Cashew: the potential and the problems (The Nation, Bangkok, 16 June 90)

Promoting tree crops in the Northeast seems to offer a way of breaking the vicious circle of poor resources, poverty, low levels of investment and environmental degradation. The cashew industry's experience shows the potential and the problems, and provides some key lessons for cooperation between the government and the private sector.

Till recently Mr Udom Mamak and his neighbours in Chum Phuang, Korat, would net between 500 and 1,000 baht per rai from planting cassava. In 1986 he ploughed up ten rai of his cassava fields in order to plant a new, improved variety of cashew trees, expecting the trees to mature in four years and produce a net annual income of 2,200 baht per rai after eight years. Production should continue at least at that level, he was told, for a further twenty years with a less arduous labour requirement compared to cassava. A poor farmer's dream.

Or a nightmare on a grand scale. So far there are 22,000 farmers like Udom, smallholders who have given half or more of their plots to cashew. Together they have planted more than 200,000 rai of cashew since 1986 in 30 provinces primarily in the Northeast, and there are plans to increase this area to more than 500,000 rai by 1995.

Will the predicted yields materialise? Most of the farmers are planting a single variety of cashew for which the background research is not fully documented and which is not certified by the Department of Agriculture.

On the other hand, good yields will mean massive output compared to Thailand's present cashew production levels. Domestic prices could collapse unless the nuts are good enough and the salesmen skillful enough to claim a sizeable share of the world cashew market.

RESEARCH

The potential for cashew in the Northeast was recognised about 1980 and both the government and private sector have been working on it since then. They are focussing not on the traditional varieties grown in the South, but on improved varieties which should give better yields and bigger nuts which can be sold in the USA, the destination for 65 percent of the world's cashew exports.

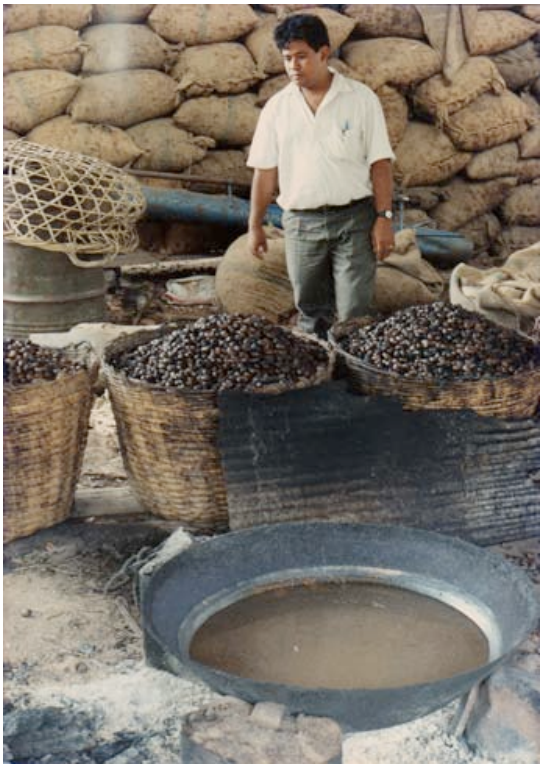
The Department of Agriculture has a comprehensive research programme, orchestrated by Mr Prasert Anupant at the Sisaket Horticulture Research Centre and supported technically and financially by the EEC as part of its cassava diversification assistance to Thailand. The research programme is designed to identify cashew varieties which perform well in the poor, sandy soils and dry climatic conditions of the Northeast.

The research has been exemplary and three varieties -- SK-A, SK 60-1 and SK 60-2 -- have been recommended for adoption by farmers. Preliminary findings suggest that two or three other varieties will perform even better than those recommended so far.

Cashew turns out to be well suited to large areas of the Northeast region, and particularly to the same types of soils as those most commonly used for cassava production. Consequently unlike some other "cassava substitution" crops, cashew is a direct replacement in that it can be and in practice usually is planted on land which was formerly under cassava.

Cashew is also good from a conservationist viewpoint because the mature trees will provide a permanently protective canopy, a contribution to the Government's "greening of the Northeast" policy.

Most importantly, the financial returns to the farmers are attractive, at least on paper. The expected difference between the farmers' cassava and cashew income is more than enough to offset the losses incurred during the immature period and justify the



farmers' initial investment. If all goes to plan Mr Udom's cashew plot will raise his net household income by 40 percent over the ten year period after planting.

An added benefit is that shelling the raw nuts is a labour intensive process which holds the promise of extensive job creation in the rural areas. One small shelling enterprise in Chum Phuang district shows the potential for income from cashew processing.

At current prices the company buys raw nuts at 18 baht per kilogram. Processing involves boiling, shelling with a simple hand operated machine, roasting, peeling off the fibrous pericarp and packing in plastic bags. All this costs less than 10 baht per kilo of raw nuts, including labour costs.

Those raw nuts yield about 220 grammes of kernels which can be sold for 40 baht. Seven workers can complete all stages of production for about 30 kilograms of kernels per day, with a sale value of 5,400 baht.

The investment costs for a simple shelling business are modest: the oven is the costliest item. And the skills are not difficult to learn. There is no reason why small groups of farmers could not shell their own nuts, and improve their cashew earnings even more.

So far so good, but these attractions are on paper, not in the farmers' fields and pockets. Translating research findings into an effective planting programme is one of Mr Prasert's main concerns and he is the first to admit that there is as yet no effective model. Ironically, while Praseut's programme has been so successful, relatively few farmers are planting any of the SK cashew varieties.

"If we cannot find a way to get our seedlings and knowledge to many more farmers very soon," says Prasert, "all the potential areas for cashew will be planted to other varieties which are less good than ours."

FARMERS

Independently of Prasert's activities the Mah Boonkrong Sirichai Cashew Nuts Company is the biggest player in the Northeast's emerging cashew industry. They are responsible for most of the planting which has taken place since 1986 using the company's own Sirichai 25 variety. Most of Mah Boonkrong's promotion has been carried out within the framework of a contract with the Bank for Agriculture and Agricultural Cooperatives (BAAC).

Under this contract the Bank's field staff assist in identifying areas and farmers suitable for the project and arrange for long term loans. The company sells the seedlings to the farmers, provides extension services in the form of monthly visits to each project plot and guarantees for ten years to buy the product at either the market price or at an agreed minimum price of 12 baht. The company is bound to the contract by a bank guarantee in favour of the BAAC.

The areas planted have kept up with the targets. Moreover many of the farmers involved are in government-planned settlement areas which were designed for the landless, and so are genuinely small -scale farmers. Mr Udom is typical of the project farmers in Chum Phuang and has a total of 27 rai, including 12 rai of paddy land.

Independent monitoring studies show that the standard of field management is generally satisfactory though it varies considerably between the several separate schemes covered by the project, and between farmers. Mah Boonkrong field officers in Chum Phuang estimate that for every 100 farmers in the project, 20 or 30 have difficulty in sticking to the technical guidelines. The problem farmers are usually those who have to spend time away looking for off-farm income.

It is too early to say how many of the farmers will achieve the expected yield levels once the trees are

mature. But the early signs are promising. In Chum Phuang the trees began bearing in the second year, two years earlier than expected. In the third year, 1989, production levels generally equalled the levels predicted for the fourth year.

The quality of the nuts has been good. Fifty five percent of the 1989 production was of Grade A standard, about half the rest was "Super A", the highest grade, and the balance was Grade B.

The company shells and packs the nuts in its Korat factory. The factory will eventually be able to handle 10,000 tonnes of raw nuts per year. Results for 1990 are not yet final but so far about 80 percent of Mah Boonkrong's purchases have been of Grade A standard.

But there are dangers. The industry could be undermined by disease and insects. Many farmers have already encountered problems with aphids which, combined with the effects of prolonged drought, resulted in disappointing yields in Chum Phuang in 1990. Training and extension are still needed in this area. The dangers are accentuated by the fact that so many of the new plantings have been of a single variety, Sirichai 25. A variety-specific disease could destroy much of what has been achieved so far.

These dangers underline the importance of good research and the urgent need for the government sector to form an alliance with one or more private companies. This would ensure that its own SK varieties are effectively distributed among many more farmers and that those farmers have the necessary technical support.

The TC Alpha Jibsen Company entered the arena in this role in 1988 and is transferring most of its cashew operations from the traditional cashew areas in the South to take advantage of recent developments in the Northeast, especially Sisaket.

Its project is on a small scale compared to Mah Boonkrong's, and it is at an early stage of development. Like Mah Boonkrong, Alpha Jibsen is able to provide technical support for participating farmers and to buy their nuts at an agreed price. But dealing with SK varieties may give the company an advantage in establishing export markets.

Alpha Jibsen also differs from Mah Boonkrong in their favourable attitude towards having farmer groups shell their nuts and sell kernels to the company.

A working partnership with the government's research centre in Sisaket should prove to be a low-cost, winning strategy for them and for the farmers who have until now had inadequate technical support for their new plantings of SK varieties.

MARKETS

These companies' ambitious planting programmes mean that the area planted to cashew in Thailand will have doubled between 1985 and 1990, and may double again within the next five years. Given that these trees are of an improved variety Thailand's production should increase by an even greater proportion. Based on a conservative projection of yields, the increase in Thailand's production which can be expected from the Mah Boonkrong project alone will by the mid-1990s amount to more than four times the present level of Thai cashew exports.

Will they be able to sell the product without creating a surplus and triggering a disastrous decline in local prices? This is the main concern for many observers, but Mr Pinit Suvanajata, Managing Director of Mah Boonkrong and Dr Wattana Keovimol, President of Alpha Jibsen, both say the real problem is not a surplus but a shortage. Mah Boonkrong has set up 250 sales booths in stores in Bangkok, and last year the company could keep them supplied for only eight months.

The company expects the local market to expand as a result of rising incomes and their own sales promotion activities. They plan eventually to open 1,000 retail outlets which should absorb 25 percent of their production. The balance will have to go on to the world market and there are differing opinions about how much that market can absorb and how effectively Thailand can compete with the established producers in Brazil, India and East Africa.

Cashew is a relatively expensive "luxury" nut comparable with almonds and Brazil nuts and except for India's and China's reexport trade the world cashew market is mainly in the developed countries. On the other hand Thailand's existing cashew export channels are mainly to other Asian countries, and its reputation among international cashew dealers is based on its traditional lower quality nuts.

Exporters are trying to establish the contacts which they will need to break into the high quality and high price markets of North America and Europe. Mah Boonkrong recently contracted to sell 3,700 of raw nuts to a European company, though again, the shortage of nuts means they expect to supply no more than half this amount.

Total worldwide production and trade have declined slowly over the last decade. It has been suggested that this decline results from changing tastes among consumers: cashew is high in calories and may therefore become less attractive to increasingly health-conscious Americans and Europeans.

Another reason for the decline in the world cashew trade is the poor state of the industry in East Africa. This gives grounds for believing that there is now a substantial unmet demand which Thai producers can help satisfy. The rising trend for world cashew prices for the last decade supports this view.

Consumption in non-traditional markets such as Asia's NICs can be expected to increase. Thai exporters' already -established connections in the fresh -fruit and vegetable trade should enable them to compete effectively in these markets.

Markets could be developed in cashew by-products. These could be important to both the farmers and the companies, particularly if there are problems in selling the nuts. Oil can be extracted from the shell of the nut, and a processing facility will surely be set up sooner or later.

Brazil has a large domestic market in cashew apple products, including the fresh fruit, juice, wine and preserved fruit in various forms. Brazilian farmers are said to make higher incomes from selling the apple than they can get from selling the nuts. They can't sell both: the apple ripens long before the nut, and withers to almost nothing as the nut develops.

Since there is at present no market for cashew apple products in Thailand, and plenty of alternative fruits are available, the development of this side of the industry seems doubtful. Mah Boonkrong regards by-products as second strings to its bow, and the effort that they may put into by-product processing and marketing will depend on their success with the nuts.

A wish-list for projects aiming at the long-term development of the agricultural sector would be that they should be environmentally and financially sound, based on an analysis of market needs and a thorough research programme, supported by active cooperation between the public and private sectors, accessible by small-scale as well as large-scale farmers, capable of supporting small-scale processing plants in the rural areas and capable of enhancing the pool of skills among the farming population.

The cashew industry meets most of these criteria well. Cashew's suitability for the Northeast is not in question. The government has a good research programme. The private sector has accepted the risks involved in developing markets, and has vigorously and successfully promoted large-scale plantings and paid for good technical support in the fields. Mr Udom's prospects would be much brighter if government and business could get their act together.