

Chapter 15

Whither Thai Agriculture?

Thai agriculture has created a culture and a nation. In an era in which agricultural production is universally under-valued in social terms, the continuing export strength of Thai agriculture alone is insufficient to ensure its secure future. Its future shape is now likely to be determined by global pressures on environmental management and domestic social pressures, as much as by financial matters. These trends are already evident.

This chapter takes a future perspective by considering the evolution of Thai agriculture, Thailand's current position, policy outcomes, and the effects of the recent Asian financial crisis. By comparing these perspectives, some challenges now facing the sector are introduced as the conclusion of the story of Thai agriculture to date.

From Past to Present

This section draws from each of the preceding chapters to present an integrated overview of Thai agriculture, from its various origins to recent commercial, social, and environmental outcomes.

From shared origins with wider Asian agriculture as hunters and gatherers were gradually dominated by migrating wet rice agriculturists, agro-cities, and then State-religious Empires prospered while they managed rice production well. More than a millennium ago, the Tai ethnic group migrated from southern China with wet glutinous rice technologies, aspects of which proved sustainable into the twentieth century. Integration of Tai and Mon-Khmer systems enhanced water control, and produced a complex blend of religious associations, including an

agriculturists' view of the natural environment requiring change to suit man, and as fearsome in its natural state. Rice culture determined community organisation and government administrative structures within an embracing and pragmatic culture, which was easily able to produce a surplus.

With the political consolidation at Ayutthaya, which laid the foundation for today's nation, the Central Plain was gradually developed and a relationship between rice agriculture and the security of the Kingdom became established. Expansionary war spoils, in the form of labour, enhanced the role of rice as an exportable and taxable commodity of small-holder producers who responded to market forces and relaxed labour laws. Chinese and European domination of export markets led them into agribusiness, for the beginning of what would become a major production and processing economy. Agriculture expanded, fuelling population increase until accessible land was expended and agricultural prices fell, although output increases continued with intensification of production with concomitant environmental concern. Agribusiness and government cooperation expanded the sector further while assuming that small-holders could continue to be taxed while isolated from the profits of the nation. In this state, modern Thailand emerged as a major agricultural exporter, receipts from which funded national development and crisis recovery, as its production base became less understood by decision-makers.

Diversification of the economy necessarily reduced the relative contribution of agriculture to GDP, which caused its other benefits of employment, crisis resilience, self-sufficiency, rural social support, and cultural custody, to be undervalued. National planning approaches came with irrevocable reliance on the global economy and widespread adoption of Green Revolution technologies, with Thailand theoretically able to increase production at a lower environmental cost than most other countries. However, environmental and social costs are indicated by extreme forest destruction, which originated with foreign then illegal local logging, to an extent that the principal viable hope for reforestation is now tied to community involvement.

Organisations supporting Thai agriculture include government and agribusiness. From embryonic institutions at Sukhothai, Ayutthaya evolved agricultural taxation and dispute resolution systems, which emerged as today's

departmental structures. Constrained by culture, institutions have produced outputs beneficial yet below potential in research, education, and technology transfer, with a bias toward commercial agriculture funded by credit. Agribusiness similarly emerged from Ayutthaya through colonial and, in particular, Chinese traders who worked with the Crown for economic expansion. After World War II, government also entered agribusiness with variable outcomes, and private agribusiness expanded rapidly with agricultural production from the 1960s, with government assistance, including contract small-holder schemes aimed at lifting all producers into a commercial system.

However, small-holders continued to underpin the economy by producing exported surpluses while supporting their 70 percent of the population from family farms which were much more than a phase toward industrial agriculture. Their intensive integrated production systems allow high quality outputs and efficient use of waste products, which still have not been adequately valued. Encouragingly, agriculture is now increasingly viewed as a social rather than a financial sector in planning, and linked to rising poverty, environmental, and cultural loss concerns. Seeking a balance between this perspective and Thailand's inseparability from global food demand and development politics, has now highlighted the need to rectify past omissions in such areas as social equity, environmental management, enforceable legal structures, wider education, and religious and cultural values.

The fertile and well watered land which diverse ethnic groups developed to become one of the world's few major agricultural exporters, now leads the world in rice, rubber, canned pineapple, and Black Tiger Prawn production and export, and is the region's largest exporter of chicken. Feeding more than four times its own population from an agriculture less intensive than that of most of its neighbours, Thailand has real potential to reduce poverty among marginal farmers while enhancing export earnings from agriculture; both rely on strengthening of education, research, legal, and social equity programs. These may be addressed in the wake of the recent Asian financial crisis, which has coincided with a rise in popular religious and secular proposals for environmentally and socially sensitive alternatives for small-holder farmers coexisting with commercial agriculture. Nevertheless, hopes of rapid industrialisation continue to be seen by some planners as the basis for addressing these diverse social issues.

Current Position

Thailand ranks as a lower-middle income country with its neighbours the Philippines and Papua New Guinea, and other such countries as, South Africa, Sri Lanka, Kasakstan, Iran, Egypt, and Guyana. It differs from upper-middle income countries such as South Korea and Malaysia, low-income countries such as Indonesia and Vietnam, and high-income non-OECD countries such as Singapore and Taiwan.¹ It also differs in the generation of its wealth from agriculture which has made it dominant in world rice export, and production and export of Black Tiger Prawns, canned pineapple, and rubber,² and a significant exporter and/or producer of cassava, maize, sugar, oil palm, chicken meat, and beans, with unrealised potential in other crops, livestock, and fisheries.

General comparisons mask Thailand's leading agricultural role; consider for example, Thailand's rankings, such as thirty-second among pig meat producers, seventeenth for chicken meat,³ and producing something less than four percent of the global rice.⁴ Such comparisons naturally favour nations with larger land areas, and may be better expressed as production per unit area or population, or even on the basis of the standard of living allowed from wealth derived mainly from agriculture. Thailand's standard of living, which approaches the world average⁵ on a price parity basis, owes much to its natural resource base,⁶ and its development of agriculture as abundant descriptive displays attest.⁷

The first national Plan is sometimes suggested to have begun the change from traditional self-sufficient agriculture to modern methods.⁸ In fact, foreign involvement at this time probably spurred economic development, part of which was national planning, rather than the Plans themselves generating economic growth. Similarly, traditional farming did not disappear, but rather continues in some areas as a form of eco-farming, while in others, commercial methods have been practiced

¹ World Bank (1999e)

² FAO (1999)

³ FAO (1999)

⁴ FAO (1999)

⁵ World Bank (1999a)

⁶ Arbhahirama, Anat, Phantumvanit, Dhira, Elkington, D. and Ingkasuwan, P. (1987)

⁷ OAE (1992)

⁸ Puntasen, Apichai and Preedasak, Pardorn (1998)

for decades to the extent of technology available. Thus recent determinations that integrated farming can be more profitable than mono-culture⁹ and can underpin new developments such as integrated chemical-free production of fruits, vegetables, spices,¹⁰ and milk,¹¹ might be considered a maturing of analyses which allow alternatives to be integrated with development proposals. Proposals now accommodate trends in social needs and global markets, among other factors. Such growing awareness of the social and economic benefits of small-holder integrated agriculture, and continued low prices for agricultural commodities, portend significant and immanent changes in Thai agriculture.¹²

Thailand, in common with other less developed nations, has traditionally taxed agriculture to an extent equivalent to 25 percent of production,¹³ although outflows may have been less than in some Latin American and African countries.¹⁴ Income, asset, and access disparities between rural and urban areas, some highlighted since the 1997 financial crisis, may not have been factored into these analyses. The current situation is a product of both history and policy outcomes, which in many cases have differed from intentions.

Policy Outcomes

Through the 1950s and 1960s, industry and agricultural policy were sublimated to a transcending political need for stability. Industrial development relied on aid and continued income from agricultural products, although the approach proved unsustainable. The emergence of an urban middle class, with an expectation of continued prosperity which was ultimately not met, led to political turmoil in 1973; one outcome was industrial policies which considered the well-being of urban centres in terms of employment creation, supply of goods, and infrastructural development.¹⁵ Such investment consolidated the traditional post-1932 revolution elite as the military, civil service, and aristocracy,¹⁶ with the middle class aspiring

⁹ Watanabe, K. (1994)

¹⁰ Puntasen, Apichai and Preedasak, Pardorn (1998)

¹¹ Chantalakhina, Charan (1999)

¹² Puntasen, Apichai and Preedasak, Pardorn (1998)

¹³ Fulginiti, L.E. and Perrin R.K. (1993)

¹⁴ Yamada, J. (1998)

¹⁵ Phongpaichit, Pasuk. (1989)

¹⁶ Meesok, Oeg Astra., Tinakorn, Pranee., and Vaddhanaphuti, Chayan. (1989)

to associate with these ranks.

Yet agriculture remained the most international business of Thailand. Notwithstanding global over-supply of agricultural commodities, which may well continue post-GATT, Thailand's advantages in export agriculture have so far outweighed limitations placed on it through inadequate research and enabling legislative environments, and development plans to the 1990s continued to rely on agriculture's profits and social savings to fund national development. However, financial success increased the gap between poor and commercial farmers in the absence of adequate social support programs.¹⁷

Even before the 1997 crisis, the total agriculture sector represented more than 50 percent of the economy,¹⁸ with a high net positive trade balance which contrasted strongly with that for non-agricultural trade;¹⁹ within natural resource related exports, agriculture represented some 90 percent.²⁰ However, recording the contribution as only some 11 percent of GDP, led to further under-emphasis in financial, and especially social terms,²¹ and produced the issues which have now brought Thai agriculture to a cross-roads.²²

Past policies which aimed to benefit all citizens through general wealth creation, falsely assumed that Thailand could rapidly industrialise. Currently Thailand has a GNP per capita approximately seven percent of that of the USA (19 percent on a Purchasing Power Parity basis) and, 5.5 percent of that of Switzerland (18 percent on PPP basis)²³ and a disparity of income of 46 percent on the Gini scale where zero represents equality across the whole population. Swiss or USA GNPs may not be an espoused aim of Thailand, but those of Singapore and the Republic of Korea have been; yet, Singapore's per capita GNP exceeded that of the USA in 1998, and Thailand's GNP per capita was less than 30 percent of that of the Republic of Korea. As 'increasing the cake' economics is balanced with social equity,²⁴ aspirations to wealth from widespread industrialisation can be viewed in

¹⁷ Siamwalla, Ammar., Setboonsarng, Suthad., and Patmasiriwat, Direk. (1989)

¹⁸ Trébuil, G. (1995)

¹⁹ OAE (1998)

²⁰ Arbhahhirama, Anat, Phantumvanit, Dhira, Elkington, D. and Ingkasuwan, P. (1987)

²¹ ADB (1998)

²² Siamwalla, Ammar. et al (No date)

²³ World Bank (1999c)

²⁴ Camadessus, M. (2000) IMF Statement to Thailand

terms of relative influence to control trans-national access to human and natural resources, and markets.²⁵ Such realities favour Thailand's rising consideration of mixed commercial and self sufficient agriculture.

The developmental imbalance, emanating from a desire to achieve an industrialised status,²⁶ eventually highlighted the need for increased inputs²⁷ into agriculture, including research and environmental regulation, as well as rural poverty.²⁸ While some argue that more has been invested in agriculture than received from taxes,²⁹ and even that the rice tax unwittingly stimulated crop diversification,³⁰ the continuous increases in agricultural efficiency essential to maintenance of some income equity in an industrialising economy, have not eventuated. High potential returns to research have been shown,³¹ yet not realised. Education, which enhances the ability to adopt new technologies, has similarly lagged in rural areas.

Policy lags led to Thai rice producers subsidising consumers, even beyond Thailand,³² to Thai consumers subsidising sugar and sugar cane producers,³³ and even to an assumption that rural access to social services need not be of the same level as in urban levels. The impact of agriculture on the environment, initially through conversion of forest to paddy fields, then later through expansion of upland cropping, continued with the economic marginalisation of poorer farmers who were forced into unsustainable agricultural practices.³⁴ By viewing agriculture primarily as an export income generator in conjunction with agribusiness, environmental impacts and poverty were subordinated. Policy orientations which considered agriculture a sunset industry further reduced interest in sustainable agricultural practices, leading to potentially large social and environmental recovery costs.³⁵

²⁵ Sivarakasa, Sulak (1990)

²⁶ Krongkaew, Medhi. (1989)

²⁷ NESDB (1983)

²⁸ Krongkaew, Medhi. (1986)

²⁹ Meesok, Oeg Astra., Tinakorn, Pranee., and Vaddhanaphuti, Chayan. (1989)

³⁰ Setboonsarng, Suthad. and Evenson, R.E. (1991)

³¹ Setboonsarng, Suthad. and Evenson, R.E. (1991)

³² Kunstadter, P. (1989b)

³³ Arbhabhira, Anat. et al (1987)

³⁴ Tingsabadh, Charit. (1989)

³⁵ Kaosaard, Mingsarn and Rerkesem, Benjawan (1999)

Reliance on rapid economic growth to reduce poverty failed to reach the poorest areas. Government welfare programs were, according to the World Bank, limited, uncoordinated and, in many cases, ineffective. Accordingly, improved administration of resource allocations to poverty areas, and fewer and better managed and funded programs were recommended.³⁶ Social sustainability requires welfare systems as well as cultural identity, improved social mobility, and the creation of institutions able to efficiently administer government programs.³⁷ These may now be considered in the light of a range of experiences previously considered to be beyond the purview of government.

Rural development can benefit from pilot experiences in environmental and social areas, using such techniques as electronic media,³⁸ revival of social institutions like water user groups,³⁹ and appropriate technologies.⁴⁰ The critical importance of agriculture is recognised in small yet powerful components of Thai society⁴¹ which understand its high levels of social and production efficiency,⁴² and need for efficient resource laws⁴³ to reorient decision making. The existing situation of, for example, open access to water,⁴⁴ and its allocation on administrative or technical rather than economic or social principles,⁴⁵ has supported investment in dams,⁴⁶ including renewed consideration of the Mekong Pa Mong Dam, to increase returns from agriculture.⁴⁷ The need for specific natural resource management policies has been clear since the 1970s⁴⁸ when legislation was proposed for the National Environmental Quality Act (1975), although its effective use has been minimal.⁴⁹ Perhaps foreign environmental and social concerns attached to trade and market conditions⁵⁰ will catalyse such change, as seems to

³⁶ World Bank (1999d)

³⁷ Serageldin, I. (1996)

³⁸ TDRI (1987)

³⁹ Attwater, R. (1998)

⁴⁰ Kaosaard, Mingsarn and Mrerkesem, Benjawan (1999)

⁴¹ Chanthalakakhana, Charana and Skunphan, Phakaphan. (1999)

⁴² TDRI (1992)

⁴³ Siamwalla, Ammar, Setboonsang, Suthad. And Patamasiriwat, Direk (1987)

⁴⁴ Christensen, S.R. and Boon-long, Areeya (1994)

⁴⁵ Kaosaard, Mingsarn and Kositrat, Nisakorn (1993)

⁴⁶ Hirsch, P. (1998)

⁴⁷ Mekong Secretariat (1978)

⁴⁸ TDRI (1986)

⁴⁹ Charoenpanij, Sriracha (1989)

⁵⁰ Falvey, L. (2000)

be the case with forest destruction.⁵¹ Certainly, Thai intellectual and foreign influence since the 1997 Asian financial crisis has highlighted such issues.

The context for the future of Thai agriculture is determined by trends of the past. While the 1997 crisis had specific impacts, these probably have little effect on long term price trends of agricultural products, shifts from trade barriers to quality assured specifications, and continued development of other sectors, with consequent reduction of the proportional importance of agriculture. Within Thailand, trends identified in the current decade⁵² remain important, including:

- increasing capital intensity in agricultural production
- increasing migration to cities of poorer farmers
- increased political polarisation between city and rural areas.

With these outcomes, despite other policy intentions, alternative approaches, including self-sufficient agriculture and rural social programs, are receiving some credence among the widespread financial plans emanating from the Asian crisis.

The Asian Financial Crisis

The crisis provided an opportunity for more reflective decision making than had recently been evident; nevertheless, much analysis of agriculture in the post-crisis period related to its income production capacity. Currency depreciation was expected to favour agricultural exports following the crisis, but global market variations, impediments to rapid response through the early months of the crisis, and rising interest rates combined to limit benefits. Despite Thailand's pre-eminence in rice and rubber export, declining prices outweighed increases in export volume of these products, resulting in reduced export income in 1998. However, notwithstanding adverse climatic and market circumstances, agricultural production rose by 2.5 percent in 1998 compared to falls of 7.5 percent for manufacturing, 22 percent for construction, and 7.1 percent for the services sector.⁵³ Agriculture already has slipped from the confidence-building rhetoric of 2000⁵⁴ which aims to indicate early recovery from the crisis by such means as claiming reductions in national debt, from private sector adjustments, despite new large IMF and other borrowings.⁵⁵

⁵¹ Sadoff, C.W. (1992)

⁵² Ieosriwong, Nithi. (1993)

⁵³ Warr, P. (1999)

⁵⁴ Leekpai, Chuan. (2000)

⁵⁵ Leeaham, Pisit (2000)

The renewed if temporary interest in agriculture⁵⁶ was clearly related to its export income⁵⁷ through which it mitigated the full effect of the first year post-crisis while international support was being garnered. As Thailand slipped to become the ninth largest global debtor, with the highest proportion (38 percent) of short term debt,⁵⁸ recent objections to foreign assistance were reconsidered and official external assistance in 1998⁵⁹ rose to \$10.4 billion. At the same time, rural communities absorbed unwanted labour returning from cities, in turn displacing employed women.⁶⁰ The disparities which caused the problems of the rural sector although foreseen,⁶¹ remained unheeded until wider consideration of the crisis stimulated concern about social and political issues surrounding agriculture.

The crisis largely undid past gains in reducing rural poverty. Stabilising and restructuring of the economy has now shifted to the three objectives of; restoring economic growth through structural reforms, ensuring that poorer segments of the society are insulated from effects of the crisis and recovery, and encouraging reinvestment of international capital. While the World Bank predicts that recovery will take longer than that of the Mexican and Argentine crises of 1994, official optimism aims to mobilise the international community to allocate aid and investment resources.⁶² However, the tentative and conditional language which continues to dominate research documents, suggests that Thailand and Indonesia are in great depression similar to USA and Germany⁶³ in the 1930s.

A fall in domestic consumption of 11 percent caused GDP to contract by 9.4 percent in 1998, with consequent reductions in private investment by almost 50 percent. Essential government budgetary cuts of 18 percent in the first half of 1998 exacerbated economic contraction, until a possibly stable position is found of 12 to 24 percent reductions in real wages.⁶⁴ The unemployed population, including the seasonally inactive labour force, increased to more than 11 percent

⁵⁶ Phongpaichit, Pasuk. (1999)

⁵⁷ Paopongsakorn, Nipon (1999)

⁵⁸ World Bank (1999b)

⁵⁹ ADB (1998)

⁶⁰ Siamwalla, Ammar (1999)

⁶¹ Akrasanee, Narongchai., Dapice, D. and Flatters, F. (no date)

⁶² World Bank (1998a)

⁶³ World Bank (1999d)

⁶⁴ World Bank (1999d)

of the total labour force during 1998, while poverty incidence in rural areas increased to 13 percent of the population.⁶⁵ Gaining investor confidence in such circumstances has been deemed a priority. Also important is domestic confidence and understanding, which recent surveys suggest are low; for example, a Suan Dusit Poll suggest that 69 percent of civil servants consider the economy continued to decline in the second quarter of 2000, and only five percent consider that the disparity between rich and poor has increased. At the same time, a Bangkok University survey indicated that only five percent of the general public consider that the existing bureaucratic system is efficient.⁶⁶

Potential for further profits from agriculture exist through the expected recovery period, although government approaches do not reflect innovation. For example, plans to extend credit to small-holders and cooperatives entail risks which have been detailed earlier. In social terms, the impact of the crisis appears in poverty statistics of the Northeast and the South where poverty respectively increased by 3.4 percentage points to 22.7, and by 4.2 points to 15.6. Labour availability in rural areas increased as rural migrants to the city returned unemployed to farms entering a drought period in 1998,⁶⁷ combining to exacerbated environmental impacts, which paralleled those resulting from private sector efforts to reduce debt through short term profit making.⁶⁸

The crisis exposed inadequacies of the Thai development model. Growth dependant on foreign capital and technology was proven unsustainable.⁶⁹ Industrialisation was revealed to have been only cheap labour-based assembly lines which used simple technology and thus masked the weakness of the essential role of education and research for an industrialised economy. Investment attracted for reasons other than cheap labour, except for logical expansion of agribusiness, included large scale speculation which tested the regulatory power of government and the culture itself, as it fuelled the highest global economic growth rates of the era. Now more realistically viewed, international business considers Thailand to

⁶⁵ RTG (1999)

⁶⁶ Nation (2000)

⁶⁷ Warr, P. (1999)

⁶⁸ Dauvargne, D. (1999)

⁶⁹ Leekpai, Chuan (2000)

be possibly a generation behind the education, training, and science of its peer neighbours (Table 15.1).⁷⁰

Table 15.1 *Competitiveness Indicators of Selected Asian Countries, 1999*⁷¹

Indicator	Unit ^a	Thailand	Singapore	Malaysia	Philippines
Years of Schooling	Bus perc'n	4.0	6.0	5.2	5.5
Primary Enrolments	%	73	94	91	100
Secondary Enrolments	%	57	72	62	79
Maths and Science Education	Bus perc'n	4.3	6.5	5.0	3.9
Staff Training	Bus perc'n	4.0	5.5	4.9	4.9
Management Education	Bus perc'n	4.9	5.5	4.8	5.9
Total Quality Management	Bus perc'n	3.8	5.4	4.5	4.5
Scientists and Engineers	Bus perc'n	4.3	5.6	4.6	4.6
Technology Transfer from Foreign Investment	Bus perc'n	4.9	6.2	5.8	5.4

^a Bus perc'n = Business Perceptions ranked on a scale of 1 to 7

World Bank loans to Thailand in response to the crisis are based on:

- restoring competitiveness through corporate restructuring, financial sector strengthening, and fiscal stimulus
- strengthening public sector governance through capacity building in private expenditure management, administrative reform, and privatisation
- sharing growth through support for the unemployed and the vulnerable, empowerment of local communities, and financing of social programs.

Once again, such foreign forces appear to determine the direction of the Thai economy.

Recovery from the crisis dominates much current analysis and planning. Reliance on generic Asian remedies,⁷² which ignore different economic structures between countries, can easily distract from Thailand's specific needs, which include support for rights of rural education and self actualisation through land and other reforms.⁷³ Trade policy similarly has special needs where the majority of the population is supported by agriculture, where it remains the major part of the

⁷⁰ Brimble, P. (1999)

⁷¹ Brimble, P. (1999)

⁷² Stiglitz, J. (1999)

⁷³ Putzel, J. (1999)

economy, and embodies much of the cultural values of the society. As the major regional agricultural exporter, Thailand continues to advocate fair and tariff-free market access, elimination of domestic subsidies, and rare and judicious use of export subsidies, while seeking minor concessions in the tariffication of rice. Yet farmers are expected to continue to be the most disadvantaged groups from such WTO agreements.⁷⁴ Small-holder agriculture including social issues will be the determinant of success in this decade, rather than national income from agricultural exports. The latter may require little input by government as the expected rise in demand for agricultural products should provide windfall profits to Thailand through its regional advantage as a reliable supplier of primary and processed products which can be further enhanced through improved competitive ability.⁷⁵ Gaining foreign investors' confidence is part of economic approach being pursued.

The Challenge

The forces on Thai agriculture now are global in the forms of market pressures and foreign influence associated with economic stabilisation. The overall environment for the significant change which will affect agriculture is created by a new Constitution approved in late 1997, which aims to reduce corruption, and to improve public expenditure management and service delivery. Among other reforms, it also provides for universal access to education through grade 12, and the involvement of the private sector in educational delivery.⁷⁶

Thailand's comparative advantages in agriculture are difficult to determine⁷⁷ at present, as wage rates, availability of capital, adaptability of technologies, and confidence of producers adjust to post-crisis norms. Trends suggest that horticultural and livestock products will be of importance, while traditional crops, particularly rice, will continue to decline.⁷⁸ Further uncertainties exist about environmental and social policies,⁷⁹ outcomes of domestic and regional competition for water,⁸⁰ returns from flood irrigated agriculture, and the reliability of water

⁷⁴ Malhotra, K. (1999)

⁷⁵ BTI (1999)

⁷⁶ World Bank (1999c)

⁷⁷ Siamwalla, Ammar (1992)

⁷⁸ Paopongsakorn, Nipon (1995)

⁷⁹ Siamwalla, Ammar, (1999)

⁸⁰ Setaputra, Sacha, Panayotou, T. and Wangwacharakul, Vute (1990)

catchments.⁸¹ These might only be reduced by lower production costs⁸² associated, not only with yield increases,⁸³ but with increased quality,⁸⁴ and development of new processed products.

Such opportunities accrue to commercial agriculture which increasingly must accommodate consumer preferences, such as pesticide-free food, biologically safe products, and assurances that products are produced in a responsible manner.⁸⁵ Demand for higher priced food items by richer urban enclaves in China or India may also suit Thailand, more so if the food security policies of those countries fail.⁸⁶ However, there is no panacea in linking market reform and credit-based intensive agriculture to development.⁸⁷ Self-sufficient farmers seeking to sell a small surplus may not readily benefit from such innovations as the WTO 20 percent reduction in subsidies on agricultural products in more developed countries, even though it should open markets to commercial Thai agriculture. WTO reductions in import duties of around 24 percent, on the other hand, would certainly challenge subsidised Thai agricultural commodities, particularly soya beans and sugar.⁸⁸

Official development assistance, which has often introduced Western concepts of equity to development, is presently poised to again support Thai agriculture. Receipts in 1990 of 0.9 percent of GNP contrast with immediate pre-crisis (1997) receipts of 0.4 percent, reflecting a declining donor influence in the economy. Since 1997, foreign assistance projects can be viewed as indicators of policy directions, with influence extending beyond financial contributions from conditional loans accepted by government in the absence of other funds. For agriculture, projects will focus on, in the case of the Asian Development Bank⁸⁹ for example; further increases in productivity, enhanced export competitiveness, and improved sector governance and management. Specific activities include improvements to watershed and soil management, land utilisation, access by the poor to credit, farmer driven research and extension, and reduced government

⁸¹ van Beek, S. (1995b)

⁸² World Bank (1986)

⁸³ Evans, L.T. (1998)

⁸⁴ Isvilanonda, Somporn and Poapongsakorn, Nipon. (1995)

⁸⁵ Erath, H. (1999)

⁸⁶ Yifu Lin, Justin (1998)

⁸⁷ Zeller, M. and Sharma, M. (1998)

⁸⁸ Itharatanna, Kajonwan (1999)

⁸⁹ ADB (1999)

Table 15.2 Grants (G) and Loans (L) to Agriculture (currencies in millions)⁹⁰

Source and Type	Subject of Project	Amount
Production and Environment		
European Union G	Fruit and Vegetable Production in the Northeast	EU B283; RTG B180
European Union G	Pilot Rubber Tree Cultivation in the Northeast	EU B19; RTG B6
European Union G	Development of Silk Production in the Northeast	EU B362; RTG B3
Japan, JICA G	Dairy Farming Development in the Central Region	na
Denmark G	Management of the Western Forest Complex	DK 14.8
Denmark G	Sustainable Agricultural Development	DK 25.4
Germany G	Regulatory and Policy Reform for Pesticides	B67
Japan, JICA G	Reafforestation and Extension in the Northeast	na
Japan, JICA/OECF L	Integrated Development of Land Reform Areas	Y3,617
World Bank, Australia L	Land Titling Project Phase III	\$25.3
Canada G	Natural Resources and Environmental Management	Can \$8.9; RTG B81
European Union G	Decision Support for Coastal Area Management	EU 0.385
European Union G	Community Participation in Mangrove Management	EU 0.902
European Union G	Natural Resource Management, Mae Chan	EU 0.216
European Union G	Phu Khieo Wildlife Sanctuary	EU 6.0 (indicative)
World Bank L	Natural Resources Management	\$200 (indicative)
Quality Improvement, Processing and Marketing		
Japan, JICA G	Chiang Mai University Plant	na
Japan, JICA G	Research on Quality of Fisheries Products	na
Japan, JICA G	Research on Forestry and Agricultural Plant Materials	na
USA, Japan, Australia,	Support to the National Center for Genetic	
Denmark G	Engineering and Biotechnology	na
Rural Credit		
Germany G	Linking Self-Help Groups to Banking Services	DM 7
Japan, OECF L	BAAC Credit for Rural Development	Y12,300
Japan, OECF L	Agricultural Credit for Job Creation	Y18,360
European Union G	Social Support Project	E15
European Union G	Northeast Poor Farmers Scheme	B343
ADB L	Rural Enterprise Credit Project	\$200
ADB L	Small Farmers Credit Project	\$50
Institutional and Agricultural Support Service Strengthening		
Australia G	Agricultural Research and Development Support	Small Grants
France G	Cotton, Rubber, and Peri-Urban Vegetable	na
FAO, UNDP, UNIDO G	Agricultural Resource Management Program	Local
Japan, JICA G	Land and Water Conservation Center	na
Japan, JICA G	National Institute of Animal Health Project Phase 2	na
Japan, JICA G	Technical Assistance to MOAC	na
CGIAR G	Basic and applied research, development and training	na
Agricultural Infrastructure and Water Resource Development		
European Union G	Northeast Water Management Improvement	EU B870; RTG B518
EU, Belgium. G	On-Farm Development, Huai Mong Irrigation	EU B166; RTG B300
Rural Development and Social Projects Related to Agriculture		
Canada G	Assistance to Local Development Foundation	C\$8.1
Canada G	Regional Rural Development Programs	na
UNDP G	Sustainable Poverty Alleviation	\$6.8
UNDP G	Thai-United Nations Collaborative Action Plan	\$0.25
Germany G	Community-based Integrated Rural Development	DM 8.8
World Bank L	Social Investment Program	\$120

⁹⁰ ADB (1999)

procurement and subsidy. The assumption that credit can assist poor farmers continues to pervade most such plans, thereby indicating continued tacit orientation to national wealth creation as the central poverty alleviation policy. Current external assistance to the agricultural sector includes a range of small projects, including many of significance in the NGO sector (Table 15.2).⁹¹ Some 18.8 billion baht disbursed through Cabinet to assist post-crisis agriculture up to the first quarter of 2000, has targetted irrigation, product quality, research capacity, economic zones, and institutional restructuring, with a power-shift from MOAC to NESDB. Separate poverty reduction policies remain an imperative.

Improved general education is perhaps of greatest benefit to natural resource management, as it enables adoption of appropriate technologies with a concomitant decrease in pressure to open new lands.⁹² Recommendations in science and technology now include social considerations, not just as a field of imported ideas, but as one to:⁹³

- create new types of employment without eliminating old ones
- reduce job tedium rather than make workers machinery components
- increase personal and national income evenly across industrial and agricultural sectors
- increase productivity and economic diversity without incurring greater pollution
- improve infrastructure without increasing urban congestion or rural disintegration
- acknowledge increased global integration without loss of Thai identity.

The beginnings of policies, which encourage self-sufficiency as a choice within an improved rural social service provision, and for enhanced natural resource management, may be contained in such sentiments.

It seems likely that specific natural resource management plans⁹⁴ will evolve. In social terms, these may be linked to agro-ecological thought through practical self-sufficient agriculture, as a major component of balanced rural development which acknowledges the independence of Thai small-holder lifestyles. Experience to date favours such embracing development approaches, together with such lessons as:⁹⁵

⁹¹ ADB (1999)

⁹² TDRI (1998)

⁹³ Yuthavong, Yongyuth and Wojcik, A.M. (1997)

⁹⁴ Arbhabhirama, Anat. et al (1987)

⁹⁵ Kaosaard, Mingsarn (1998)

- agricultural and poverty alleviation policies should not be confused
- technology development research should be encouraged and increased
- prices and markets of agricultural raw materials should not be manipulated
- extension to advanced agriculture should be privatised
- long-term loans should be provided to farmers in association with agribusiness
- tariffs should be reduced
- agricultural value adding industries should be promoted
- natural resource management should be enhanced
- farmers should participate in development planning
- export quality control and marketing should be improved
- government agencies should be reorganised to meet new priorities.

Such recommendations span commercial agriculture and agribusiness and provide potential benefits to the whole rural sector. However, near subsistence small-holders require a different approach. While it is implied that this can be delivered by separation of agricultural from poverty alleviation policies, the latter must acknowledge self-sufficiency which sells surplus production. Agriculture embraces social more than financial and technical sectors while the majority of the Thai population are involved in it and earn little. As financial institutions such as development banks must take a financial perspective, even on social programs, government with their many unsolicited advisers, remains the obvious responsible voice for small-holders. With a highly educated public service and improved bureaucratic procedures, such a new role for government in agriculture and rural development appears feasible, although considering traditions and external pressures, difficult.

Golden Cradle

The story of Thai agriculture, is largely one of wet rice culture, which built cities with God- Emperors, long after first food gatherers. With glutinous rice, migrating Tai sustained yields based on the *muang fai*, founding a sound governance device, for a civil State with surplus rice. Ayutthaya rose, secure and wealthy, while its rice was cared for and healthy, then foreign business arose and grew, as Thai numbers and new lands ensued.

Declining in a pure fiscal term, agriculture's real role remained firm for work, income, and social support, and from global force, an old resort. Imported plans allowed excesses, unredeemed by research successes as roles changed to knowledge extension, in the package of credit expansion. Agribusiness then as State right arm, sought to convert the small to a large farm, losing the complete production system, and social values of local wisdom.

Uniquely Thai, farming comprises, ancient irrigation contrivances, and governance based on water control, which support a primary export role. With agribusiness now multinational, foreign deals which mix need with the rational, and scope for increases from techniques known, Thailand seems set to reap what it has sown.

As a leader in chicken meat and prawn, and feeding more than four times its own born, from less intense farming than neighbours', markets portend more reward for labours. Yet equity, research, welfare, and schools, now shown as lacking along with law's rule, define social and nature's demise, in a land yet to industrialise.

Is it income or less poverty, or tradition informing policy, commercial or self-sufficiency? In fact it is all, with real equity. Sunthorn Phu's lament of bull powered mills, might today cause tears for buffalo killed, which is but part of lost social traditions, that form the challenge for rural transitions.