The Voluntary Export Restraint Agreement between Thailand and the European Economic Community on Cassava*

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THE STORY UP TO 1980

The Roots of the Thai-EEC Cassava trade

Cassava trade with the European Economic Community (EEC) is entirely a creature of the Common Agricultural Policy (CAP), and of the binding made by the EEC in the Kennedy round to maintain its tariff on cassava root and chips at 6%, and on soybean and soybean meal at zero. The CAP maintains cereal prices within the EEC at a much higher rate relative to their world price. As cereal is mostly carbohydrate plus a bit of protein (cassava is almost entirely carbohydrate, and soybean meal is rich in proteins) a combination of cassavá and soybean meal therefore substitutes closely for cereals. Thus, 0.77 kg of cassava could be mixed with 0.20 kg of soybean meal to replace 1 kg of barley in pork rations (Koester 1982: Table 19). Most importantly, because of the differentials in border taxes between this cereal substitute and the cereals themselves, European feed compounders began to find it profitable to introduce this and other similar cereal substitutes into their rations. And because this precise combination of circumstances is peculiar to the EEC, only the Europeans are major consumers of cassava as feed. Indeed, supplying countries find it more profitable to ship the rather bulky cassava to Europe than to use it for their own livestock.

The demand thus generated readily found its supply. Cassava can be produced in any tropical country and, because it is an undemanding crop, is usually grown on the poorest soils. Traditionally, it is considered not only a subsistence crop, but the subsistence crop of the most marginal of farmers. The two countries initiating this trade, Brazil and Indonesia, were the source of the cassava that was shipped to Europe in the mid-1960s--the early days of the trade.

Over the next decade, however, one country, Thailand, came to dominate the cassava trade to the EEC, capturing over 90% of the market. In the beginning, the Thais were hardly the leading producers of cassava; in fact, in 1961 the Thai share of world cassava production was a miniscule 0.6%, a figure easily dwarfed by Brazil, Indonesia, Nigeria and Zaire (ITC 1968: 25). The problem with the other countries was that their cassava was (and is) mainly produced by subsistence farmers who consume most of what they produce. The marketed surplus was thus usually quite small and its volume uncertain. Thailand, on the other hand, was sitting on a large amount of surplus land, had newly acquired access to roads, and farmers and merchants attuned to producing for the market. The conditions were thus ready for the explosive growth of Thai cassava production to feed the livestock industry of Europe (Figure 1). Between 1967 and 1980, cassava production in Thailand doubled every 3-4 years, and the tonnage exported grew from 374,000 to 4.96 million metric tons.

It is doubtful if Thailand's comparative advantage rests on the special suitability of its soils for cassava production. As has been pointed out, cassava can be grown on almost any tropical soil. The factor that favored Thailand rested more on its transport cost advantage. Cassava is a bulky crop: when it leaves the farm as fresh root, it fetches only 3 cents per kg. All the processing that is done to it is basically to reduce its bulk to economize on transport costs. The fresh root is first chipped and then sun-dried in a simple process which removes about 60% of the weight. Before 1970 these chips would enter international trade without further processing; after that date, however, it was more common for the chips to be pelletized, i.e. squeezed into the shape and size of cigarettes1. This takes a further 4% off the weight, but the main purpose of the pelletization is to reduce the bulk of the cassava, making it possible to pack a greater tonnage in ships' holds.

Some of the processing and transport steps involved in getting cassava from Thai farms to European ports are subject to significant economies of scale. Perhaps the most important occurs at the final stage, transportation to

* *The historical narrative in this section profited enormously from two pieces written by Somboon Siriprachai (1987, 1988).*

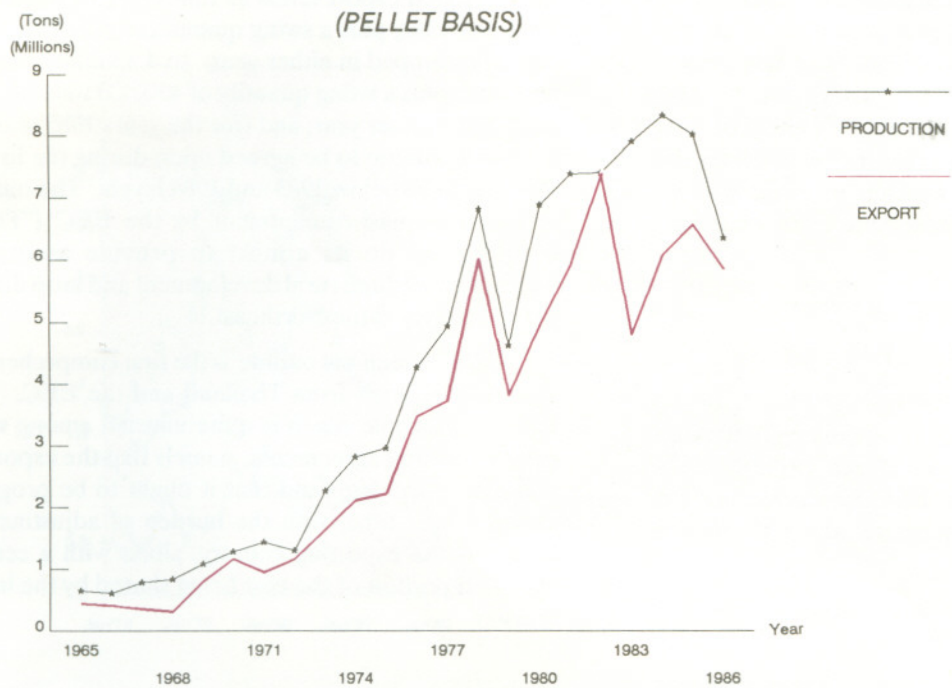

Figure 1

Production and Export of Cassava

Source:
Production from the Ministry of Agriculture and Co-operatives
Export from the Department of Customs, Ministry of Commerce

Europe. By the latter half of the 1970s, cassava pellets from Thailand would be shipped in 60,000-ton (or in many cases, 100,000-ton) ships, which were chartered especially for that purpose. By that time, annual exports from Thailand had already reached 6 million tons, and therefore it was worthwhile for traders to acquire ships on a time-charter basis. To serve the large volumes involved, large on-shore loading facilities had to be erected; however, with the rapid growth in trade volume, private investors found no trouble in obtaining needed capital.

The economies of scale, once acquired, became a significant barrier to entry by other would-be cassava exporters, and reinforced the trade lead acquired by Thailand. The factors thus outlined on both the demand and supply sides led to EEC dominance (on the import side) and Thai dominance (on the export side) of world trade in cassava as feed[2].

The Structure of the Trade: the European Side

All cassava that is not converted into tapioca flour is used by feed compound mills. This industry, particularly in the Netherlands (to which more than half of Thai cassava usually finds its way), is dominated by livestock producer cooperatives. These mills combine the various feeds in least-cost combinations determined by linear-programming models appropriate for various animals. They then ship the feed compounds to livestock producers. While the largest of these compounding plants regularly buys 500-600,000 tons of cassava pellets annually (slightly less than 10% of the total market for Thai cassava in Europe), the number of feed compounding mills using cassava in Europe is quite large, running into several hundreds.

Supplying feed compounders with the cassava was a group of companies called "carriers." Up until 1980 there were four of these: Peter Cremer, Toepfer, Krohn, and Tradax, the last being a subsidiary of Cargill, the grain-trading multinational, and the others being European grain-trading companies. They made long-term (six-month) commitments to buyers in Europe, chartered the giant vessels used in the cassava trade, and acquired title to the goods when the cassava entered the ships' holds in Thailand. These "carriers" are thus the real exporters of cassava from Thailand, despite the existence of another group labelled "exporters" (see next subsection below).

Almost the entire amount of cassava imported into Europe was used by the Netherlands and West Germany, with the former taking up about 46% in 1980 (although other countries, particularly Belgium and France, were rapidly expanding their imports).

The Structure of the Trade: the Thai Side

In Thailand, the cassava trade was organized as follows. The four foreign "carriers" made long-term (also six-month) contracts with Thai traders--labelled "exporters," although they only delivered cassava pellets to the carriers free on board (f.o.b.) the vessels. The exporters, in turn, bought their cassava from the pelletizing plants (typically located up country) who collect raw materials from the chipping plants located in the producing areas. Trade from the exporter backwards to the farm level is on a spot basis.

In the earlier stage of the trade, cassava production was located mostly in the eastern seaboard provinces. Two of them, Chonburi and Rayong, produced 61% of all cassava root in 1970. Then, as the Northeast road network expanded, it became economical for that region to start growing the crop also. By 1980, the region's share of total production was 61%. Considering that the Northeast is the country's poorest region, the adoption of cassava as its farmers' main cash crop was a great boon to its economy.

THE END OF THE GOLDEN AGE 1980-1982

The First Agreements with the EEC, 1979-1980

In the late 1970s, the Thai government was told by the EEC that it could not look forward to continued unlimited expansion of the cassava trade. In March 1979, the Thai Minister of Commerce and the EEC Commissioner for Agriculture signed agreed minutes in which the major points were:

- Thailand's agreement to limit the export level in 1979 to the level achieved in 1978;
- A suggestion by the EEC that the Thai government might "consider the introduction of a levy on tapioca exports which should result in some increase in export prices, and that the proceeds from such a levy could be used for crop diversification and, where necessary, for financing the cost of absorbing tapioca in excess of requirement, so as to stabilize agricultural incomes";
- A declaration by the EEC of its intention to initiate an article XXVIII action to unbind the tariff for cassava as committed in 1967. The declaration was immediately followed by a statement to the effect that this unbinding was to ensure that other countries did not "undermine specific arrangements with Thailand."

From a long-term perspective, the last point is the most important. Thailand at that time was not a GATT contracting party, but benefitted from the binding on account of the most-favored-nation agreement signed between the EEC and ASEAN (the Association of Southeast Asian Nations, which, at that time, comprised Indonesia, Malaysia, the Philippines, Singapore and Thailand). In this respect, the cassava story differs fundamentally from the voluntary export restraint agreements for industrial products (e.g. automobiles) in which there is a more limited degree of substitutability in the supply from different sources.

The Thai government was willing to limit 1979 exports to 1978 levels because the earlier year was an extraordinary one. In 1978, high cassava prices induced growers to dig up a considerable supply, which was no longer available in 1979. There was also a drought in 1979. Thus, 1979 exports were 32% lower than 1978's without the government having to undertake any action to limit them. In November 1980, an outline of arrangement was initialled by the Thai Minister of Commerce and the EEC Commission for Manufacture which limited export levels as follows: to 5 million tons in 1981 and 1982, plus a swing quantity of 500,000 tons which could be shipped in either year; to 4.5 million tons in 1983 and 1984, plus a swing quantity of 450,000 tons which could be shipped either year; and (for the years 1985 and 1986) a further limitation to be agreed upon during the first half of 1984 but to be below 1983 and 1984 levels. The outline also included a quasi-commitment by the EEC ("The Community shall do its utmost to provide assistance for projects....") to fund rural development and crop diversification programs in the Northeast.

This agreement outline is the first comprehensive one signed by officials from Thailand and the EEC. It established a principle which is quite unusual among voluntary export restraint agreements, namely that the export level is considered too high and that it ought to be progressively reduced over time, with the burden of adjustment being borne by the exporting country, albeit with a certain unspecified portion of the cost being shared by the importing country.

The Attempt to Restructure the Export Trade: Some Experiments with New Methods of Quota Allocation

With the announcement of the quota, the DFT quietly encouraged exporters to form one carrier company, called Eurasian. And exporters with a combined market share of 62% of the total became shareholders in the new company and ceased supplying the other four carriers. The new company chartered its own vessels and shipped pellets to Europe. Then, the four-company cartel was dealt another heavy blow in June of 1981. The Chonburi pelletizers and growers, angry over sharply deteriorating prices (Figure 2), demonstrated against the government. As a consequence of this experience, the Minister of Commerce was forced to announce the end of the quota system and a return to free trade in cassava.

Notwithstanding the ministerial announcement, Ministry of Commerce officials felt bound by the outline agreement which precluded free trade and set the export "target" level for 1981 at 5.5 million tons, the maximum allowed in the agreement. During the first half of the year, the tonnage already shipped was over 2 million tons, leaving 3.17 million tons to be shipped.

THE FINAL NAIL ON THE COFFIN: THE 1982 AGREEMENT

During 1981 and 1982, the EEC finally completed its Article XXVIII negotiations with Brazil, the initial supplier, and Indonesia, the principal supplier of cassava for the EEC, at least among the GATT contracting parties. Thailand was not yet a contracting party (it would formally accede only in September 1982). This agreement with Indonesia, in particular, established as tariff quota system, with the tariff for the initial quota level set at the old 6% at,

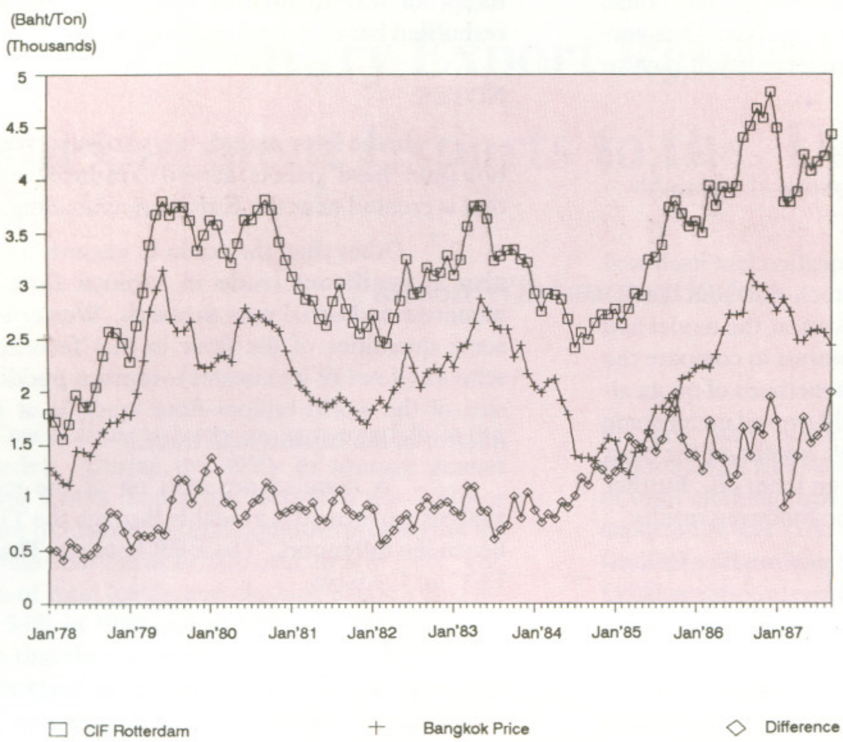

Figure 2

Cassava Prices in Bangkok and Rotterdam and their difference 1976-1987

Sources: Rotterdam Price from the Ministry of Commerce; Bangkok Price from the Thai Tapioca Trade Association, Peter Cremer Ltd., and Bank of Thailand

and the tariff for the amount in excess of that to equal the barley levy. This latter rate would make the cost of importing cassava prohibitively high. The EEC guaranteed Indonesia's share in the tariff quota at 85% of the amount allowed to all GATT contracting parties (which would of course exclude Thailand). The total quota set for all contracting parties was as follows:

1982	588,235	tons
1983	882,355	tons
1984	882,355	tons
1985	970,590	tons
1986	970,590	tons

The reason for the odd set of figures thus announced becomes clear if one multiplies each figure by 0.85 to obtain the figures 500,000, 750,000, 750,000, 825,000, 825,000 tons--the Indonesian quotas for the five years. Obviously this was the figure demanded by the Indonesians as the price for their agreement. Note also that the amount allowed Indonesia rose, unlike the amounts that were to be agreed on with Thailand.

Following this agreement with Brazil and Indonesia, the EEC entered into a "Cooperation Agreement on Manioc Production, Marketing and Trade" with Thailand. The main points of the agreement were to limit export levels: to 5 million tons in 1983 and 1984, plus a swing quantity of 500,000 tons which could be shipped in either year; and to 4.5 million tons in 1985 and 1986, plus a swing quantity of 450,000 tons which could be shipped in either year.

Reluctantly, and after some lobbying, the Thai government started negotiations with the EEC, which did result in an increased quota for Thailand, i.e. 22 million tons over the period 1987-1990 (Sathirathai and Siamwalla 1987).

The Final Shape of the Quota Allocation System

The quota allocation system for 1984 was devised by the Minister of Commerce himself. The principle of granting quotas to exporters who jumped through certain hoops was maintained, except that the standard of performance was changed. The quotas were divided into two types. The first, called "bonus quotas," were awarded to those who managed to export cassava pellets or chips to markets other than the EEC. As announced in 1983, for every ton thus shipped, the exporter was granted a quota of one ton for the EEC market. The second, residual set of quotas was to be awarded on the basis of the amount of stock held by the exporter on a particular date. This second type of quota was divided into seven lots. For each lot, a date was fixed. On that date, government officials from different departments, and representatives from various trade associations, would fan out to all the warehouses registered by the exporters and estimate the size of the stock they held. The quota for each export firm for that lot would be granted in proportion to the amount of the stock it held. It is clear that the objective underlying this particular method of quota allocation was to lift the domestic price of cassava. This was to be done by artificially raising the demand for cassava--in the one case, by dumping it overseas and, in the other, by increasing the demand for stock. This quota allocation system, with slight modifications--most importantly, the ratio of the bonus quota allowed for exports to non-EEC markets--has survived to the present. Given its relative longevity, it pays to examine, in some detail, how it works.

A Theoretical Analysis of the Final System of Quota Allocation.

The present system of quota allocation lent itself well to precise modelling. Because of the stock-flow problem involved in the storage-based quota allocation, the model had to be dynamic.[3] And it was of some interest to compare the consequences of these rent-dissipative methods of quota allocation against the situation that would prevail under some rent-retaining methods--such as to give quotas on the basis of historical performance, or to auction them off. Further analysis of the above model yielded the following results:

- *A quota system based on export performance* to non-EEC markets does raise the domestic price relative to what would prevail under conventional rent-retaining quota allocation methods. It may even be that the domestic price would be higher under this quota allocation system than under a totally free trade regime, particularly if the elasticity of demand were considerably higher outside the EEC than inside.
- *A quota system based on stock* has no permanent effect on the domestic price. Again this is relative to what would prevail under a rent-retaining quota-allocation method. Such a quota-allocation method has only a temporary effect on the domestic price when the measure is newly introduced. After the initial jump in price, it will subside to the level that would prevail had the quotas been auctioned off or allocated on the basis of historical performance.
- *Both these methods of quota allocation* have an ambiguous effect on the degree of domestic price instability. If the source of instability arises out of EEC demand fluctuations, under a rent-retaining method of quota allocation there would be zero fluctuation in the domestic price, but under the rent-dissipative systems that we examined, domestic prices would fluctuate. If the source of the price instability is supply-side fluctuation, then both of these quota-allocation methods would tend to moderate the price movement relative to rent-retaining methods. The bonus-quota system does so because of market diversity, while stock acts as the shock absorber against movement in primary supply.

The inefficiency of both of the methods presently used relative to rent-retaining methods is obvious. In the case of the bonus-quota system, there is a major anomaly that is seldom noted. At the present time, Soviet and Korean feedmills are obtaining Thai cassava at cheaper prices than Thai feedmills are. The obvious correction for this anomaly is to grant bonus quotas to those who sell cassava to Thai feedmills. The problem is to design an administratively foolproof way to prevent that same cassava from being reshuffled back into the market.

NOTES:

[1] In the later period, this particular type of pelletization (into "hard" pellets) served to reduce the dust pollution that is created near the European unloading facilities.

[2] Other than the trade in cassava for feed, there is also a significant trade in tapioca flour which finds numerous industrial uses as starch. Westerners also ingest some quantities of the flour in that favorite of boarding schools (if not of its inmates)--topioca pudding. The total size of the world tapioca-flour trade is at most about a quarter of the cassava feed trade.

[3] A detailed descripti on of the model and the analysis performed is available through the TDRI ARD office in the full report, "The VER between Thailand and the EEC on Cassasva.

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