

TAPIOCA PRODUCTS AND TRADE IN THAILAND¹

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The Thai Tapioca Trade Association (TTTA)

The Thai Tapioca Trade Association (TTTA) has been active in promoting the production and the trading of tapioca products in Thailand for the past 40 years. Our efforts have resulted in tapioca trade growing rapidly from a negligible quantity at its inception to a significant export item which contributes a great deal to the Thai economy. Although there are currently more than one trade associations involved in the tapioca trade, TTTA has been duly recognized by the government as well as other domestic and foreign organizations as the leading organization in the tapioca trade.

TTTA was founded on June 28, 1963 by a group of Thai tapioca traders. It was then known as “The Tapioca Association of Thailand.” In 1966, Commercial Association Act B.E. 2509. was enacted . The Act prohibits the use of such words as ‘of Thailand’ in any trade association’s name. Since then, TTTA has been renamed “The Thai Tapioca Trade Association”

Today, TTTA has a membership of about 110. Although the majority of the members are exporters of tapioca chips, pellets and starch, the membership comprises chip producers, pelletizers, starch mills, traders and consumers of tapioca products. There are also a number of foreign members who are welcome to join as our associate members.

Table 1. World cassava production in 2000.

	Cassava production (‘000 t)	(%)
World	175,670	100
- Africa	94,087	54
- Latin America and Caribbean	31,849	18
- Asia	49,448	28
-Thailand	18,752	11.0
- Indonesia	16,089	9.0
- India	6,250	3.6
- China	3,601	2.0
- Vietnam	2,038	1.2
- Philippines	1,771	1.0
- Malaysia	380	0.2

¹ In many countries, including Thailand, the word “tapioca” is used for any product made from “cassava”, which is the plant or crop.

² The Thai Tapioca Trade Association (TTTA), Bangkok, Thailand.

Table 2. Area yield and production of cassava in Asia, 2001.

Country	Area (ha)	Production (t)	Yield (t/ha)
Asia	3,420,936	43,476,000	14.5
Brunei	168	2,000	11.9
Cambodia	20,833	200,000	9.6
China	234,438	3,751,000	16.0
India	291,667	7,000,000	24.0
Indonesia	1,219,063	15,804,000	12.8
Laos	5,182	71,000	13.7
Malaysia	36,893	380,000	10.3
Myanmar	12,632	144,000	11.4
Philippines	211,765	1,800,000	8.5
Sri Lanka	28,523	251,000	8.8
Thailand	1,105,272	18,237,000	16.5
Vietnam	254,500	1,036,000	8.0

Table 3. Characteristics of cassava production and utilization in five Asian countries in 2000.

	China	India	Indonesia	Thailand	Vietnam
Cassava production (‘000 t)	3,601	6,250	16,089	18,752	2,036
Cassava harv. Area (‘000 ha)	225	260	1,257	1,150	254
Cassava yield (t/ha)	16.0	24.0	12.8	16.3	8.0
Utilization - primary	Starch -domestic	Human consumption	Human consumption	An. feed (50%) exp (85)/dom (15)	On-farm pig feeding
-secondary	On-farm pig feeding	Starch -domestic	Starch -dom/export	Starch (50%) -exp (65)/dom (35)	Starch -export/dom
Time of planting	March	Apr/Sept	Oct/Nov	Apr-May	Feb-May
Land preparation	Manual/oxen	Manual/oxen	Oxen/manual	Tractor	Oxen/manual
Fertilization - organic - chemical	rel. high low	rel. high rel. high	some low-high	some low-medium	rel. high low-medium

Table 4. World trade of cassava products (chips, pellets and starch in million tonnes).

	1994-1995	1996-1997	1998-1999
	Avg.	Avg.	Avg.
World exports	6.30	6.39	5.47
Thailand	5.00	5.16	4.62
Indonesia	0.60	0.43	0.23
China and Taiwan	0.40	0.39	0.20
Others	0.25	0.42	0.43
World imports	6.30	6.39	5.47
European Union	4.20	3.72	3.58
China and Taiwan	0.65	0.61	0.62
Japan	0.35	0.38	0.32
S. Korea	0.35	0.46	0.35
Others	0.70	1.23	0.61

Table 5. Cassava crop surveys in Thailand from 2000/01 to 2002/03.

	2000/01	2001/02	2002/03
Harvested area (ha)	1,101,168	988,220	1,079,117
Production (t)	18,265,400	16,868,309	18,426,211
Yield (t/ha)	16.59	17.07	17.08

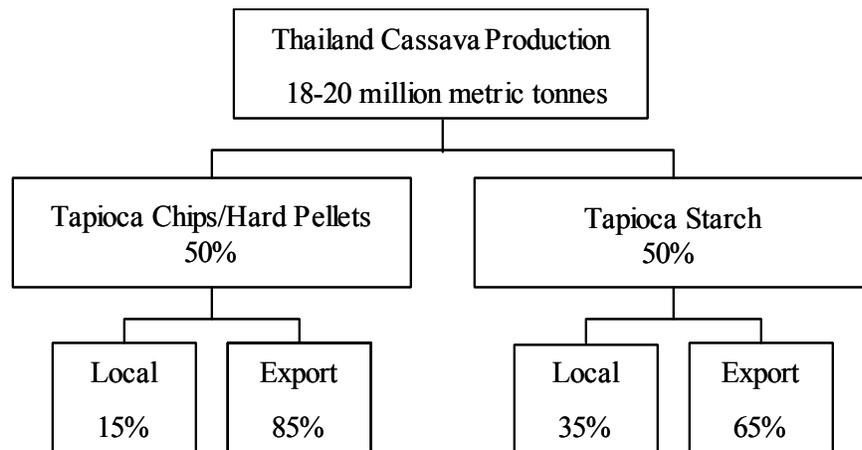
*Figure 1. Approximate distribution of cassava products in the domestic market and for export.*

Table 6. Conversion of cassava fresh roots into dry chips, pellets and starch.

Fresh roots	— 45.5% —>	Chips	— 98% —>	Pellets
1,000 kg	—————>	455 kg	—————>	446 kg
Fresh roots	— 25% —>	Starch		
1,000 kg	—————>	250 kg		

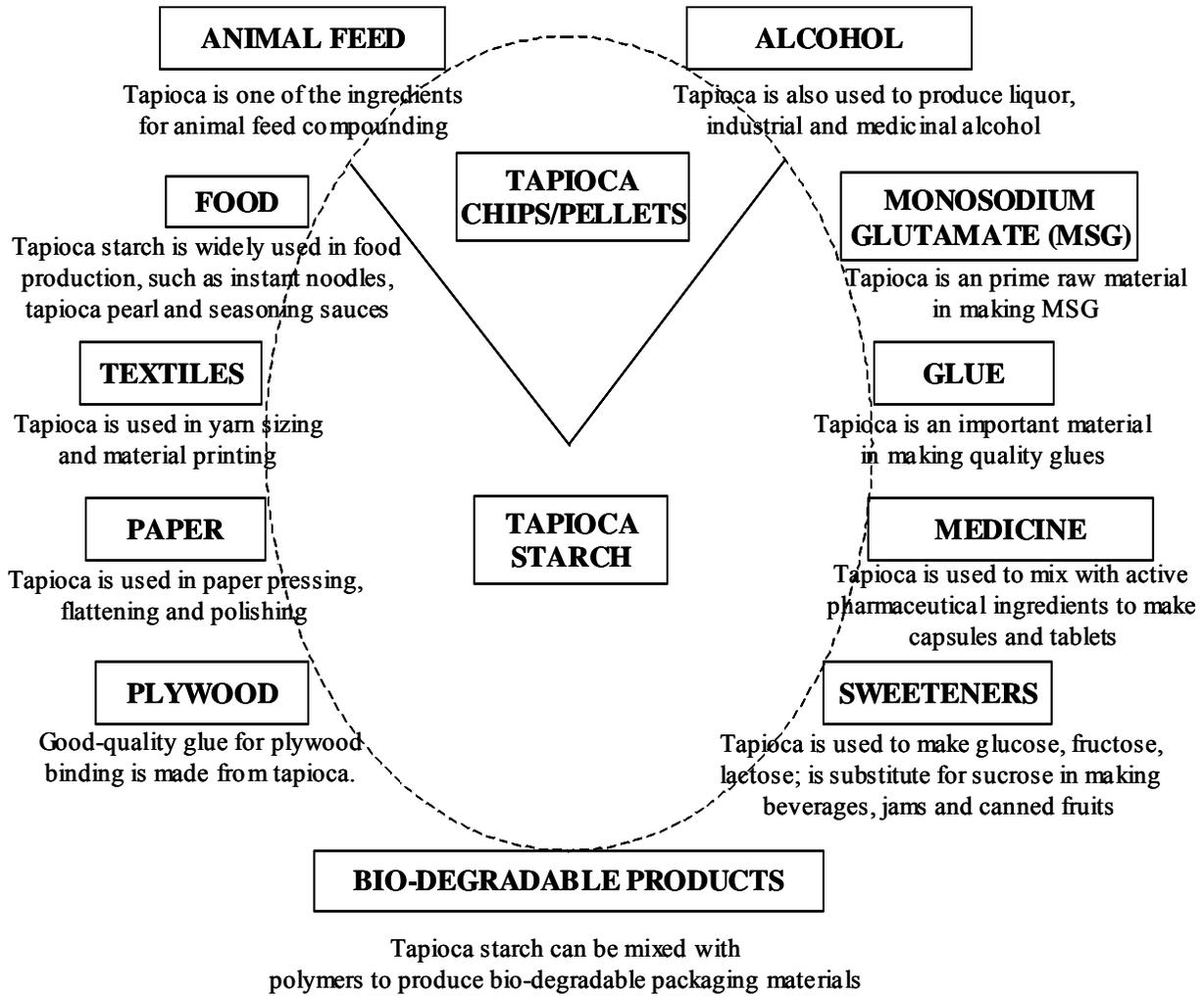


Figure 2. Industrial applications of cassava products.

Table 7. Thai cassava chips and hard pellets specifications for export to the EU.

Starch	65% min
Moisture	14% max
Sand/silica	3% max
Fiber	5% max

Table 8. Thai cassava starch specifications.

1. Whiteness	
2. Starch	85% min.
3. Moisture	13% max.
4. Ash	0.2% max.
5. Pulp	0.2% max.
6. pH	5-7
7. Viscosity	550 Brabender Units min.

Table 9. Comparison of prices of various cassava products and corn and soybean used in animal feed in Bangkok in 2002.

Cassava prices				Corn/soybean prices							
Roots at drying yard		Chips at warehouse		Pellets at factory		Starch at factory		Corn at factory		Soybean meal at factory	
Baht/t	US\$/t	Baht/t	US\$/t	Baht/t	US\$/t	Baht/t	US\$/t	Baht/t	US\$/t	Baht/t	US\$/t
1,400	32.18	2,800	64.37	2,960	68.05	7,700	177.01	4,830	111.03	8,743	201.00

¹⁾ exchange rate: 1US\$ = 43.50 baht in March 2002.

Table 10. Quantity (metric tonnes) of cassava pellets exported from Thailand to various countries from 1989 to 2002.

Country	1989	1992	1999	2001	2002
Belgium	114,343	177,693	73,148	21,601	28,279
China	66,795	15,254	-	65,020	10,500
Italy	214,460	-	26,616	-	-
Germany	590,471	111,069	-	7,350	-
Japan	308,135	168,858	16,603	16,889	17,239
Netherlands	4,624,243	4,420,430	3,409,728	1,838,825	1,021,283
Portugal	238,278	226,482	57,125	223,465	153,535
Spain	416,244	396,841	535,329	480,616	223,410
S. Korea	754,186	942,677	-	169,595	42,340
Taiwan	181,500	135,528	-	15,880	-
U.S.S.R.	825,640	48	-	-	-
Others	700,843	1,129,500	-	5,500	-
Total quantity	9,032,915	7,724,387	4,118,549	2,844,741	1,496,586

Source: TTTA Annual Reports 1989 to 2002.

Table 11. Quantity (metric tonnes) of cassava chips exported from Thailand to various countries from 1989 to 2002.

Country	1989	1992	1999	2001	2002
China	81,523	136,905	155,261	1,638,726	1,560,200
Germany	-	4,700	-	-	-
Hong Kong	-	-	-	10,500	-
Indonesia	-	79,580	-	-	-
Italy	-	-	32,277	-	-
M	1,200	-	-	-	-
Malaysia	8,608	9,200	-	-	-
Netherlands	4,730	18,370	24,720	-	16
Portugal	2,752	-	9,800	-	-
S. Africa	-	-	-	-	10
S. Korea	23,280	47,908	-	12	126
Turkey	-	2,000	-	-	-
Total quantity	122,093	298,663	222,058	1,649,238	1,560,352

Source: TTTA Annual Reports 1989 to 2002.

Table 12. Quantity (metric tonnes) of cassava starch exported from Thailand to various countries from 1989 to 2002.

Country	1989	1992	1999	2001	2002
China	2,078	-	63,634	83,590	108,026
Hong Kong	-	23,410	52,560	58,865	67,517
Indonesia	994	40,882	47,147	91,726	82,969
Japan	186,168	246,192	255,938	333,991	320,154
Malaysia	2,635	35,641	91,065	115,683	107,812
Netherlands	9,952	12,271	15,149	30,927	27,472
Philippines	-	-	21,326	42,114	50,968
Singapore	15,978	33,708	51,402	58,005	57,987
Taiwan	177,425	258,180	305,970	306,370	313,477
U.S.A.	22,056	5,324	46,254	42,145	40,670
Others	99,994	44,787	77,676	121,131	76,681
Total quantity	517,179	755,685	1,028,021	1,284,547	1,307,635

Source: TTTA Annual Reports 1989 to 2002.

Table 13. Number of cassava pellitizing companies certified or in the process of being certified in Thailand.

Certified	41	companies
In process	6	companies