Swamp Rice Farming

The Indigenous Pahang Malay Agricultural System

Donald H. Lambert

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About the Book and Author

This first detailed ethnographic account of the Pahang Malay people of peninsular Malaysia focuses on the society's traditional agricultural system, particularly on its specialization in the production of rice on largely unmodified natural swampland. Dr. Lambert discusses the historical development of Pahang Malay rice farming, its dependence on indigenous knowledge of local ecology, and its adaptability to adverse conditions. Farmers experimenting with cultivars, adapting new technologies to local conditions, and using their own seed selection skills have over several decades substantially improved their rice yields. Dr. Lambert suggests that well-adapted indigenous farming systems found throughout the world should be studied and the adoption of these successful agricultural practices should be encouraged by governments and development planners.

Donald H. Lambert is a teaching associate in anthropology and political economy at the University of Texas at Dallas.

To the late
Tok Hitam binti Katid Gendut:
Orang Pesagi and friend

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Preface

The Pahang River basin of West Malaysia has contained a sizable population of Malay farming peoples for at least the last several hundred years. Many continue to live in villages along stretches of the river, and practice a mixed economy based on swamp rice farms, river and swamp fishing, cash from rubber and fruit production, with minor attention given to cattle and poultry rearing, kitchen gardens, and exploitation of natural forest products. While the Pahang Malay in recent decades are experiencing an incredible range of changes, mostly caused by Malaysian Government development programs in Pahang, and many are turning to newly available economic opportunities, the majority of them see their future in maintaining and adapting existing swamp rice and other indigenous resource utilization methods. While my study in the central Pahang village of Pesagi shows that most households are primarily supported by the production of rubber for cash, my informants took far greater pride in characterizing themselves as rice growers. In an ecological sense the highly adapted technique for producing rice and fish in the largely unmodified natural swamps bordering the Pahang river and coast is the Pahang Malay's niche specialization.

This book on the swamp rice agricultural system of the Pahang Malay follows closely my doctoral dissertation, and a report prepared on this subject for the Malaysian Government. Fieldwork in Pahang was carried out with support from a Fulbright-Hays Graduate Research Fellowship from January 1976 until March 1977. This current product is the result of continuing research since that time utilizing the data analysis facilities of the Quantitative Anthropology Laboratory and libaries at UC Berkeley, and revisions made while teaching anthropology at the University of Texas at Dallas.

While in Malaysia I received assistance from many people. I am obligated to members of the National

Unity Board and the General Planning Unit of the Prime Minister's Department, to the staff of the National Museum and the University of Malaya. My local sponsor was the Malaysian-American Commission on Educational Exchange (MACEE), which helped me solve countless problems and made my stay productive and enjoyable. A great deal is owed to the Daerah and Mukim officials for their support and assistance throughout the fieldwork period. I must especially thank Penolong Pegawai Daerah Encik Mohammad Ibrahim bin Abu Bakar, Wakil Raya'at Yang Berhormat Puan Sariah binti Kamiso PPM, Pengulu Ishak bin Haji Awang Lembek, Pengulu Wan Mohammad Ali bin Wan Haji Abdul Malik, and Ketua Kampong Mahmud bin Mat Taib PJK.

I am grateful for advice and encouragement from colleagues, especially William H. Geoghegan and James N. Anderson. Thanks are owed for help in preparing this manuscript to M.J. Tyler, Loel Miller, Linda Viloria, Dorothy Luttrell, Evelyn Stutts, Joan Seagraves, and the other staff at the Language Behavior Research Laboratory/Quantitative Anthropology Laboratory at Berkeley, and the School of Social Sciences at UT Dallas.

Of course this book would not have been possible without the interest and cooperation of the villagers at Pesagi. My family and I were treated with such warmth and friendliness that we feel a lasting emotional attachment to our many friends there. Everytime I work with the data, use the materials in my teaching or writing, or think of the fieldwork experience I long to see my friends and Pesagi again.

Donald H. Lambert
The University of Texas at Dallas
November 1984

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Introduction: Indigenous Agriculture— Survival in a Modern Age

The Pahang Malay live along the coast and major rivers of the state of Pahang in West Malaysia. While a few Pahang Malay live in urban settings such as Temerloh or Kuantan, more than nine out of ten live in rural villages. This book is based on fourteen months of field work between January, 1976 and March, 1977 in the rural village known as Pesagi. In Pesagi each individual household practices a broad range of interrelated economic activities which villagers call kerja kampong (lit. 'village work'). This production complex, referred to as the indigenous Pahang Malay agricultural system, is comprised of cash and subsistence cropping, gathering of wild produce, hunting and fishing, various cottage industries, petty trading, cattle rearing, and maintaining small flocks of poultry. Before embarking on a detailed description of the studied village, I should like here to emphasize the importance of research on indigenous production systems, and highlight the unique benefits derived from using methodological and theoretical approaches in fieldwork which discover and record indigenous systems of knowledge.

One characteristic of the indigenous agricultural system of the Pahang Malay, is that over long periods of time it has consistently met the basic production needs of the local population. For example, while yields of rice, the major food crop, have varied greatly from year to year, farmers have always been able to offset this variation by carefully managing a diverse range of other productive activities such as fishing, home gardening and poultry rearing.

The lack of dependence on a single crop together with maintaining complex resource exchange networks and use of a broad range of microenvironments affords the Pahang Malay the capability for rapid adjustment to relatively small ecological and economic variations, and provides an inherent capacity to withstand great social and economic upheavals. Pahang agriculture

indeed appears to be inherently adapted to withstand high frequencies of adverse conditions. Devastation and disruptive warfare throughout the 19th century and recurring with Japanese occupation and the "Communist Emergency" of the 1940s and 50s, traumatic flood and droughts about every 40 years with lesser episodes at least once per decade, changes in government, and unpredictable market prices are among the frequent disruptive episodes common to the Pahang scene. Nonetheless, the Pahang Malay have always maintained a secure and reliable level of production for local consumption. Never in recorded history has Pahang experienced famine, or even severe food shortages, in spite of frequent and sometimes extraordinarily disruptive calamities.

While in recent decades much effort has been expended to eradicate what were perceived as "backward" or "wasteful" traditional technologies, we now see that objective observers of some indigenous systems are so impressed as to argue that "indigenous knowledge should be taken seriously," (Belshaw 1980), and that "traditional systems" are ecologically functional and inherently rational (Igbozurike 1971). James N. Anderson (1979) at a recent International Symposium of Tropical Ecology held in Kuala Lumpur, concludes that indigenous agricultural systems such as the "Southeast Asian traditional home garden", have a very long history of providing people self-reliance and participation in their own development, and that there is little doubt that there are considerable potential benefits from making improvements to old, long-evolved, and time tested indigenous systems.

PROBLEMS OF MODERN AGRICULTURE IN PAHANG

While agricultural specialists have generally assumed that "modern methods" are of outstanding merit on most counts, cases are certainly not absent in which indigenous agricultural methods have proven superior to modern ones. The 'swamp rice' (or padi paya) system of Pahang, which this report describes in detail, is just one example of a superlative indigenous adaptation to both short-term and long-term environmental fluxations. Repeated attempts to establish modern technology on central Pahang swamplands, especially those in the Temerloh District, have not been encouraging. Many dams, drainage ditches, and other water control works built by government agencies and foreign to the Pahang system have failed because of the heavy rates of siltation or erosion from floods. Agriculture Department literature from the thirties shows that test station experiments on rice varieties conducted at Pulau Tawar,

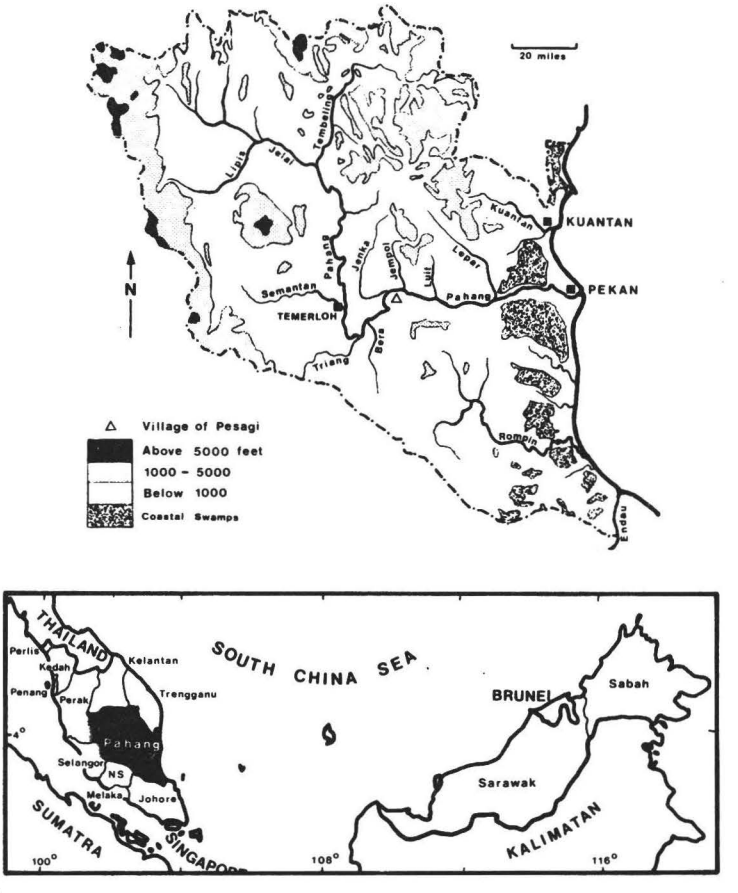

FIGURE 1 MAP: PAHANG AND MALAYSIA

Kerdau, Mengkarak, and Chenor were not successful in finding "improved" rice varieties suitable for swamp conditions. In most cases, introduced test varieties performed with great inconsistency or produced lower yields than traditional varieties (Birkenshaw 1941; Jogoe 1939). In the riverine areas of central Pahang technicians found "modern" rice production methods quite unsuited to the extremes of the local environment, and eventually gave up on attempts to improve indigenous rice cropping methods. (A. O. Report 1929-37).

In another example, that of rubber (Hevia brasiliensis), a crop introduced to Malaya by British corporations using estate and plantation technology, farmers using local methods have for many decades had a significant competitive advantage under economic and ecological crisis conditions. In Ooi Jin-Bee's comparison of smallholders' rubber-growing strategies to those used on plantations, he argues that smallholders are more able to avoid risks and undesirable costs than plantation owning corporations. He writes that

> practical experience in Malaya and other tropical countries has shown that a well-organized system of peasant farming, because of its greater flexibility is better able to withstand crisis conditions than an economy based on plantation agriculture. For example, during the Great Depression of the 1930s, the rubber plantations were badly hit while the peasant rubber smallholders simply left off tapping and turned to other alternative occupations without having to worry about heavy overhead costs. Again, an economy based on peasant farming gives greater economic and social stability to the country during a major depression because farmers can always turn from growing cash crops to growing foodcrops. No mass unemployment need follow such a depression, unlike the position in a country which is mainly dependent on plantation agriculture [emphasis mine] (Ooi 1963:195).

Unfortunately history has had little impact on the direction of current government managed rural development projects, as evidenced by the fact that most rubber, oil palm and other modern projects are largely systems which follow the plantation design. A more practical approach would be to model development projects on selected time-tested and well-adapted indigenous forms.

Other problems with introduced modern agriculture are highly visable and regularly reported in Malaysian newspapers and elsewhere, such as widespread pollution of the environment by agricultural chemical affluents

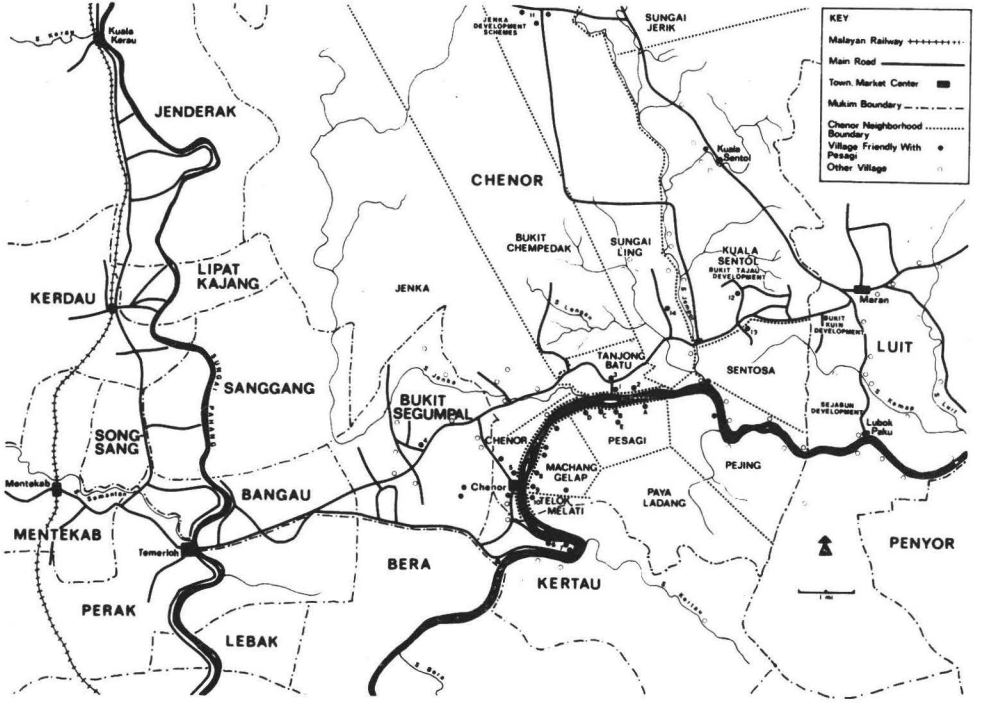

FIGURE 2 MAP OF CENTRAL PAHANG AND VILLAGES CLOSE TO PESAGI