of Pacific exploration, they took with them coconuts and taro plants, very early cultigens grown by the very earliest farmers in tropical Asia. Some 7,500 years ago when these voyages began, rice was not yet commonly cultivated. The earliest plants cultivated into crops grown in Asia include sago palm, taro, and millet—all of which preceded rice as staples in the early Neolithic period. Rice is thought to have been domesticated from wild grains gathered in swampy areas. Even today some varieties of rice are known to be able to send roots down into twelve feet of fresh water. Irrigated rice padis, in many ways a man-made imitation of the swamp origin of rice, are the most productive of any grain field.

Rice grown in this way possesses an advantage over any other staple food crop. Irrigated rice fields may be planted again and again over centuries of time. Because nutrient-laden irrigation water is annually reintroduced into the field, because the stubble from the



Sam Neua Rice Planting, Laos, 2004. Photo by Peter Whittlesey

rice straw is often chopped up to serve as mulch in the field, and because some animal waste is oftentimes applied as fertilizer, the fields remain fertile and productive indefinitely. Other cultigens tend to exhaust the soil, demanding crop rotation so that fields can be rested and restored to productivity. Only rice may be planted in lowland irrigated fields again and again without appreciable loss of fertility. In traditional times, villagers enhanced the nutrient base of annual flood waters with chopped rice straw and animal waste. In recent times, the application of chemical fertilizers, pesticides, and the introduction of higher yield rice varieties have further enhanced production.

Grown not only in lowland fields, rice can be grown in rain-fed upland fields. In colder environments as average temperature decreases the cultivation cycle is extended. Sometimes it takes as long as six months to bring in an annual crop. Upland people such as the Hmong and Mien groups of mainland Southeast Asia and southwestern China typically farm such dry upland fields. In the past, when a mountain field became exhausted, the forest cover was allowed to return and new fields were carved out of tropical forest land. Today, with the increase in national populations, the decline of forests due to timber harvesting and firewood collection, and a growing concern for watershed protection, such typical patterns of "slash and burn" agriculture are being constrained by government regulation throughout the mountains of Asia. Aside from irrigated lowland plots and upland dry fields there is another way of growing rice, in carefully constructed hillside terraces. Terraces allow farmers to plant annually. In essence, a rice terrace mimics a lowland rice field, replicating in miniature a series of mini-fields on a mountainside. Although terraces can be planted annually, they normally depend upon rainfall for irrigation and are seldom watered by man-made irrigation systems.

Rice cultivation demands a great degree of common village planning, cooperation, and labor. Lowland fields are the most labor

intensive. To maximize crop yield lowland farmers plant rice in two stages. First they sow seed beds. When the rice sprouts have reached a foot or so in height they are pulled up and taken to expansive fields for transplanting. Here the rice seedlings are carefully spaced to ensure maximum growing room for the mature plants. Yields are inevitably increased by careful weeding, the application of natural fertilizers, and the deployment of adequate precautions against predators. Rice is a very water dependent plant. Where temperature is sufficiently high and sunshine sufficiently sustained, rice can grow—assuming adequate water is available. When the rice plants are heavy with grain, villagers often move

to the fields, assigning old folks or young people to remain in small huts in the fields to scare away birds, monkeys, wild pigs, and elephants, all fond of rice. Long strands of twine and lengths of braided bamboo are sometimes attached to the field huts allowing for the sounding of noisemakers to scare off flocks of seed-eating birds.

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Harvesting Rice, Laos, 1999. Photo by Peter Whittlesey

When harvesttime arrives, villagers work quietly in the fields. Voices are muted; oftentimes the only sound to be heard is that of small children playing simple tunes on simple instruments fashioned from rice stalks. Before the harvest is stored in rice granaries, ceremonies are performed to ensure that the crop will not only be free from spoilage, but also will magically expand inside the storage structure. Ancient civilizations—such as that of Cambodia during the Angkor dynasty, China beginning in the Shang dynasty, and Japan in Yayoi times—fabricated complex irrigation canals to multiply annual rice yields through dry season irrigation projects.

In Asia, rice and culture are inextricably bound together. Our English word for rice only superficially serves the purposes of describing rice seeds prior to sowing, rice seedlings, rice plants, rice grains just after harvesting, rice that has been hulled but not cooked, and cooked rice. In Asian languages a separate term describes each phase of cultivation and type of harvested rice. Many varieties of rice are grown in Asia, distinguished by the physical shape and color of the grain, and the amount of starch in the grain. There are literally tens of thousands of locally adapted varieties of rice in Asia which farmers have carefully nurtured in specific soil conditions, micro-climates, and altitudes.

Rice is not only central to village economic and nutritional concerns, it is in many ways a sacred crop. Because so much of village life for so long has focused upon the cultivation of this particular crop, rice has over the centuries taken on a religious as well as a secular meaning. The process of cultivation in many remote villages to this day is accompanied by rituals and ceremonies designed to

assure a good harvest and to protect against plant disease, animal predators, and poor weather. A cult of rice, a series of religious practices focusing on rice production, may fairly be said to be one of the earliest of Asian religious concerns. The entire cultivation cycle of sowing, cultivating, and reaping is portrayed in myth and song and lore as being analogous to the process of procreation, conception, gestation, birth, and death in human societies. In remote traditional villages today, rice continues to be harvested with a small finger knife (as opposed to a scythe), which is said to respect the goddess of rice. In many areas the harvesttime is a sacred time during which foul words and inappropriate social interaction may not take place in the fields lest the crop be lost at the last moment due to supernatural retribution in response to the violation of rice-related taboos. Rice is greatly respected, it is never mindlessly discarded. After meals, leftover rice is either swept up and fed to domestic animals or sometimes is left on the floor so that it can be scavenged by household pets. Growing in the field, stored in a granary, or arrayed on the table, rice is revered and honored.

For the Toraja people of highland Sulawesi island, Indonesian rice is traditionally seen as a gift from their high god. During the blessing of seeds prior to sowing, village women winnow the grain, simultaneously blowing on it, imparting life to the rice seed. They do so wearing golden necklaces that suggest the golden grains of ripe rice to be harvested three months hence. Dancers at major rituals sometimes don elaborate headgear embellished with gold leaf squares said to symbolize grains of rice. The Toraja, and many other traditional Southeast Asian peoples, construct elaborate granaries to

store their grain. The granaries are miniature replicas of the family house and are thought of as extensions of the sacred “face” of the house oriented to the life-giving direction of the northeast. The Toraja closely associate rice with life. Clothes, meat, and ceremonial objects related to funerals (associated with death) are expressly banned from proximity to producing rice fields.

In mainland Southeast Asia, Tai peoples (Thai, Lao, and tribal Tai such as Black, White, and Red Tai highlanders) oftentimes graphically depict the rice goddess at harvesttime. Here there is a shared notion of the *Me Khau*, the “Mother of Rice.” The Mother of Rice is the guardian of the fields. She is closely associated with fertility of crops, of domestic animals, and of man. Her children are the sacred rice seed grains that are kept in a special part of the house, usually up in the eaves of the roof. Before the harvest is taken in, the special rice planted for the rice mother is taken first, oftentimes by a young couple of childbearing age. This rice will be saved and used for seed next year. At harvesttime the rice mother appears as a straw figure fabricated from the sheaves of harvested grain. This image is placed in the sacred field thought to be inhabited by the Rice Mother at harvesttime.

Because world religions such as Buddhism, Hinduism, Islam, and Christianity have impacted all but the most remote villages in Southeast Asia, religions largely centered on reverence for rice are today still practiced only in the most remote areas. But respect for rice as a sacred crop remains widespread throughout Asia. Offerings of rice for ancestors are commonly deployed in Buddhist nations from Burma to Vietnam. In Vietnam the sprigs of blossoming fruit trees are displayed at the new year, the sign of a new growing season.

A French colonial official in Vietnam once remarked that the rice fields are both granaries and vineyards for the local inhabitants. Rice wine in Asian culture is an important sacrament for religious occasions and is consumed on all-important occasions prior to and during formal feasts.

The demographic trend towards urbanization continues throughout Asia. In countries such as Thailand and Malaysia in Southeast Asia, urban populations have become the majority only in very recent times. But even for urban residents of Singapore or Jakarta or Hanoi, a special relationship with rice and rice products persists up to the present. Urban markets offer countless varieties of uncooked rice for sale. In increasingly electrified rural villages and urban Asian neighborhoods, these days no household appliance is more ubiquitous than the electric rice cooker.

In many Asian cultures rice is not only cultivated as a staple and utilized on ceremonial occasions, it also constitutes an impor-



Rice Mother Effigy, White Tai Village, Nghe An Province, Vietnam, 2000. Photo by Eric Crystal.

tant offering and sacrament linking contemporary families with deceased ancestors. Throughout much of Asia, offerings of uncooked rice are consecrated by prayers and chants and then given to family members to take home and cook as omens of good luck blessed by unseen ancestors. In Bali, Indonesian rice grains are blessed with holy water and sometimes pressed on the foreheads of worshippers as a symbol of ancestral blessing. At funerals of the Mien (Yao) people of highland China and northern mainland Southeast Asia, funerals end with the distribution of uncooked rice grains blessed by attendant ancestors to close relatives of the deceased. Such beliefs and ceremonies continue, not only in remote village locales but also in contemporary urban venues where modern factory workers, university students, and government employees continue to honor ancient beliefs rooted deep in the culture of rice-growing Asian farmlands in present day urban settings. Indeed, a range of Asian

cultures celebrate the beginning of the New Year (really the beginning of the new agricultural year at which time the rice fields will be

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prepared for planting in anticipation of spring rains) by the pounding of special rice cakes with wooden mallets. Once pounded, the rice cake is either toasted over a fire or in an oven or boiled as a dumpling in soup. The pounded rice cake is emblematic of the essence of rice and anticipates the taking in of another good harvest during the coming year.

The technology, cosmology, and sociology of rice cultures in Asia are core to our understanding of this part of the world. Students in America have only to visit Asian ethnic markets and survey rice and rice products for sale to gauge the importance of this grain in the traditional diets of the peoples of the Pacific Rim. Rice is an important agricultural element in the farming economies of not only Asia, but also of the United States itself. California is the largest rice-growing state. Significant rice crops are also planted in Arkansas, Texas, and Louisiana. A small amount of rice is planted still in South Carolina, the first place where rice was grown in colonial America. Yet for all its economic importance, rice in the New World has never



Hmong Man with Padi Harvest, Lao Cai, Vietnam. 1999.  
Photo by Eric Crystal.

taken on the ritual, ceremonial, and symbolic importance of rice in Asia. There rice continues to be not only the staple grain of choice, but a revered and respected crop closely tied to the history and culture of the many nations, ethnic groups, and communities which continue to annually bring in the rice harvest.

#### Note for Teachers

Rice as a subject of study, analysis, and discussion serves as an essential key to the study of Asia. Culturally diverse, linguistically complex, geographically vast, East Asia, Southeast Asia, and southern, South Asia all share economies, social structures, and belief systems that are in many ways tied to the cultivation of rice. Investigating the ecology and economics of rice production provides key insights into current issues of sustainable development, food security, and regional and international trade across Asia and beyond. Lowland-rice-growing societies inevitably manifest the development of stratified social systems reflected in differential power and status, class and caste differentiations based on access to irrigated rice fields. Village

solidarity is often reinforced by shared beliefs, agricultural-oriented rituals, and cyclical ceremonies rooted in the agricultural cycle.

Rice is accessible to all of us. Visits to local markets will oftentimes reveal a wide variety of domestic and imported rice strains. Universally available cookbooks suggest the importance of rice to individual Asian cultures and provide ample opportunity for experimentation. Rice is grown widely within the United States. California, Texas, Arkansas, and Louisiana are the major exporting states. Students in producing areas should be able to contact local growers associations to learn more about connections between domestic rice production and rice exports to Asia and other parts of the world. The importance of symbolic rice cakes during Vietnamese New Year is annually reconfirmed in Buddhist temples and community centers across the United States. These and other communities (whose second generation students are found in classrooms throughout the United States) have much to offer teachers who make the effort to reach out to tap resources within walking distances of many school sites.

Web and print-based resources listed below provide just a partial list of resources available to teachers interested in teaching about Asia through the prism of a rice-based curriculum. Although rice was first cultivated in Asia, it is now a universally prized and daily-consumed commodity around the globe. Rice is important in central Asian, sub-Saharan African, and Latin American cuisines as well as in Asian food preparation. The study of rice, ultimately, allows us to appreciate not only its key role in Asian culture but also in the way that all of us are increasingly drawn together in an ever more inter-related world. ■

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Preparing Glutinous Rice for New Year Rice Cakes, Hmong Village, Son La Province, Vietnam, 1996. Photo by Eric Crystal.

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#### RICE WEBOGRAPHY

The Asia Rice Foundation is working to secure a prosperous future for Asia's rice societies by supporting rice education activities, cultural preservation, research, and advocacy movement: <http://www.asiarice.org/>

The Rice Web, a compendium of facts and figures from the world of rice: <http://www.riceweb.org/>

International Year of Rice (teacher-designed) contains numerous links to sites about rice, the history of rice, growing rice, types of rice, nutrition, etc.: <http://www.teachers.ash.org.au/jmresources/rice/year.html>

International Year of Rice, the official Web site: [http://www.fao.org/rice2004/index\\_en.htm](http://www.fao.org/rice2004/index_en.htm)

Australia's Education Network's Web site on rice Web links: <http://www.edna.edu.au/edna/go/cache/offonce/pid/2394;jsessionid=AD633A5023A7463B3A264DA662BD4C78>

A mini-online unit on "Rice, The Global Crop" from AskAsia lesson plans: [http://www.askasia.org/teachers/Instructional\\_Resources/Lesson\\_Plans/Indonesia/LP\\_indonesia\\_1.htm](http://www.askasia.org/teachers/Instructional_Resources/Lesson_Plans/Indonesia/LP_indonesia_1.htm)

"Feeding a Hungry World: Focus on Rice in Asia and the Pacific." This unit, produced by the Stanford Program for International and Cross-cultural Education published in 1995, introduces students to key environmental issues through an exploration of the rice-based farming systems of Bangladesh, China, Indonesia, Japan, the Philippines, and Thailand. Students will come away with a better understanding of environmental systems, population dynamics, biodiversity, uses of technology, and the complexity of setting environmental policy. Well done. Access at: [http://spice.stanford.edu/dml/viewpub\\_sp.lasso?id=10046](http://spice.stanford.edu/dml/viewpub_sp.lasso?id=10046)

**ERIC CRYSTAL** has undertaken research on traditional culture and culture change in Southeast Asia for nearly four decades. He has worked intensively in Eastern Indonesia and more recently in Northern Vietnam. After retiring in 2000 from his position as Vice-Chair of the University of California Berkeley Center for Southeast Asia Studies he collaborated with the Museum of Ethnology in Hanoi on *The Art of Rice* exhibition recently mounted at UCLA. Dr. Crystal continues to teach for the Group in Asian Studies at Berkeley and also at the San Francisco Art Institute. He has been documenting traditional culture in Southeast Asia through print, still photography, film, and video since the beginning of his career.

**PETER WHITTLESEY** currently serves as Librarian at Grant High School in Sacramento, California. He studied Hmong at the Southeast Asia Summer Studies Institute at the University of Oregon during the summer of 1998. He has subsequently lived in Laos for two years, traveling extensively throughout the country. He was appointed "K-12 Visiting Scholar" at the Center for Southeast Asia Studies at University of California Berkeley in the summer of 2001. Mr. Whittlesey subsequently organized a Southeast Asia Institute for the International Studies project at California State University at Sacramento in the Spring of 2002, led two summer study tours to Laos in 2002 and 2003, and has created extensive Web sites relating to his work in Laos at: <http://homepage.mac.com/peterlaos/Menu6.html>.

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