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THE POTENTIAL FOR INCREASED FOOD PRODUCTION IN CONTINENTAL SOUTHEAST ASIA UNDER CHINESE COMMUNIST CONTROL

Summary and Conclusions

The Southeast Asian "Rice Bowl" accounts for about one-half of the world's exportable rice surplus; net exports from the region totaled about 3.3 million tons of milled rice in 1965.* Rice production in the area has not reached its potential, however, and some improvement could be achieved at relatively low cost within a few years. Assuming a Communist Chinese takeover of the area, this limited improvement would not enhance Communist China's food supplies significantly, while the capital inputs required for substantial improvement appear to be beyond China's capabilities, given her domestic requirements. Increased labor inputs from a program of resettlement of Chinese farm laborers could, in fact, prove counterproductive. Although production of some other food crops could be expanded more dramatically than rice, achievable levels would remain relatively low, and expansion would probably occur only at the expense of rice production.

* Milled rice tonnage is equivalent to 67.5 percent of paddy tonnage.

The following analysis attempts by means of a hypothetical example to show that potential expansion of food production in continental Southeast Asia, under favorable conditions, would not justify a Chinese Communist takeover of the area on economic grounds. The analysis has been limited to four countries -- Burma, Thailand, Cambodia, and South Vietnam -- normally the surplus rice producers of Southeast Asia. Laos, although in the same area, has been excluded as of little economic potential. It is assumed, in order to isolate the problem, that China's control of the area could be asserted without cost, that no damage to productive capacity would occur from such takeover, and that the populace would not resist China's moderate efforts to expand food production. Contrary, and more realistic, assumptions would strengthen the conclusion. Realistically it is believed unlikely that China could bring about any significant improvement in the food surplus of these countries in the foreseeable future because of the social and political disruptions implicit in a takeover and occupation. It is possible, however, that the potential for a relatively small food increase would provide China with a rationalization for a takeover that it regarded as desirable on political grounds.

Rice

Rice has developed historically as the food staple of Southeast Asian countries despite natural conditions that are less than ideal for its growth. The traditional approach of farmers to its cultivation and the absence of serious government programs to improve production

have kept yields and output below achievable levels. Consequently there is opportunity to increase production by increasing area and yields through four means: (1) introduction of improved varieties, (2) improved cultivation techniques, (3) expanded use of fertilizers, and (4) improved water control. Maximum results can be achieved only by introducing these improvements in combination, but favorable results could be realized by applying only the first two methods, which are relatively inexpensive. It is unlikely that Communist China would find it expedient to attempt the necessary programs of improvements in these four countries rather than devote its resources to improvements at home, even under the assumed favorable conditions.

To provide a benchmark of potential production of rice in the four countries, the performance record of 1964/1965 (Table 1) has been recalculated (Table 2) on the basis of two key assumptions: (1) that 5-percent greater area had been devoted to rice production, and (2) that 25-percent greater yields per hectare had been achieved. The assumptions are generous but not inconceivable, given a concerted program of information and the cooperation of a nonhostile populace. A 5-percent increase in area could be achieved by expansion of cultivable area and by double cropping on a moderate scale. Such an expansion would be less than one-half the increase in area realized in these countries as a group over the past decade but is about all that could be expected because of natural limitations. A 25-percent greater yield is feasible with improved varieties and greater care in cultivation plus relatively

inexpensive extension of water control. Although this is much greater than has been achieved in the area in the past decade, the modest efforts of the Thai government have helped that country realize a 19-percent improvement in yield during the period. Under these assumptions the total production of paddy rice in these countries in 1965 would have been 31 percent, or 7.9 million metric tons, greater than the 25.4 million tons actually grown.

Two considerations suggest that a takeover of these countries for a food surplus of this magnitude would not be profitable for China. In the first place, several years of effort would be required to initiate the measures postulated, even under favorable conditions. In the time required for a program to produce these results population increases at present rates in these countries would absorb most of the increase indicated, and accordingly an absolute increase in the area's surplus of 7.9 million tons would require much more than the 31-percent production increase postulated. In the second place, an increase of 7.9 million tons in the area's surplus, even if available now, would be a relatively small contribution toward China's needs. This amount is equal to 10 percent of China's 1965 rice production of about 80 million tons (of which 900,000 tons on a paddy basis were exported) and constitutes only 4.5 percent of the more relevant total estimated food grain production of about 175 million tons. If all of the area's current surplus of 4.9 million tons of paddy rice were added to the 7.9 million potential increase in production, the resultant 12.8 million tons would represent 7.3

percent of China's present food grain production. This would be the most optimistic estimate and is not likely to prove feasible. The caloric contribution of this rice to China in percentage terms would be approximately the same as the production percentages cited above.

Substantially greater increases in output could be achieved by expanded use of fertilizer and improved water control. The Pa Mong project of the Mekong Basin development program, for example, is expected by itself to extend irrigation to 800,000 hectares in Thailand. Such improvements, however, would require sizable capital investments, and this fact would make the effort impractical for the Chinese to attempt. Such investment as has occurred in these fields has employed Free World assistance, which would be unavailable to the area under Chinese domination. China itself probably could not supply necessary resources, and if they were available they could be more appropriately invested to improve China's domestic food production.

A large-scale movement of Chinese to these countries is unlikely to overcome the above limitations on production increases, as labor shortage is not a significant problem in these countries. It might be easier for Chinese laborers themselves to improve techniques on land now farmed than to teach indigenous farmers, but this would only increase the underemployment that presently exists among the local agricultural population. If the Chinese were to attempt to cultivate additional land, production would have to be extended to areas of lower quality and yields would tend to decline. The outcome would be only slightly

less negative if the Chinese were to take the best land for themselves and drive the indigenous population to the marginal lands. As indicated above, the primary barrier to significant increases in agricultural production is capital investment, and the indigenous people, under well-managed programs, could increase output to the degree feasible without such investment. It is also noted that the Communist approach has not markedly improved agricultural yields in other countries and that native reaction to a large influx of Chinese would almost certainly have an adverse effect on agricultural output. On balance it is believed more likely that production would be improved by Chinese management of the area's present population than by the migration of Chinese farmers. The most that China would be likely to gain from a migration is slight temporary relief from her population pressures. This could only occur at the expense of Southeast Asia's present per capita food consumption and at the risk that the area for many years would fail to produce the surplus that is feasible by other means.

Other Food Crops

The only other food grain of importance in these countries is maize. Total production of maize exceeds one million tons, most of which is exported. Thailand is by far the most important producer of maize in the area and production is now more than five times the low production of 1958. Such rapid expansion, however, is not likely to continue; if a further rapid expansion were attempted in these countries, it would likely be in part at the expense of rice expansion. One

million tons is the equivalent of 1 percent of China's production of food grains other than rice and 0.6 percent of China's total food grains. The present production of maize and the assumed maximum rice surplus potential of the area would account for 8 percent of China's present food grain production. Data on production of other food crops in this area and in China do not permit ready comparison, but present and likely exports of other crops from these countries constitute a negligible fraction of China's present requirements.

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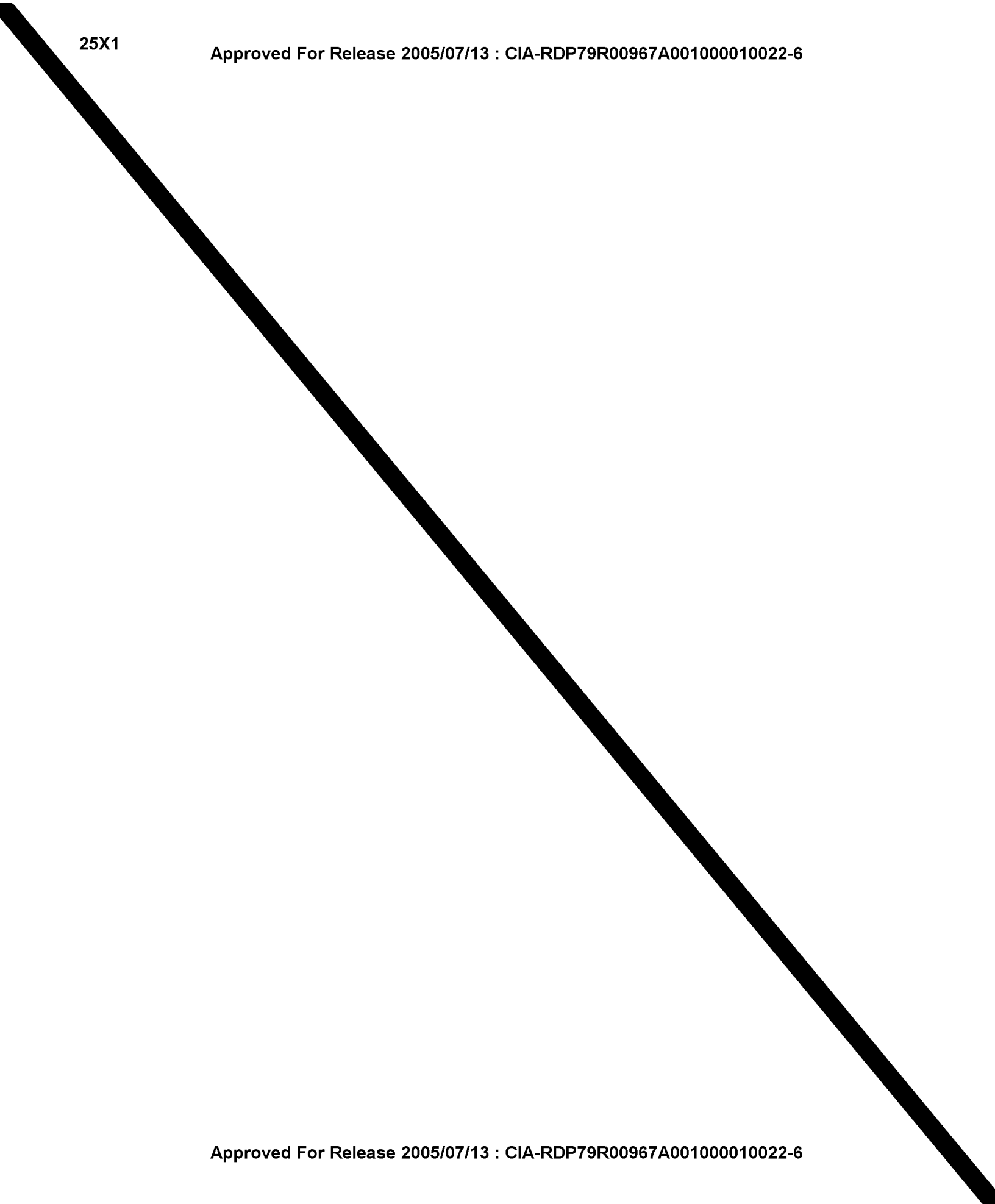

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Table 2

Hypothetical Production of Rice
in Major Producing Countries
of Continental Southeast Asia*
Crop Year 1964/65

	Production (1,000 Metric Tons Paddy Rice)	Area (1,000 Hectares)	Yield (Kilograms per Hectare)	1965 Exports (1,000 Metric Tons Paddy Rice Equivalent)
Burma	10,630	5,355	1,985	4,180
Thailand	12,640	6,295	2,008	5,715
Cambodia	3,469	2,352	1,475	1,726
South Vietnam	6,603	2,683	2,461	1,222
Total	33,342	16,685	1,998	12,843
Milled Basis				8,669

* Assumptions: (1) 5-percent greater area than actual.
(2) 25-percent greater yield than actual.
(3) All increases in production available as exportable surplus.