New Challenges in IPRs Protections: Biological Diversity & Biotechnology

Jasmine Rice Crisis

A Thai Perspective

by

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Abstract

During the past decade, Jasmine rice has been a target of copying and modifications in western countries, especially the United States, in order to develop aromatic rice varieties that can compete with Jasmine rice in the US and ultimately in the world market. In case of Jasmati (registered trade mark of RiceTec, Inc.), which is genetically quite unrelated to Thai Jasmine rice, the word "Jasmati" can easily confuse consumers into believing that such rice is a progeny of the world-famous Jasmine rice, grown in Thailand. To resolve this act of unfair trade practice, Thailand should use legal, business, and diplomatic means to convince the US government into taking appropriate actions in order to protect the principle of fair competition and to protect US consumers rights against acts of passing-off. Nevertheless, this Jasmati incidence should help Thai exporters of rice and other goods and services realize the importance of intellectual property protection, especially as applied to international trade and services, including trademarks, service marks, certification marks, famous or well-known marks, and geographical indications.

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Jasmine Rice Crisis:
A Thai Perspective[1]

Lerson Tanasugarn[2]

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[1] This paper is a modification of the original edition (V1.02), which appeared in the Intellectual Property and International Trade Law Forum (Special Issue: First Year Anniversary of the Central IP&IT Court - 1998) The author, who is also the copyright owner, wrote this paper from October 7-20, 1998 in his spare time. Any opinion expressed here is the author's own opinion and may not necessarily be the opinion of the Central IP&IT Court or that of the Chulalongkorn University Intellectual Property Institute. The author, who is not an expert in US law, has attempted to the best of his ability to write and proofread this review but cannot offer any warranty as to the accuracy, completeness, or timeliness of the information provided, or as to the suitability of application to the reader's need. The author will be indebted to any reader who reports any errors, omissions, or otherwise any possible improvements to this article. Abbreviations: IRRI = International Rice Research Institute, CBD = Convention on Biological Diversity, DIP = Department of Intellectual Property, Ministry of Commerce, MTA = Material Transfer Agreement, NGO = nongovernmental organization, RAFI = Rural Advancement Foundation International, TRIPs = Agreement On Trade-Related Aspects Of Intellectual Property Rights, Including Trade In Counterfeit Goods, UPOV = Union Internationale Pour la Protection des Obtentions Végétales (Union for the Protection of New Varieties of Plants), USDA = US Department of Agriculture, USIS = United States Information Service, USPTO = US Patent and Trademark Office, US-PVPA = US Plant Variety Protection Act, WTO = World Trade Organization.

[2] Dr. Lerson Tanasugarn received a joint AB *(magna cum laude)*-AM and also a Ph.D. in biology from Harvard University. Dr. Tanasugarn is presently an Associate Judge at the Central Intellectual Property and International Trade Court. He is also the Director of Office of Intellectual Property Policy Research at Chulalongkorn University Intellectual Property Institute. His past appointments include Science and Technology Advisor to the Prime Minister, Advisor to the Minister of Science, Technology, and Environment, Advisor to the Deputy Minister of Labor and Social Welfare, Expert Scientist Attached to the Standing House Committee on Science and Technology, and Member of the National Research Council (Engineering and Industrial Research). In addition, he also lectures biochemistry at the Faculty of Science, Chulalongkorn University. Since 1989, Dr. Tanasugarn has been on the Ministerial Committee that oversees and scrutinizes the drafting of all intellectual property laws in Thailand. He has also been a consulting negotiator and licensing agreement drafter for agencies including the National Science and Technology Development Agency (NSTDA), the Thailand Research Fund (TRF), and the Office of Technology Transfer at Chulalongkorn University Intellectual Property Institute.

1. The Crisis

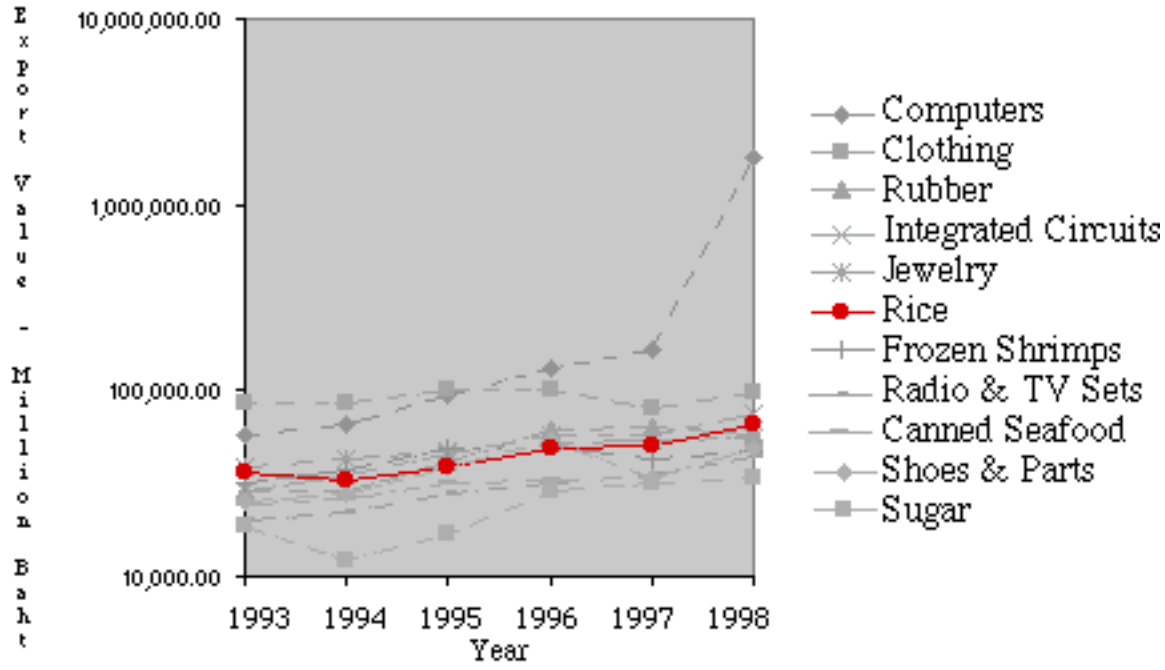

Figure 1-1: Rice is Thailand's Number One Agricultural Export

In 1998, the top ten products exported from Thailand are computers and peripherals, ready-made clothing, integrated circuits, rice, canned seafood, vehicles & parts, rubber, television receivers, frozen shrimps, and jewelry. Note: This Figure does not include the service sector, of which tourism has always been the most important. Source: statistics collected and disseminated by Thailand's Ministry of Commerce. (MOC, 1998)

Since ancient time, Thailand has been a major agricultural producer, with rice as her most important exported product. Recently, although industrial goods and tourism have replaced rice as the breadwinner (no pun intended), rice is still Thailand's number one agricultural export. (Please see Figure 1-1.) The most famous type of Thai rice is called "Khao Hom Mali," which has been translated into "Jasmine Rice" in English. In 1998, however, the Thai news media reported that a US company had registered Jasmine rice under the US intellectual property protection system.

Excerpt from translation of IRRI's Press Release

... One of the points that His Majesty King Bhumibol brought up for discussion was the case of a US registration of Jasmine rice by a private company. The name "Jasmati" may mislead consumers that such rice is Jasmine rice, grown in Thailand, or Basmati rice, grown in other Asian countries. IRRI representatives assured the King that IRRI did not approve of such acts. ...

... IRRI reported to His Majesty that the Institute supports research activities in over 90 countries around the world, including Thailand, in order to exchange rice varieties for free breeding and genetic experimentation that would lead to mutual benefits among its Members. In order to maintain the free rice variety exchange policy and to prevent unscrupulous exploitation of IRRI's work, IRRI has applied for protection of its logo as a mark that signifies rice varieties developed by IRRI. ...

Excerpt from translated interview with IRRI President during the Press Conference on June 24, 1998.

... Recently, we had an audience with the King. His Majesty asked us about the news that a private US company was applying for patent protection on Jasmati. The name may mislead people into believing that the rice is Jasmine rice. We gave His Majesty a promise that IRRI would closely monitor the progress and deal with this matter. We confirmed with His Majesty that IRRI would protest such act and will not condone commercial use of IRRI logo. In addition, the International Committee on Agricultural Research, which oversees plant researches, is looking into ways to deal with problems about patents of plants. ....

Excerpt from translated interview with IRRI Vice President during the same event as above.

... We would advise Thailand to make known the trade name for Jasmine rice as related to geographical origin, like Scotch Whisky or wines ...

Excerpt 1-1: Excerpts of IRRI Press Release and Interviews with IRRI Executives about the Audience with the King of Thailand.

Translated from Thai text. Source: news of the day. (Matichon, 1998b)

In early 1998, the first group to voice concerns for Jasmine rice was a non-government agency (NGO) called BioThai, which heard about the alleged piracy from an international network of NGOs. Meanwhile, the news media reported that the registered Jasmine rice variety that the US company was seeking intellectual property protection came from IRRI, which had been collecting varieties of aromatic rice from Thailand over half a century. Some IRRI executives were reportedly acting as advisors to this US company.

Farmers Mob Invaded US Embassy, Demanding Cancellation of Patent on Thai Jasmine Rice

July 22, 1998, 2:30 PM: A group of about 500 Jasmine rice farmers led by Wirapol Sopa, Advisor to the Council of the Poor, Chalong Noisang, Core Leader of Moon River Coalition, and representatives of BioThai, moved from Government House to the US Embassy on Wireless Road. Examples of the banners read "Stop Biopiracy. Jasmine rice is ours. Don't take it away, Americans." and "Thai brothers must unite to protect Jasmine rice." The group made speeches against the US in front of the Embassy and closed off one lane of traffic. Over 50 policemen were there to preserve peace. The group made the following 3 demands to the US

1. The US Government must revoke Jasmati patent and must refuse to grant any patents on Jasmine rice or other indigenous rice varieties from Thailand.

2. The US Government must urgently cancel the trademarks on Jasmine, Jasmati, or other marks that may confuse the public in believing that such rice is Jasmine rice.

3. The US Government must stop direct and indirect pressures to force developing countries to provide patent protection of life forms.

In the names of Thai farmers and the Thai people, the group vowed to fight to the end, against biopiracy and piracy of Thai indigenous knowledge, and will use any means to assure compliance of the above terms.

Mr. Robert Fitts, Commerce Counselor at the US Embassy, came out to receive the demands from the protesters, saying that the group should not worry as Thailand could still export Jasmine rice abroad. The group then moved back to the Government House at about 3:30 PM.

Excerpt 1-2: News Excerpt about Thai Farmers Demanding the US Government to Rectify the Trouble Facing Jasmine Rice

Translated from Thai text. Source: news of the day (Matichon, 1998a)

The news reported in the media readily caught the attentions of some Thai politicians.[3] Nevertheless, owing to the urgency of public opinion, little homework was done to evaluate the situation and assess available policy options. At least one cabinet minister believed that Jasmine rice was patented in the United States.[4] Such confusion only served to escalate the anxiety of the Thai people.

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[3] It should be noted that, despite the action taken by the King (expressing his concerns to IRRI Executives), there has been no report that Prime Minister Chuan Leekpai personally tried to resolve the matter in any way. Traditionally, the King would not need to deal with matters like this. His gesture indicated to the Thais that their Government failed to act appropriately to protect their farmers' interests and their national heritage.

[4] In fact, the rice that was involved with a US patent was Basmati rice, normally grown in India and Pakistan. There is no evidence to date that a modified Jasmine rice has ever been a subject of patent application in any country. The beginning part of the word "Jasmine," however, has been spliced up with the ending part of the word "Basmati" to form "Jasmati," which is registered as a US trademark by RiceTec Inc. of Texas.

Shortly afterwards, His Majesty King Bhumibol Adulyadej granted an audience to executives of IRRI, who later made a press conference that IRRI did not approve of such acts and was in the process of registering IRRI marks against unauthorized use. (Please see Excerpt 1-1 for further details.)

By mid August of 1998, the Ministry of Commerce took advantage of the situation to promote public acceptance of the Plant Variety Protection Draft Act, claiming that if the Act was in force, Thailand could use it to resolve the Jasmine rice crisis.

During the same time period, angry protesters staged a mass demonstration (Please see Excerpt 1-2.) and demanded the US Government, among other things, to cancel any patent or trademark on Jasmine rice.

Meanwhile, Thai civil servants in the Ministries of Agriculture & Cooperatives, Commerce, Science, Technology & Environment, and Foreign Affairs were alerted to find additional resources (money, advice, etc.) to deal with the matter. Some Thai officials unofficially met with US counterparts to compare notes and try to find a way out. It was discovered around this time that the statue of limitation for cancellation of the Jasmati trademark in the Thai case was about to run out on November 30, 1998. Thailand was therefore put into a crisis since they had a time pressure to decide what to do and how best to do it. The Thai Government, unfortunately, did not adequately communicate to the public to inform them of the progress made, the direction Thailand was moving, and any precautions other export industries should take, in order to avoid falling into similar traps.

As a member of the uninformed public, the author of this article tried to obtain background information as to what actually happened regarding Jasmati. He was quite frustrated because different parts of the Thai Government referred him to another part of the same Government for answer. Fortunately, the author finally found information sources in the Ministry of Agriculture and Cooperatives and in the Ministry of Commerce. (Please see Acknowledgments.) The author hopes this article serve as a review for the Jasmine rice crisis, as well as an orientation to a Thai who wants to know something about intellectual property protection of plants and other exported goods in general.

With the two objectives in mind, this article is organized into three parts as follow:

- A review of basic background information regarding this case, with emphasis in activities in the US. (Please see Section 2.)

- A review of relevant intellectual property regimes and their applicability to the Jasmine rice crisis. (Please see Section 3.)

- Suggestions on how to resolve the Jasmati problem. In addition, using this case as a model, what Thai companies should do to protect themselves against similar forms of piracy. (Please also see Section 4.)

2. Background Information

To build up a foundation for further analyses, presented here are some background information, such as business of Jasmine rice, the Jasmine 85 rice variety, some sample US rice breeders, and the background on RiceTec, Inc.

2.1 The Jasmine Rice Business

Year	other rice export (million tons)	Jasmine rice export (million tons)	total rice export (million tons)	value (million baht)
1992	3.68	1.10	4.78	35,700
1993	3.74	1.06	4.80	31,500
1994	3.59	1.14	4.73	38,200
1995	4.69	1.25	5.94	46,800
1996	3.80	1.45	5.25	48,800
1997	4.03	1.24	5.27	60,600

Table 2-1**:** Production and Export Statistics of Thai Rice

Thailand exports about 5 million metric tons of rice annually. From this figure, about 1 million metric tons is Jasmine rice. Source: modified from statistics published by Thailand's Ministry of Commerce (MOC, 1998)

Jasmine rice was first developed in Thailand between 1949 and 1950 (Chitrakon, 1998b)[5] by breeding and selection of indigenous aromatic rice varieties and released to farmers in Thailand around 1959. (Chitrakon, 1998a) The best variety of Jasmine rice was named "Khao Kao Dok Mali 105."[6] (MOAC, 1995) Since then, the varieties of Thai aromatic rice has collectively been know as "Khao Hom Mali,"[7] and has been translated into English as "Jasmine rice."

The most famous Jasmine rice, Khao Kao Dok Mali 105, is tall, drought resistant, and acidic and salty soil resistant. The rice seeds are long, tapered, hay-colored, and requires relatively little effort for manual milling. If a rice milling machine is used, the rice grain will be transparent and strong, with little small opaque middle region. The

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[5] It was also recorded that Mr. Soontorn Seehanern collected indigenous rice varieties around Bang Kla, Cha Serng Sao Province, for selection at Kok Samrong Rice Experimental Station in Lop Buri Province. (MOAC, 1995)

[6] Khao = rice, Kao = white, Dok = flower, Mali = Jasmine. This variety was contributed to IRRI in 1961 and was assigned the variety name "IRGC Acc. No. 850." (Chitrakon, 1998a)

[7] Hom = aromatic or fragrant.

cooked rice is pleasantly aromatic[8] and soft-textured. Nevertheless, the rice is not very resistant to quite a few diseases and insects. Moreover, it likes dry climate. The best fertile soil would weaken its stem. (MOAC, 1997)

During the past several decades, Thai rice breeders have developed a few more Jasmine rice varieties, such as Gor Kor 15, Kong Luang 1, and Supanburi Jasmine rice. Each variety has a slight difference in flavor and its own set of disease and insect resistance characteristics. (Chuvisitkul, 1997a; Chuvisitkul, 1997b)

Surplus Jasmine rice produced in Thailand is exported around the world. (Please see Table 2-1 and Table 2-2 for annual figures.) In short, the annual export of Jasmine rice from Thailand is just over 5 metric tons. About 1 million metric ton of this (1/4 to 1/5 of total export) is Jasmine rice.

Recent records show that out of about 1.2 million metric tons of Jasmine rice exported from Thailand, about 0.2 million metric tons (or about 17%) went to the US. The import of Jasmine rice from Thailand into the US accounted for about 75% of total rice import from Thailand. The same amount of rice was equivalent to 5% of the total rice consumption in the US.[9] Over the past decade, the import of Jasmine rice from Thailand into the United States has doubled, from about 0.1 to bout 0.2 million metric tons per year.[10]

The high level of export results from the quality of Jasmine rice, which experts say is determined by geographical features of Thailand, such as soil and climate. In the United States, systematic studies have been attempted to understand these factors in scientific terms. (Andrews et al., 1998)

After Jasmine rice grains are produced in Thailand, they are ultimately packed in large bags (100 kg and 50 kg) to be shipped to foreign buyers. In the United States, rice importers consist of Americans, Chinese, Vietnamese, etc. They often repackage Jasmine rice in smaller bags (5 to 20 kg) to be sold in Asian supermarkets for non-immigrants and US citizens with Asian background. Some lots of the imported Jasmine rice are mixed with other types of rice, and packaged in smaller (such as 0.5 to 1 kg) boxes or bottles under heavily-promoted brand names for sale in supermarkets to US consumers, often at premium prices. The value added to the products brings handsome profits to innovative American rice companies. Rice importers and marketing companies often register their own (and also Thai) trademarks in the country where Jasmine rice is popular, blocking the chance for Thai rice exporters to compete under their own brand names.

In recent years, Jasmine rice in retail US market is getting progressively more expensive. For example, from June to November, 1997, the retail price of Jasmine

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[8] Owing to the presence of 2-acetyl-1 pyrroline. (Chitrakon, 1998a)

[9] Figures given by Andy Aaronson, Chairman, USDA Inter-Agency Commodity Committee for Rice (Hagrove, 1997).

[10] US Government Officials have always argued that Thai rice farmers and exporters should not worry about competition from US aromatic rice since the imported Jasmine rice from Thailand doubled during the last decade. (EAP/VLC, 1998) It has been pointed out, during a Roundtable Teleconference held at the US Information Services on October 9, 1998, by a representative of the Thai Rice Exporters Association that in the absence of direct competition from the US aromatic rice (of inferior quality, according to him) the import of Jasmine rice from Thailand should be more than double the amount during the past decade.

rice (50 lb. bags) rose from 40 cents a pound to almost double the price, while domestic non-aromatic rice costs about 28 cents per pound. If Jasmine rice production in Thailand has a low yield in any season, the US retail price of Jasmine rice goes up accordingly. (Hagrove, 1997)

During the past 4 decades, the United States has systematically been trying to compete with Jasmine rice from Thailand, both for import-substitution and export-competition. During the past decade, plantbreeding and genetic engineering made the attempts possible to a certain degree. The author has seen classified experiments being conducted at certain US universities on genetically modified rice that was believed to be of Jasmine varieties.

In 1991, while Thailand was trying to recover from a Coup d'état, researchers at Texas A&M University scientifically compared the preferences of American subjects from various ethnic backgrounds: Caucasian, Filipino, Chinese, Taiwanese, Thai, Cambodian, and Vietnamese, on 5 varieties of rice: Jasmine rice from Thailand, Jasmine 85, another US aromatic rice, and two US non-aromatic rice. Data were also collected to pinpoint factors affecting the choice of consumers. Interestingly, Jasmine rice from Thailand was consistently the winner in all ethnic groups of subjects. (Hagrove, 1997) The result should not surprise any rice connoisseur since Jasmine rice is so well-known for its aroma and taste. Unfortunately, being the Champion made Jasmine rice a prime target for all forms of (fair and unfair) competition. For examples, researches were subsequently conducted in several lines of approach:

1. Genetic engineering research aimed at developing domestically grown rice that has flavor and texture similar to those of Jasmine rice.

2. Agricultural research in mimicking the soil and climate conditions to match those of Thailand.

3. Postharvest technological research in collection, milling, storage, and cooking of rice to approximate the qualities of Jasmine rice, imported from Thailand.

4. Research on attitude and behavior modifications of US consumers to change their preferences to US-grown rice varieties.

During the past decade, therefore, US rice breeders focused their attentions into developing various aromatic rice varieties for US farmers. A fraction of these activities were performed at federal and state supported institutions and sponsored by grants from state and federal governments. One practical approach to generate new varieties is to start out with an existing variety with desirable product characteristics, i.e. Khao Dok Mali 105. This is exactly how IR841 (later named Jasmine 85 in the United States) was developed over 3 decades ago at IRRI.

Country Year	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998
China	7	12	35	83	91	239	262	447	258	203
Hong Kong	175	215	251	222	203	201	221	220	207	169
Singapore	141	143	155	157	174	170	179	196	172	143
Malaysia	69	2	16	87	62	98	115	108	150	180
Others	2	14	19	19	19	19	21	26	31	20
Asia	394	386	476	568	549	727	798	997	818	715
USA	97	123	145	144	169	172	175	189	197	197
Canada	18	24	29	29	32	36	39	41	42	45
Others	1	0	1	5	0	2	1	2	1	1
America N&S	116	147	175	178	201	210	215	232	240	243
Italy	15	17	20	16	18	18	19	15	10	6
France	0	2	6	8	7	3	2	5	9	12
Norway	2	2	3	2	3	4	4	7	7	8
Netherlands	1	2	4	4	3	4	4	4	6	6
Switzerland	2	3	3	3	4	4	4	5	5	5
Sweden	4	6	8	11	13	26	2	4	5	8
Germany	0	0	1	1	1	2	2	2	5	4
Others	9	7	11	15	9	12	14	14	14	13
Europe	33	39	56	60	58	73	51	56	61	62
Saudi Arabia	24	21	32	41	32	46	26	34	31	25
Israel	11	15	15	12	17	17	19	27	25	21
Dubai	5	6	11	99	116	23	75	20	8	5
Others	73	34	7	68	39	2	6	3	2	1
Middle East	113	76	65	220	204	88	126	84	66	52
Ghana	0	0	2	5	6	4	3	12	8	6
Benin	0	1	2	5	4	1	7	5	8	0
Gabon	0	0	0	0	1	1	2	4	4	4
Others	16	29	21	41	17	19	22	33	14	16
Africa	16	30	25	51	28	25	34	54	34	26
Australia	13	20	24	22	20	18	20	23	22	22
Others	3	4	2	2	2	2	3	3	3	3
World Total	688	702	823	1,101	1,062	1,143	1,247	1,449	1,244	1,123

Table 2-2: Thailand's Market for Jasmine Rice

Export statistics for 100% Jasmine rice from Thailand (x 1000 metric tons). The figures for 1998 are estimated values based on the performance during the first 5 months of the year. Source: official statistics of Thailand Ministry of Commerce (MOC, 1998)

2.2 Jasmine 85

IR841-85-1-1-3[11] is a direct progeny of Khao Kao Dok Mali 105 (the original Jasmine rice variety contributed to IRRI by Thailand) and IR262-43-8-11. (Chitrakon, 1998a) It was developed in 1966 by Dr. Ben Jackson, a rice breeder at IRRI who stationed in Thailand between 1966 and 1983. IR841 carries the aromatic trait of Jasmine rice and was so popular at IRRI headquarters in the Philippines that some people wanted to name it "Imelda" after the first Lady Imelda Marcos before releasing it to the Filipinos. IRRI executives, however, did not rename it because they knew the variety was not resistant to local insects; it would become a political disaster to release the rice to the public under such name. (Hagrove, 1997)

In 1989, USDA, with collaboration from IRRI, University of Arkansas, Louisiana State University, and Texas A&M University, released IR841 to American farmers under the name "Jasmine 85." This variety grows rapidly, gives high yield, and carries good resistance to pests in southern United States. It also suppresses the growth of weeds in the surrounding area. All these desirable features allow US farmers to grow Jasmine 85 as "Organic Rice" (rice grown without added chemicals or insecticides), for which health-conscious US consumers are willing to pay a premium price. (Hagrove, 1997) The weak point of Jasmine 85 is the many broken grains found after milling, which tend to drive the price down. Consequently, many techniques have been developed during the last decade to increase milling efficiency, such as spraying rice with water during milling. The product would contain less broken grains and look almost as white as the original Jasmine rice. (Evans, 1990)

Over the past several years, Jasmine 85 has become widely grown in southern United States including Texas and Louisiana. (Anonymous, 1997a) It has become the primary rice variety for new rice companies such as Doguet-Dishman.

2.3 Roles of Doguet-Dishman Rice Company

Doguet-Dishman Rice Company is an example of a new-generation US rice firm, which started out with domestic rice varieties but later turned to aromatic rice, especially Jasmine 85. This trend, along with the popularity of Thai cuisine, slowly helps educate the American public of the Jasmine rice flavor. The visible marketing opportunities also helps fuel the research and development in aromatic rice.

The Doguet-Dishman Rice Co. was founded by two young Americans named Mike Doguet and Bill Dishman. Both Doguet and Dishman came from farmer's families. In 1979 Doguet and his father bought a rice mill and started to market rice in 1984. (Evans, 1990)

In 1986, Both Doguet and Dishman noticed that most rice in rice grocery shops all over Houston, were Jasmine rice imported from Thailand. It occurred to them that they should produce aromatic rice to compete with Jasmine rice. Jasmine 85, released

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[11] IR841-85-1-1-3 has been widely grown in different countries. In China, it is called "Zhong Yin 85." In Indonesia, it is called "Bengawan Solo." In Brunai, it is called "BR1." (Chitrakon, 1998a)

round that time, allowed them to form the Doguet & Dishman Rice Co. in 1989. Contract farming allows flexibility in production from year to year. (Evans, 1990)

Doguet & Dishman Rice Co. was committed to compete heads on with Jasmine rice from Thailand. They made a few improvements in the production of Jasmine 85 and claimed that their Jasmine 85 was more aromatic than Jasmine rice imported from Thailand. The rice is said to retain more fragrant flavor since little transit time is required for Jasmine 85 in comparison with 2 to 6 months of shipping delay for genuine Jasmine rice. (Evans, 1990)

There exist other US companies with similar strategies as those of Doguet and Dishman. Nevertheless, rice companies that can potentially cause more damage to Thai rice industry are the ones with both technical background and sound intellectual property-based business strategies. RiceTec, Inc. is the best-known firm of this type.

2.4 Roles of RiceTec, Inc.

RiceTec, Inc. is a rice breeding and marketing company in Alvin, Texas.[12] "Farms of Texas" was the former name for RiceTec prior to 1989. At present, RiceTec employs about 100 persons and has an annual turnover of about 10 million US$. (Rajghatta, 1998) This US RiceTec belongs to the RiceTec Group of Companies that have several subsidiaries around the world such as RiceSelect Ltd. in England. (RAFI, 1998)

Investigative work notably by the Rural Advancement Foundation International (RAFI) revealed that the flagship company of RiceTec Group is RiceTec AG that is based in Liechtenstein. The Chairman of the Board of RiceTec AG is Prince Hans-Adam II, (RAFI, 1998) who has been Liechtenstein head of government since 26 August, 1984 and has been the country's head of state since 13 November, 1989. (MicroSoft, 1998) Liechtenstein established diplomatic relations with Thailand in 1997.[13]

According to RAFI, it is also interesting to note that Prince Hans-Adam II has played a leadership role in "self-determination" among technology-poor nations, judging from his speech at the United Nations and the research grant on "exploration of legal options for self-determination within and without the nation state" that he gave to the Woodrow Wilson School of Public and International Affairs at Princeton University. (RAFI, 1998) If left unchallenged, RiceTec Group will eventually become a major player in the global aromatic rice business, thanks to the shrewd, intellectual property-based, global business strategy, which is made at the expense of poor farmers in developing nations.

The key foundation of RiceTec's technology is its advisor, Dr. Harry Beachell, a world-famous rice breeder who used to work for IRRI from 1963 to 1982. In 1996, Beachell was awarded World Food Prize along with Dr. Gurdev Singh Khush, a Punjabi who was also a former IRRI rice breeder. (Please see Figure 2-1.) Dr. Beachell is

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[12] The company is officially registered in Delaware for preferential tax treatments.

[13] Personal communication with officials at the Ministry of Foreign Affairs.

Figure 2-1: Henry Beachell in an IRRI Reunion

Two World Food Prize Winners (1996) posed with 4 former IRRI Executives and a sample of IR-841 (Jasmine 85) during a reunion in Gainesville, Florida. Leftmost: Dr. Henry M. (Flank) Beachell, World Food Prize Winner 1996. Rightmost: Dr. Gurdev Singh Khush, another World Food Prize Winner, 1996. The 4 middle men are former IRRI Director Generals: Dr. Ralph Cummings, Dr. Robert F. Chandler (IRRI's first Director General), Dr. Klaus Lampe, and Dr. Nyle C. Brady. Simulated line-art drawing. The original picture in full color can be found at: http://www.agcomintl.com/irri.htm (Hargrove, 1997) .

credited as one of the three rice breeders who developed the IR-8 rice variety[14] and several Chinese semi-dwarf varieties. Moreover, Beachell used to work with Basmati rice varieties and used to do rice breeding work in Thailand. (RAFI, 1998)

RiceTec (Farms of Texas) has registered several rice varieties under the US law. (Please see Section 2.6) and has been granted US patent on "Basmati Rice Line and Grains" (Patent Number 5,663,484; please see Section 2.5), which India has asked the USPTO to revoke. RiceTec also tried to patent the same invention in other countries.

Although RiceTec (US) specializes in rice breeding, the RiceTec group of companies, with subsidiaries in several countries, has used clever marketing strategies to attract customers to their products. For example, RiceSelect (an English company in the RiceTec empire) released "Chef Original," a line of rice products in packages that display RiceTec logo along with those of world-famous chefs who incorporate RiceTec's rice in their recipes. (RAFI, 1998) Supermarkets are paid to display ChefSelect in a special area of the shelves of the store. One of the rice used in the recipes is Jasmati.

Again, the use of the name "Jasmati" can easily mislead consumers that Jasmine rice and Basmati rice are combined in the Jasmati variety. Quality-conscious customers would be willing to pay more for the product, which is associated in quality with Jasmine rice, the best in the world according to consumer preference tests like the one mentioned at the end of section 2.1. In the process, RiceTec's trademark would be

[14] RiceTec was alleged, by a non-government agency, to register a US plant variety certificate for IR-8 under the name CB-801.

associated with great chefs all over the world plus the fame of Jasmine rice. If a consumer did not like the quality of the rice in Chef Original products, it is conceivable that the consumer would not buy Jasmine rice imported from Thailand at a later date since the consumer may perceive Jasmine rice to be roughly the same in quality as Jasmati. Jasmine rice, therefore, would lose one potential customer and this American consumer would never know how good "the real thing" really is. On the other hand, if a customer liked the flavor of Jasmati in RiceTec's package, he or she would be hooked on to the ChefSelect brand. In this case, Jasmine rice would lose one potential customer as well and this American consumer would never know that genuine Jasmine rice is much more delicious than the "imitations." In any case, Thai rice would lose a potential customer.

RiceTec has been accused of trying to "biopirate" staple rice varieties from Asian countries over the past couple of decades. (Bhattacharjee, 1998; RAFI, 1998; Ray, 1998; Rediff, 1998) In case of Basmati, RiceTec bred genuine Basmati varieties with semi-dwarf rice varieties and selected for desired characteristics of the rice grain products. In 1998, a US patent on "Basmati Rice Lines and Grains" was granted by USPTO and assigned to RiceTec. This patent is often cited as another case of biopiracy[15] in addition to the transgenic cotton patent, the transgenic soybean patent, and the turmeric patent. (Please see sections 2.5 and 3.1 for more details.) In addition, the Rural Advancement Foundation International (RAFI) has raised the issue that the semi-dwarf variety used for breeding the RiceTec Basmati lines may have been the property of IRRI and somehow the license agreement (or the material transfer agreement) may have been breached. (RAFI, 1998)

What we do not know for sure is whether what happened to Basmati rice has already happened for Jasmine rice, i.e. whether Jasmine rice has been subjected to similar manipulations and the methods/product has been packaged in such a way that seems to be a patentable invention. Once the patent application is filed, the detail of the invention will be under secrecy until the patent is published (or granted in US case).

Not only has RiceTec taken advantage of developing countries through clever exploitation of the patent system, the allegation goes on, it also exploited the trademark system to its advantage. For example, after RiceTec tried to register Basmati as a US trademark three times without success, the company successfully registered "TEXMATI" as a federal trademark. Whatever the true variety really is, TEXMATI may suggest that the rice is Basmati rice grown in Texas.

Moreover, RiceTec has tried to register Jasmati and Jasmatica as US trademarks since 1990. At the time of this writing, RiceTec still waits to hear the decision on Jasmatica but it received a US trademark on Jasmati on November 30, 1993. When Thailand was aware of the registration, RiceTec denied any genetic connection between Jasmati rice and Jasmine rice. (RiceTec, 1998)

In addition to utilizing the US intellectual property system, RiceTec also applied for intellectual property protection in various other countries. In the case of Basmati rice, RiceTec attempted to register the trademark "Jasmati," "Kasmati," and "Texmati" in countries like England (where there are lots of Indians consumers) and Greece (a major market for Basmati rice). Moreover, RiceTec tried to obtain plant variety protection for Basmati rice in Greece and patent protection for Basmati in India.

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[15] A briefing paper prepared by US government officials stated that the title of this patent is a misnomer. So we will look at some of the claims from this patent later in section 2.5

Obviously, India rejected the Basmati rice patent application and complained to the Greek Government, which later rejected the plant variety application. (Mukherjee, 1997)

In short, RiceTec has been revealed by many third-world critics as a company very aggressive in intellectual property-based rice business. It has been using questionable strategies and tactics to exploit the intellectual property protection system to obtain monopoly on certain markets of aromatic rice, together with creating confusion among rice consumers with respect to the name and quality of its products.

Such aggressive strategies are not unexpected from a technology-based company with financial backup and advanced knowledge of intellectual property systems. What should also be expected from a reputable company, however, is a certain level of business ethics, which are not codified in any law but are necessary for peaceful coexistence of entities both at domestic and global levels.

2.5 US Patents on Aromatic Rice

US Patent Number	US Patent Title
4,764,643	Route to hybrid rice production
4,999,945	Route to hybrid rice production
5,158,879	Hybrid rice production utilizing perennial male sterile rice plants
5,173,423	Process for breeding a glabrous variety of rice crop and a glabrous plant
5,304,722	Hybrid rice production utilizing perennial male sterile rice plants
5,350,688	Method for regeneration of rice plants
5,360,725	Method for producing rice cybrid cell
5,399,680	Rice chitinase promoter
5,545,822	Herbicide resistant rice
5,639,948	Stamen-specific promoters from rice
5,663,484	Basmati rice lines and grains
5,674,993	Nucleic acid marker for rice blast resistant genes and rice blast resistant genes isolated by the use of these markers
5,736,629	Herbicide resistant rice
5,773,680	Hybrid wild rice production utilizing cytoplasmic-genetic male sterility system
5,773,703	Herbicide resistant rice
5,773,704	Herbicide resistant rice

Table 2-3: Examples of US Patents Related to Rice

Examples of US patents related to rice during 1976-1998. When the US Patent Classification was set to Class 800 (plants) and "rice" must be contained both in the title and the abstract, 16 titles were found. If the US Class was set to 800 and "rice" must be contained in the abstract regardless of the title, 76 additional titles were recovered. The majority of these additional patents are process patents applicable to other crops as well as rice. If only "rice" must be contained in the abstract regardless of title and classifications, the search found 20,518 titles, which were too many to present here. The shaded row on the table is the Basmati rice patent assigned to RiceTec. Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute.

Registration Information	US Patent Title and Some Claims
US Patent Number: 5,663,484 Filed: September, 1997 Granted: February, 1998 Inventors: Eugenio S. Sarreal, John A. Mann, James E. Stroike Robin D. Anrewes Assignee RiceTec, Inc.	Basmati Rice Lines and Grains Claim 1: A rice plant, which plant when cultivated in North, Central or South America, or Caribbean Islands a) has a mature height of about 80 cm to about 140 cm; b) is substantially protoperiod insensitive. and c) produces rice grains having i) an average starch index of about 27 to about 35, ii) an average 2-acetyl-1-pyrroline content of about 150 ppb to about 2,000 ppb, iii) an average length of about 6.2 mm to about 8.0 mm, an average width of about 1.6 mm to about 1.9 mm, and an average length to width ratio of about 3.5 to about 4.5, iv) an average of about 41% to about 67% whole grains, and v) an average lengthwise increase of about 75% to about 150% when cooked. ..... Claim 12: A seed produced by the rice plant of any of claims 1 to 11. Claim 13: A rice grain derived from the seed in claim 12. Claim 14: A progeny plant of the rice plant of any of claims 1 to 11. Claim 15: A rice grain, which has {the following properties} ... …… Claim 18: A method of selecting a rice plant for breeding or propagation, comprising the steps of .....

Table 2-4: US patents owned by RiceTec related to Basmati rice

Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute. (August, 1998)

Two US rice patents are worth looking at. The one shown in Table 2-4 has to do with "Basmati Rice Lines and Grains." Although some US officials maintain that this title is a misnomer and nowhere in the claim the name "Basmati" is used, this patent allows RiceTec to prevent others from the commercial exploitation of rice plants, seeds, grains, etc. with the phenotype and cooking characteristics listed in Table 2-4, which cover the rice variety they bred (and selected) from Basmati and other rice varieties of questionable origins. NGOs have called this a cunning way of effectively obtaining patent protection for a "me, too invention" on top of a rice variety that has been bred and selected for thousands of years by natives of Asia. Unfortunately, the legal system in an industrialized country like the United States does not recognize the contribution of the third-world natives, who have not invented anything by legal definitions. The system only protects the "right" of modern inventors who invent on top of existing prior art that is considered to be in the public domain. A classical patent system may work well for mechanical and electrical inventions but has serious consequences for natives of third-world countries when it is applied to

pharmaceutical and biological inventions, where the prior art (e.g. knowledge of traditional medicine) consists of undocumented contributions of uncountable generations of people, or the existence of such prior art (e.g. a medicinal plant) is the result of sustainable use of a forest for centuries. The Convention on Biological Diversity attempts to address this problem in a limited way by using mechanism of contract and even creates more problems on its own. (Please see section 3.3 for further details.)

Registration Information	US Patent Title and Some Claims
US Patent Number: 5,208,063 Filed: 18 March, 1991 Granted: 4 May, 1993 Inventors: Robin D. Andrews Deborah Locke John A. Mann James E. Stroike Assignee: RiceTec, Inc.	Milling process for controlling rice cooking characteristics Claim 1: A process for changing the cooking behavior and cooked rice texture of a given well-milled rice when cooked in a predetermined way, including the steps of • varying only the milling degree of said rice by ..... • milling said rice to a greater degree than well-milled to produce cooked white rice having substantially softer and thicker texture; or, • milling said rice to a lesser degree than well-milled to produce cooked white rice having substantially fluffier and drier texture. Claim 2: A process for maintaining uniform cooking behavior and enclosed rice texture in a production run of a milled rice, including a combination of steps of: ..... Claim 3: A process for milling dehulled rice including the steps of ..... …… Claim 5: A milled rice produced according to the process of claim 3 and possessing the characteristics selected from the groups consisting of ..... ……

Table 2-5: US patents on a rice milling method that yield fluffy and tender cooked rice just like Jasmine rice

It is a normal practice to make process claims followed by products produced according to the process claimed earlier. Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute. (August, 1998)

Another interesting US patent is Patent Number 5,208,063 assigned to RiceTec. This time the subject of invention is a milling process that RiceTec uses to make Jasmati rice assume cooking characteristics, like fluffiness, that are similar to the real Jasmine rice.

2.6 US Plant Variety Protection of Rice

PVP Number	Variety Name	Owner	Filing Date: Grant Date:	Alternate Name: Reg. Status:
7200040	Golden Steve	Steve Landry	10/14/71;10/17/75	Certificate expired
7200080	Labelle	Texas Agri Expt Sta	01/28/72	Application abandoned ...
7300073	Maxwell	James E. Grundman	03/13/73;03/05/76	Certificate expired
7400006	Terso	Grundman & Dewit	08/14/73;04/05/76	Certificate expired
7400075	Tsuru Mai	Rice Researchers, Inc.	03/13/74;12/12/75	Certificate expired
7400076	Ampec	Rice Researchers, Inc.	03/13/74;06/30/75	Certificate expired
7400077	Kokubelle	Rice Researchers, Inc.	03/13/74;10/17/75	Certificate expired
7605004	Melrose	Alexandria Seed Co.	07/01/76;01/25/79	Certificate expired
7700012	Gebolla II	Willis & Bollinger	11/02/76	Application abandoned ...
7700040	CB 744	Chocolate Bayou Co.	01/31/77;01/26/78	Certificate expired
7800076	Bellevue	Alexandria Seed Co.	05/30/78;12/21/78	Certificate expired
7900085	RRI-105	Rice Researchers, Inc.	06/04/79;03/26/81	
8100093	California Belle	Davis Drier & Elevator	04/07/81	Application abandoned ...
8100094	Calpearl	Davis Drier & Elevator	04/07/81;05/27/82	
8200106	California Belle	Davis Drier & Elevator	04/15/82;10/28/82	
8300123	RRI-7530	Rice Researchers, Inc.	05/02/83;07/31/86	
8500011	CB-801	Farms of Texas Co.	10/16/84;10/31/85	
8600162	V7713	Farms of Texas Co.	09/23/86;01/15/88	<A717, CB860>
8700085	V4716	Farms of Texas Co.	03/13/87;12/18/87	<A7339, CB848>
8700144	S2-Calpearl	Davis Drier & Elevator	06/08/87;01/15/88	
8700145	Valencia 87	Davis Drier & Elevator	06/08/87;01/15/88	<Calpearl S-1>
8700203	KRM-2	Rice Researchers, Inc.	09/11/87;03/11/88	
8900034	S-101	Ca Coop Rice Res Fdn.	11/28/88;11/30/92	<85-Y-136>
8900035	M-203	Ca Coop Rice Res Fdn.	11/28/88;11/30/92	<M-401>
8900077	V7817	RiceTec Seed Inc.(FoT)	01/23/89;02/28/92	
8900101	M-103	Ca Coop Rice Res Fdn.	02/24/89;05/29/92	<84-Y-9>
9000074	RT-A1001	Farms of Texas Co.	01/29/90;09/30/91	
9000075	RT-A1002	Farms of Texas Co.	01/29/90;09/30/91	
9000090	Sumirice II	Sumitomo Chemical	02/20/90;07/31/92	
9000158	S-301	Ca Coop Rice Res Fdn.	05/01/90;05/29/92	<85-Y-502>
9000193	NFD 108	Davis Drier & Elevator	05/31/90;10/31/91	
9000194	NFD 109	Davis Drier & Elevator	05/31/90;10/31/91	
9000207	KR4	Rice Researchers, Inc.	06/11/90;11/30/94	<81-114-042>
9100103	RT7015	RiceTec Seed Inc (FoT)	02/07/91;02/28/92	LC765-34-Bk-BK
9100204	L-203	Ca Coop Rice Res Fdn.	06/27/91;05/29/92	88-Y-774
9200125	Yumekaori	Mitsubishi	03/12/92;05/31/95	
9300075	M-204	Ca Coop Rice Res Fdn.	01/08/93;05/31/94	
9300147	Amylo 17	Mitsubishi Chemical	03/02/93;08/31/95	
9400110	Hareyaka	Mitsubishi Corp.	03/04/94;02/28/95	
9500141	SP211	Western Rice Res ...	04/21/95;08/29/97	
9500142	SP311	Western Rice Res ...	04/21/95;08/29/97	
9500171	NFD-181	Davis Drier &	05/15/95;08/29/97	
9600077	Basmati 867	RiceTec, Inc.	12/11/95	Application abandoned ...
9600196	Isla	Hisparroz, S.A.	03/22/96;10/31/97	
9600197	Denosa	Hisparroz, S.A.	03/21/96;10/31/97	
9600305	S-102	Ca Coop Rice Res Fdn.	07/17/96;09/30/97	<09/30/97>
9600317	Millrose	Western Rice Res ...	07/24/96	<WRM-1708> Pending

PVP Number	Variety Name	Owner	Filing Date: Grant Date:	Alternate Name: Reg. Status:
9600318	Surpass	Western Rice Res ...	07/24/96	<WRS-1369> Pending
9700051	A-201	Ca Coop Rice Res Fdn.	12/09/96;04/30/98	<91-Y-631>
9700052	L-204	Ca Coop Rice Res Fdn.	12/09/96	<92-Y-93> Pending
9700138	Drew	U. Arkansas Agri Expt	02/18/97	<RU9201176> Pending
9800172	Honami	Mitsubishi Chemical	03/23/98	Pending
9800173	Tsuyayak	Mitsubishi Chemical	03/23/98	Pending
9800174	Hayate	Mitsubishi Chemical	03/23/98	Pending
9800212	Priscilla	Mississippi State U.	04/17/98	Pending

Table 2-6: Registered US plant varieties from 1971 to 1998

PVP Number = Plant Variety Protection Number; Ca Coop Rice Res Fdn. = California Cooperative Rice Research Foundation, Inc.; Western Rice Res. = Western Rice Research Busch Agricultural Resources, Inc.; Mitsubishi Chemical = Mitsubishi Chemical Corporation; Mississippi U. = Mississippi Agricultural and Forestry Experiment Station, Mississippi State University. The shaded rows show 8 varieties registered by RiceTec and Farms of Texas. Source: Data obtained from USDA Web Site. (USDA, 1998)

A search of US Plant Variety Protection database reveals that between 1971 and 1998, RiceTec (or Farms of Texas) registered 8 rice varieties. One of these varieties, RT-A1001 (PVP Number 9000074), is known to be the Jasmati variety. (Chitrakon, 1998a)

2.7 US Trademark Protection of Jasmine Rice

It is worth noting that in the United States both at the Federal and State levels, there are many food trademarks which contain the word “JASMINE RICE” or “JASMIN RICE.” Here we will categorize these registrations into three broad groups: (1) registration by Thai exporters, (2) registrations by US importers, (3) registrations by US ricebreeders. More details are provided in the following three subsections:

2.7.1 Jasmine Rice Trademark Registered by Thai Exporters

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status
	HONG THONG JASMINE RICE (Golden Phoenix)	Bangsue Chia Meng Rice Mill Co., Ltd., Bangkok, Thailand	USA	First use: 11/94 First commercial use: 11/97 Federal trademark filed: 21/11/97	pending
	THAI FRAGRANT RICE SUPREME QUALITY GOLDEN CAMEL	Siam Grain Co., Ltd., Bangkok, Thailand	USA	First use: 24/11/96 Federal trademark filed: 21/05/97	pending

Table 2-7: Jasmine rice US trademarks registered by Thai exporters

Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute (July 30, 1998)

Trademarks in this category appear to be the two shown in Table 2-7. They are the Golden Swan and Golden Camel brands of Jasmine rice.

2.7.2 Jasmine Rice Trademark Registered by US Importers

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status	Remarks
	Rice King	Well Luck Co., Inc., New York, New York	USA	First use: 01/05/82 Federal trademark application filed: 28/04/97	pending	Chinese characters translated as Scented Jasmine Rice
	TAMDA PHUOC LOC THO BRAND OF 100% JASMINE RICE	Kim Hung Supermarket, Inc., Houston, Texas	Texas, USA	First use: 01/83	Texas trademark registered 17/09/90	Jasmine Rice is translated as Scented Rice of Thailand Country
	JASMINE BRAND	Eastland Food Corp.	USA	Federal trademark application filed: 03/10/1983	abandoned	applied to food and flour
	JASMIN RICE	Jinthay Trading Co., Portland, Oregon	Oregon, USA	First use: 01/01/84	Oregon trademark registered: 21/01/92 Extension: 15/01/97	Figure of Thai woman standing under the words JASMIN RICE
	THAI JASMINE RICE	DBA Len Hin Trading Company, Portland, Oregon	Oregon, USA	First use: 03/87	Oregon trademark registered: 13/06/91	
	GOLDEN ELEPHANT FRAGRANT RICE	Tresplain Investments, Ltd., Hong Kong	USA	First use: 16/04/87 Federal trademark application filed: 23/05/96	pending	
	THAI JASMINE RICE	Len Hin Trading Company, Portland, Oregon	Oregon, USA	First use: 07/88	Oregon trademark registered: 10/05/91	A cock standing on a globe.

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status	Remarks
	PENGUIN MILAGROSA	Global Marketing Enterprises, Inc., Chicago, Illinois	USA	First use: 07/11/89 Federal trademark application filed: 07/12/90	Federal trademark registered 18/08/92	The word Milagrosa means Jasmine Rice
	THAI JASMINE RICE & GAOTHOM ANGKOR WAT	Tri-Eight Trading Corp., Seattle, Washington	Washington, USA	First use 08/08/991	Washington trademark registered: 22/11/91	
	THAI JASMINE RICE MILGROSA	Tri-Eight Trading Corp., Seattle, Washington	Washington, USA	First use: 08/08/91	Washington trademark registered: 22/11/91	
	LANG HUONG	Anhing Corp., Los Angeles, California	USA	Federal trademark application filed: 24/06/91	abandoned 09/06/92	
	GAO THOM LANG HUONG	Anhing Corp., Los Angeles, California	USA	Federal trademark application filed: 02/12/91	Federal trademark registered 08/09/92	
	Jasmine Rice Extra Super Quality Gao Thom “Hai Con Ket” Double Parrot Brand	Kim Seng Co., Los Angeles, California	USA	Federal trademark registration filed: 29/12/95	Federal trademark registered: 03/06/97	Double Parrot Brand
	YAAS	Amalia Galian (Residence of Tarzana, California)	USA	Federal trademark application filed: 27/02/95	abandoned 30/12/96	YAAS means Jasmine
	Herdsman Brand	Hoa Ying Trading Corp., Seattle, Washington	USA	Federal trademark application filed: 24/01/97	Publication	Child riding a water buffalo playing a recorder, with Chinese characters (Jasmine Flavored Rice)

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status	Remarks
	PREMIUM LONG GRAIN AROMATIC JASMINE RICE	Sem-Chai Rice Products Corp., Palm Beach, Florida	USA	First use 01/09/96 Federal trademark application filed: 16/09/97	pending	
	MILAGROSA GAO THOM THUONG HANG JASMINE RICE THAI KING RICE PRODUCT OF THAILAND MOOT LAY HWANG MY TIE GWO	Duong To (a Vietnamese)	USA	First use: 02/09/97 Federal trademark application filed: 19/09/97	pending	
	ARROZ JASMINA	DBA Oriental Trading Company by a Japanese named Otani, Reedly, California	USA	First use: 24/11/97 Federal trademark application filed: 18/12/97	pending	Arroz in Spanish means rice.
	JASMINE	Specialty Rice Marketing Inc., Brinkley, Arkansas		Used in the US since 1997 but did not file for trademark registration		

Table 2-8: Jasmine rice US trademark registered by US rice importers

These US trademarks were searched at the federal, state, and common law levels. Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute. (30 July, 1998)

2.7.3 Jasmine Rice Trademark Registered by US Rice Breeders

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status	Remarks
	TEXMATI	Farms of Texas Co., Houston, Texas	USA	First use: 24/03/77 First commercial use: 12/04/77 Federal trademark application filed: 14/03/86	canceled	for comparison only
	TEXMATI	RiceTec, Inc., Alvin, Texas	USA	First use: 24/03/77 First commercial use: 12/04/77 Federal trademark application filed: 16/08/93	Missasigned	for comparison only
	JASMINE	Doguet-Dishman Rice Co., Inc., Texas	USA	First use: 04/05/90 Federal trademark application filed: 03/07/90	abandoned (failure to respond) 17/03/92	
	BAZMATI	RiceTec, Inc., Alvin, Texas	USA	Federal trademark application filed: 17/05/90	abandoned 12/06/91	For comparison only
	JASMATI	RiceTec, Inc., Alvin, Texas	USA	Federal trademark application filed 17/05/90	abandoned (defective statement of use) 09/09/91	Assigned from: Farms of Texas Co.

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status	Remarks
	BASMATICA	RiceTec, Inc., Alvin, Texas	USA	Federal trademark application filed: 17/05/90	abandoned 09/09/91	
	JASMATICA	RiceTec, Inc., Alvin, Texas	USA	Federal trademark registration filed: 17/05/90	pending	
	JASMATICA	RiceTec, Inc., Alvin, Texas	USA	Federal trademark application filed: 30/08/90	abandoned (no statement of use filed) 28/02/92	Assigned from: Farms of Texas Co.
	FLAVORED BY NATURE	RiceTec, Inc., Alvin, Texas	USA	Federal trademark application filed: 11/12/91	abandoned 26/02/93	For reference only
	BASMATI USA	RiceTec, Inc., Alvin, Texas	USA	Federal trademark registration filed: 20/08/92	abandoned 24/09/94	
	JASMINE USA	Ricetec, Inc., Alvin, Texas	USA	Federal trademark registration filed: 20/08/92	abandoned (no statement of use filed) 24/09/94	
	JASMATI	Ricetec, Inc., Alvin, Texas	USA	Federal trademark application filed: 25/03/93	Federal trademark registered: 30/11/93	Assigned to Bil Finance (Ireland), Ltd.
	KASMATI	RiceTec, Inc., Alvin, Texas	USA	First use: 19/08/94 Federal trademark application filed: 04/05/94	Federal trademark registered: 25/06/96	For reference only

Illustration	Trademark	Owner	Place of First Use or Place of Trademark Application	Date of First Use or Trademark Application	Status	Remarks
	FLAVORED BY NATURE	RiceTec, Inc., Alvin, Texas	USA	First use: 15/05/94 Federal trademark application filed: 07/04/95	Federal trademark registered: 09/04/96	For reference only
	CHEF'S ORIGINALS	RiceTec, Inc., Alvin, Texas	USA	First use: 30/09/95 Federal trademark application filed: 25/05/94	Federal trademark registered: 23/04/96	No mention of the word Jasmine rice in the mark but a document by RiceTec, Inc. stated that this product contains Jasmati rice.
	TEXMATI	RiceTec, Inc., Alvin, Texas	USA	First use: 24/03/97 First commercial use: 12/04/97 Federal trademark application filed: 25/10/97	Federal trademark registered: 25/10/94	For reference only
	HINODE ROYAL JASMINE (Hinode means rising sun)	Rice Growers Association of California, Sacramento, CA	USA	First use: 03/94 Federal trademark application filed: 03/08/94	Federal trademark registered: 15/07/97	Assigned to International Nederlanden (US) Capital Corp., Los Angeles, California

Table 2-9: Jasmine rice US trademarks registered by US rice developers

These US trademarks were searched at the federal, state, and common law levels. Note that several of the trademarks shown here cannot be registered and the applications have been abandoned. Some of the trademarks do not contain the word "Jasmine" or "Jasmin" but are shown here for references. Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute. (30 July, 1998)

Please note that all the above marks of the latter category were registered by RiceTec, which made the first attempt in 1986. Perhaps by trial and error, RiceTec's persistence paid off in the federal registrations of Jasmati, Kasmati, Texmati, Flavored by Nature, and Chef's Original trademarks.

Please note also that the information provided here resulted from searches performed on July 30, 1998 on United States databases only. Similar attempts to register trademarks related to Jasmine rice may also exist in many other countries, especially countries that import or consume Jasmine rice. (Please see Table 2-2 for the names of potential countries.)

2.8 DNA Fingerprints of Jasmine Rice

At present there are analytical procedures that can display genetic relationship between two plant varieties. DNA fingerprinting has been used to compare questionable US varieties with Jasmine rice varieties. (Please see Figure 2-2.)

> Jasmati rice DNA has been compared with those of Khao Kao Dok Mali 105 (KDML105), Jasmin 85, Basmati, Khao Chao Hom Suphanburi 1 (a Jasmine rice variety), and Khao Chao Hom Klong Luang 1 (another Jasmine rice variety) using 16 microsatellites loci. It was found that 35 loci were useful for discriminating varietal differences. For example, comparison between Jasmati, Basmati, and KDML 105 showed 27 differences. The NTSYS-pc DNA fingerprint analysis software concludes that there is virtually no similarity between Jasmati and KDML105. Referring to the phylogenetic tree in {Figure 2-2}, Basmati is 15% similar to Jasmati. Furthermore, Jasmati is not a progeny of KDML 105 and Basmati. This analytical technique is capable of distinguishing Jasmine rice originating in Thailand from aromatic rice varieties of foreign origins. ... (Vanvijit, 1998)

2.9 Summary of Background Information

Jasmine rice was selected from local varieties in Thailand in the early 1950s. During the past 5 decades, Thailand has been the top producer and leading exporter of Jasmine rice. The name "Jasmine rice," however, has never been registered as any kind of mark. (EAP/VLC, 1998)

The *bona fide* use of the name "Jasmine rice" over 40 years has made the name "Jasmine rice" very well-known among rice consumers all over the world. When these people hear the word "Jasmine rice", they automatically associate the flavor and texture quality of the rice with Thailand, which is its origin. The texture and flavor of Jasmine rice is generally believed to result from the geographical and climatic features of Thailand. Attempts in growing Jasmine rice seeds taken from Thailand in other parts of the world resulted in much poorer fragrant characteristics. Even a US importer of Vietnamese connection acknowledged that "Jasmine Rice is translated as Scented Rice of Thailand Country." (Please see the Texas trademark registration of TAMDA PHUOC LOC THO in Table 2-8.) In 1991, a consumer preference test conducted at Texas A&M University confirmed the common understanding that Caucasian and Asian consumers prefer Jasmine rice from Thailand over any other kinds of rice. This result was consistent with what people all over the world had already known for years, i.e. the aromatic rice varieties from Thailand is the best in the world. These varieties are called Jasmine rice.

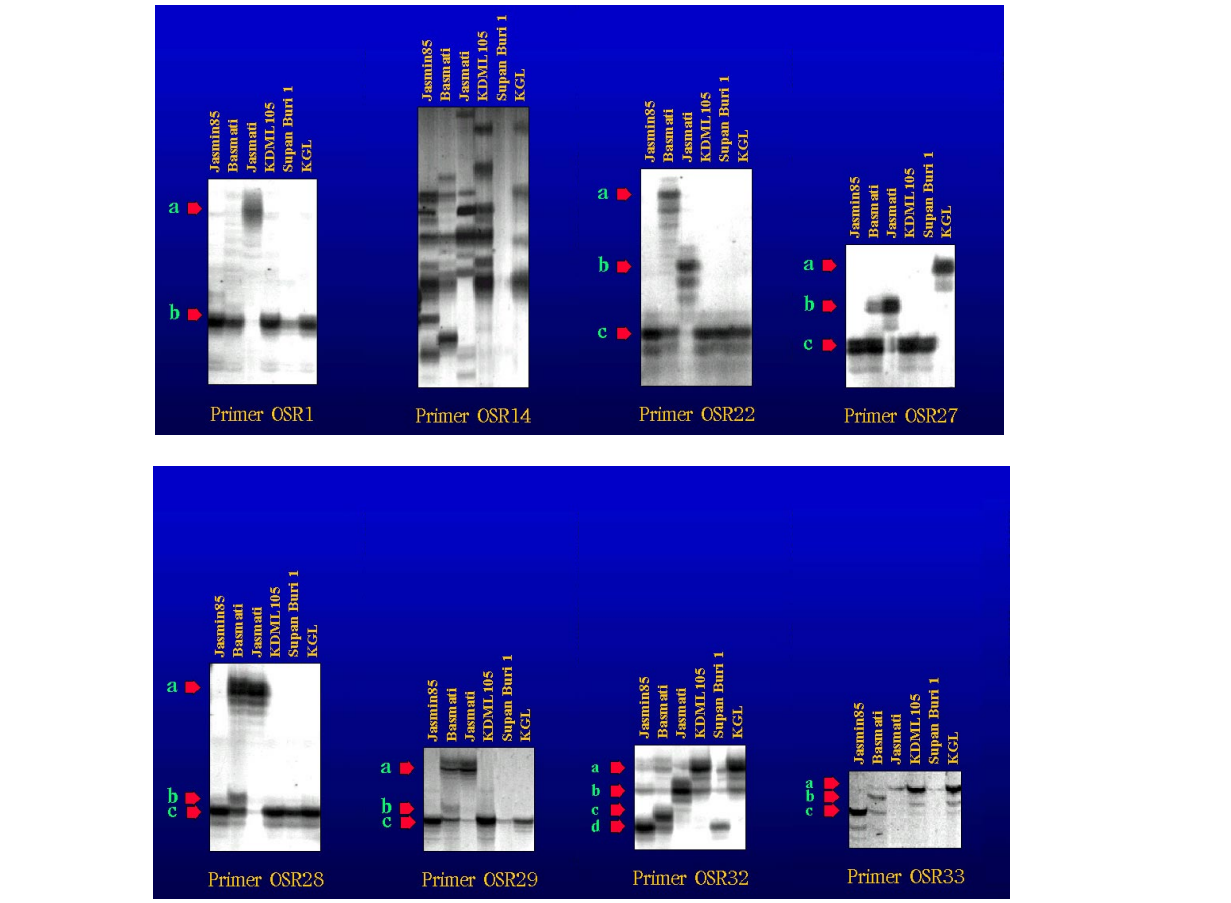

Figure 2-2: DNA fingerprints of rice

Representative results of DNA fingerprinting of a few rice varieties. Left to right columns (lanes): Jasmine 85, Basmati, Jasmati), Khao Kao Dok Mali 105 (KDML105), Supanburi Aromatic Rice 1 (Suphanburi1), and Klong Luang Rice 1 (KGL1). Primer used are OSR 1, 14, 22, and 27 in the top row and OSR 28, 29,32, and 33 in the middle row. The phylogenetic tree is also given in the bottom row. (More results are shown in the reference.) It was concluded that Jasmati is almost genetically unrelated to Jasmine rice. Source: DNA Fingerprinting Unit, Kasetsart University, Kampangsaen, Nakhon Patom, Thailand. (Vanvijit, 1998)

During the last decade, foreign rice breeders have intensified their efforts at developing aromatic rice varieties that have cooking characteristics similar to those of Jasmine rice, while growing fast, giving high yields, and possessing resistance to pests and diseases in each particular farming area. The final goal is to produce aromatic rice, with quality approaching that of Jasmine rice, for global competition.

Meanwhile, the Thai farmers and exporters were not alerted. Most Thai farmers know that the flavor and cooking characteristics of Jasmine rice are the results of interactions between the genetic-dependent factors and environment-dependent factors that yield the optimum outcome when these varieties are grown in Thailand. Nobody bothered to seek any kind of intellectual property protection since competition, they believed, was technically not possible. Surely they had not heard about modern plantbreeding and biopiracy.

With this attitude on the Thai side, the US government in collaboration with IRRI and several US universities released to their farmers Jasmine 85, formerly called IR841, which is a direct progeny of the original Jasmine rice developed in Thailand. This high-growth, high-yield variety made possible the establishment of new rice companies like Doguet-Dishman. Upon hearing that the US attempted to grow Jasmine rice, some Thais were very amused at another would-be-futile attempt. Nobody from Thailand protested the naming of IR841 "Jasmine 85."

Of all US rice companies, RiceTec is perhaps the most aggressive in devising new strategies and utilizing intellectual property system to its full advantage, often at the expense of parties in the developing world. In the Basmati case, RiceTec obtained a US patent on the selection method and the result of breeding genuine Basmati varieties with semi-dwarf ones with selection for cooking characteristics of the rice grain. India decided to defend her interests in Basmati-importing countries around the world including England and Greece.

In the case of Jasmine rice, Thai rice exporters normally work by filling orders from importers in other countries without realizing that quite frequently, importers would have the Thai trademark registered as theirs. Imported Jasmine rice in 50 and 100 kg bags are routinely divided (and/or mix with other ingredients) and repackaged into smaller bags, sometimes very small, in order to sell to US consumers. The added value, alas, would go to the repackagers instead of Thai rice exporters, rice developers, or rice farmers.

The whole issue, therefore, is based on the information that RiceTec was granted a trademark on Jasmati, where there is virtually no genetic similarity between Jasmine rice and RiceTec's variety. The use of the mark "Jasmati" can easily confuse (and deceive) consumers that the product is a progeny of Jasmine and Basmati varieties. In the end, it also dilutes the reputation of Jasmine rice and the connection between Jasmine rice and Thailand. Since Jasmine rice has been the leader of all aromatic rice in terms of flavors for many decades, the use of "Jasmati" mark can also be viewed as an act of tarnishing the well-known image of Jasmine rice.

Unfortunately, due to the ignorance of many people involved, Thailand has a time limit of only a couple of months to contest the validity of Jasmati trademark. This is why some people call it "The Jasmine Rice Crisis."

3. Considerations

Based on the background information reviewed in the previous section, we are in a position to consider the applicability of various legal regimes that may be useful in resolving the crisis, such as patent protection, plant variety protection, Convention on Biological Diversity, trademark, well-known mark, certification mark, geographical indication, and consumer protection.

3.1 Utility Patent

Year	Registration Info	Title and Sample Claims
1991	USPatent Number 5004863 Filing date: Dec 3, 1986 Issue date: Apr 2, 1991 Inventor: Paul F. Umbeck Assignee: Agracetus, Inc.	Genetic Engineering Of Cotton Plants and Lines 1. A method of introducing genes into cotton plants and plant lines comprising the steps of: - exposing hypocotyl tissue of immature cotton plants to a culture of transformation competent non-oncogenic Agrobacterium tumefaciens harboring - a Ti plasmid having a T-DNA region including both a foreign chimeric gene and a selection agent resistance gene, both genes including appropriate regulatory sequences so as to be expressed in the cells of cotton plants; - culturing the exposed tissue in the presence of a selection agent for which the resistance gene encodes for resistance so as to select for plant cells - transformed with the T-DNA region; - inducing somatic embryo formation in the exposed tissue in culture; and - regenerating the somatic embryos into whole cotton plants. ..... 13. Cotton plants produced by the method of claim 1 which include cells which comprise in their genome the foreign chimeric recombinant gene and the selection agent gene and which produce a foreign cellular product coded by the foreign gene. 14. Cotton somatic embryos produced by the method of claim 1. 15. Cotton seeds produced by the plants of claim 3. 16. A method for introducing genes into cotton plants and plant lines, comprising the following steps in sequence; .....
1994	European Patent Number 0 301 749	Particle-mediated transformation of soybean plants and lines 1. A method of making a genetically transformed soybean plant characterized in that it comprises the steps of:

Year	Registration Info	Title and Sample Claims
	Filing date: July 20, 1988 Issue date: 1994 Inventor Paul Christou, Dennis McCabe, William F. Swain, Kenneth A. Barton Assignee: Agracetus, Inc.	• preparing copies of a foreign gene including a coding region and flanking regulatory sequences effective to express the coding region in soybean cells; • joining copies of the foreign gene to biologically inert carrier particles; • placing a regenerable soybean tissue on a target surface; • physically accelerating the particles carrying the chimeric gene copies at the target surface in such a fashion that some particles lodge in the interior of at least some of the cells of the soybean tissue; • regenerating the treated tissue into a whole sexually mature soybean plant; and • verifying the existence of the foreign gene in the tissues of the regenerated plant. ……. 16. A soybean plant produced by a method as claimed in any one of the preceeding claims. 17. A seed produced by a soybean plant produced by a method as claimed in any one of the preceeding claims. 18. A soybean plant comprising in its genome a foreign gene constructed to cause expression of an exogenous gene product in at least some of the cells of the soybean plant. 22. A soybean plant comprising in its genome an exogenous gene construction conditioning expression in the cells of the soybean plant a marker gene product which is detectable by assay. 25. A regenerable soybean tissue including soybean cells which comprise in their genome an exogeneous gene. …. 28. A method of making a genetically transformed line of plants comprising the steps of: • preparing copies of a foreign gene including a coding region and flanking regulatory sequences effective to express the coding region in cells of the plants; • joining copies of the foreign gene to inert carrier particles; • placing a meristematic tissue of the plant on a target surface; • physically accelerating the particles carrying the foreign gene copies at the target surface in such a fashion that some particles lodge in the interior of at least some of the cells of the meristematic tissue; • growing the meristematic tissue into a whole sexually mature plant; • obtaining self-pollinated seed from mature plant; • growing out progeny plants from the seed; and • assaying the progeny plants for presence of the foreign gene.

Year	Registration Info	Title and Sample Claims
1995	US Patent Number 5,401,504 Filing date: Dec. 28, 1993 Issue date: Mar. 28, 1995 Revoke date: Aug. 13, 1977 Inventors: Suman K. Das, Hari Har P. Cohly Assignee: U. of Mississippi Medical Center	Use of turmeric in wound healing 1. A method of promoting healing of a wound in a patient, which consists essentially of administering a wound-healing agent consisting of an effective amount of turmeric powder to said patient. 2. The method according to claim 1, wherein said turmeric is orally administered to said patient. 3. The method according to claim 1, wherein said turmeric is topically administered to said patient. 4. The method according to claim 1, wherein said turmeric is both orally and topically administered to said patient. 5. The method according to claim 1, wherein said wound is a surgical wound. 6. The method according to claim 1, wherein said wound is a body ulcer.

Table 3-1: Examples of Troublesome Biotech Utility Patents

Emphasis added. Source: Office of Intellectual Property Policy Research, Chulalongkorn University Intellectual Property Institute

It is a common belief for the Thai people that plants and animals should be excluded from intellectual property protection. Many Americans who complained that the Jasmin Rice Crisis was blown out of proportion to its actual severity should understand that the Thais' resentment towards any attempt to monopolize plants is based on their agricultural background. Since rice is the most important crop of the Kingdom, the issue is extremely sensational. Sensitive issues similar to this one used to rock the political stability of past governments and intellectual property issues were credited as a major factor that caused Prime Minister Prem Tinsulanond to dissolve the Parliament back in 1988.

As the global minimum standard for intellectual property protection, TRIPs specifies that patent protection must be available in all fields of technology. Nevertheless, Member countries are allowed to exclude plants and animals from patent protection until the next revision of the Agreement.[16]

Although lawyers in the Western hemisphere sometimes tend to view the patent system as part of business laws, intellectual property protection is, in fact, part of

[16] **TRIPs Article 27 (Patentable Subject Matter)** 3. Members may also exclude from patentability: (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. ....

economic law.[17] Patent is the capitalistic tool that stimulates invention and technological progress. Industrialized countries have successfully used patent systems to their national advantage. By allowing rightholders to enjoy limited monopoly on new, improved inventions, potential inventors are motivated to allocate resources into inventive activities. Public disclosure of the invention details is needed in order to prevent others from having to reinvent the wheel. Potential inventors can then concentrate their efforts into inventing brand new inventions, however incrementally small, on top of the existing prior art.

The heart of a utility patent system lies in the ingenious benefit-sharing arrangement among those responsible for such building up of these technological increments. A smart inventor of technological improvement can commercially exploit his patent rights while the inventor of the technological base can derive extra income through licensing. A typical patent law system is structured such that the exclusive right is the right to exclude others from the make, use, and sell of the patented invention.[18] In order to commercialize his own invention, a patent rightholder may need to avoid patent infringement by obtaining a license (and probably have to pay upfront and royalty fees) to practice an invention on top of which his own invention lies. In the end, theoretically at least, everyone wins. Society gets new products and inventors in the chain of incremental improvements receive some shares of the take. Other potential inventors can access the information contained in the patent document in order to improve on the invention and make some money, too. As a consequence, the technologies contained in the original invention keep getting improved.

The reservations from developing countries with respect to patenting biotechnological inventions have to do with the standard practice of pharmaceutical and plantbreeding companies in using many plants, animals, and biochemical compounds collected in developing countries as starting materials for incrementally improved inventions. These improved drugs, etc. are subsequently granted patent protection in many countries worldwide. The patent holder is then in a position to commercialize his invention without the need to share any benefit with anyone in developing countries since naturally occurring substances, plants or animals (i.e. without human intervention), as well as local and indigenous knowledge, are either not recognized as inventions or are considered to be in the public domain, and are therefore not patentable.

The United States is well-known for having broad scope of patentable inventions, as well as a separate regime of plant patent. (US-PPA, 1930) The European Union is in the process of establishing a biological material protection standard of its own. (EC, 1998) Nevertheless, developing countries often cite three example cases to illustrate their objections with industrialized countries, especially the US, in exploiting poorer and often less informed nations. These problematically patented inventions have to do with genetically engineered cottons, genetically engineered soybeans, and the wound-healing property of turmeric.

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[17] Business law is defined here simply as a framework for orderly business transactions. Economic law emphasizes a framework that fosters socio-economic well-being of the society. As such, special socio-economic objectives may pre-empt freedom in making transactions among individuals. Antitrust laws, the US mechanical rights compulsory licensing system, reverse engineering provision in integrated circuit layout design protection laws, and patent cancellation provision in the Thai Patent Act are a few examples.

[18] This is why patent rights are considered to be "negative rights." If patent rights were "positive" rights, there would be a conflict between the rights of an inventor in the prior art and the rights of an inventor who made patented incremental improvements on the first inventor's patented invention.

In the case of genetically-engineered cotton, Agracetus (a US company) was granted US Patent Number 5,004,863,[19] which covered genetically engineering cotton regardless of what the gene actually was. (Please see Table 3-1.) This normal practice of USPTO to grant broad claims to the first patent in each line of technology may not be that unusual in other fields of technology but when applied to biotechnology, it may retard technological development. As pointed out by academics and NGOs, Agracetus is now in a position to shape the direction and momentum of further genetic improvements in cotton[20] since Agracetus can dictate who, when, and where genetic improvements in cotton may be commercialized. (RAFI, 1993) Naturally, Agracetus has applied for patent protection in major cotton producing countries, including the EPO, Brazil, China, and India.[21] India refused to issue a similar patent that Agracetus filed in India[22] and petitioned USPTO to revoke US Patent No. 5,004,863.

In case of genetically-engineered soybean, Agracetus was granted European Patent number 0 301 749 in 1994 on "Particle-mediated transformation of soybean plants and lines," which was criticized in the same way as the genetically engineered cotton patents. (Please see Table 3-1.) The claims in the patent, as usual, cover process and products including soybean plants and seeds produced by the method regardless of the gene involved. (Please see claims 13 and 28 of European Patent No. 0 301 749 in Table 3-1.) The same transformation technique (The Gene Gun) is also protected for use in any other plants. (Please see claim 28 of European Patent No. 0 301 749 in Table 3-1.)

The case of turmeric was different from those of cotton and soybean. In 1993, two Indian scientists working in the United States filed for patent protection of the "Use of turmeric in wound healing," the claims of which are given in Table 3-1 in its entirety. On behalf of the Indian Government, India's Council for Scientific and Industrial Research (CSIR) submitted 32 documents to USPTO with a request to revoke the turmeric patent on the ground that the invention had been practiced in India for centuries and therefore, no novelty could be found. The cancellation of the patent was official in August, 1997. According to Indian experts, over 65 US patents are additional candidates for biopiracy. (Anonymous, 1997b)

In case of rice, an interesting patent is a US patent on "Basmati rice line and grains." (Please see Table 2-4.) Basmati rice lines from India and Pakistan were bred with semi-dwarf long grain varieties and the progeny were selected according to the characteristics of "cook grain texture." The method of breeding and selection is new and patentable, according to the USPTO. (Sarreal et al., 1997) As we have seen before, the claims cover the process and products obtained from the process including seeds, plants, etc. Interestingly, the independent claim (claim 1) starts out with the rice plant itself, which is defined by the characteristics of the physical measurements, the behavior, and the physical and chemical properties of the rice grain produced by such plant. Although the name "Basmati" exists only in the title of the patent, the claims effectively include any modified Basmati lines as long as their characteristics are within the scope of the claims. From the standpoint of genetic resource onwers, this seems like a dirty tactic to get around plant variety protection and use a novel selection technique as a back door to obtain utility patent protection (with stronger protective measures) of the variety and perhaps several

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[19] And later US Patent numbers 5,159,135 (1992) and 5,608,142 (1997).

[20] At least until other effective methods in introducing foreign genes into cotton is available.

[21] USA, Brazil, China and India account for 60% of the world production of cotton, which amounts to about US$ 20 billion annually. (RAFI, 1993)

[22] According to some sources, the patent was first granted and then revoked.

related ones without having to satisfy the DUS criteria of US-PVPA. In fact, the "novel" breeding and selection technique may have been practiced in Asian countries for centuries but was not documented. Besides, the inventive step (difference) between documented prior arts and RiceTec's breeding and selection technique seems too small to be non-obvious. In addition, the use of the name "Basmati" in the title of the patent can give the company a tremendous commercial advantage in that consumers may be misled to believe that RiceTec has the monopoly (at least in America and the Caribbean Islands) to commercialize Basmati rice. Finally, RiceTec has been alleged to have taken semi-dwarf rice varieties, that it used to breed with Basmati, from IRRI. (RAFI, 1998) According to the Material Transfer Agreement (MTA) between IRRI and acceptor of IRRI rice lines, the IRRI varieties or the progeny of which must not be patented or registered under an intellectual property protection system.[23]

Since a patent application is treated confidentially until grant or publication, nobody in Thailand knows for sure whether a company like RiceTec may have bred Jasmine rice with some semi-dwarf varieties, using a slightly different selection scheme and applied for patent protection in countries that substantially import Jasmine rice from Thailand. If Thailand could monitor patent publications and issues in these countries, we would be in a position to take appropriate actions according to the domestic patent law in each country.[24]

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[23] Kuanpoth, Jakkrit (1998) in a televised interviewed (Nation Newstalk) by Suthichai Yoon in August, 1998. In 1997, IRRI entered into agreement with the Food and Agricultural Organization (FAO), prohibiting IRRI to allow anyone to seek intellectual property protection of IRRI's rice. It was pointed out that all the 22 Basmati varieties used for breeding in this patent came from IRRI (RAFI, 1998)

[24] For example, **US Patent Law. §135 (Interference)** (b) A claim which is the same as, or for the same or substantially the same subject matter as, a claim of an issued patent may not be made in any application unless such a claim is made prior to one year from the date on which the patent was granted. **§301 (Citation of Prior Art)** Any person at any time may cite to the Office in writing prior art consisting of patents or printed publications which that person believes to have a bearing on the patentability of any claim of a particular patent. If the person explains in writing the pertinency and manner of applying such prior art to at least one claim of the patent, the citation of such prior art and the explanation thereof will become a part of the official file of the patent. At the written request of the person citing the prior art, his or her identity will be excluded from the patent file and kept confidential. (US_Patent_Act, 1984)

3.2 Plant Variety Protection

Number	Variety Name	Filing Date	Registration Date
8500011	CB-801	10/16/84	10/31/85
8600162	V7713 (A717, CB860)	09/23/86	01/15/88
8700085	V4716 (A7339, CB848)	03/13/87	12/18/87
8900077	V7817	01/23/89	02/28/92
9000074	RT-A1001	01/29/90	09/30/91
9000075	RT-A1002	01/29/90	09/30/91
9100103	RT7015 (LC765-34-Bk-BK)	02/07/91	02/28/92
9600077	Basmati 867	12/11/95	Abandoned

Table 3-2: Summary of Rice Varieties that RiceTec, RiceTec Seed, or Farms of Texas Have Filed for Protection or Have Been Granted US Plant Variety Protection

RiceTec (or Farms of Texas) has 7 rice varieties registered under US-PVPA. The variety "RT-A1002" (shaded line at PVPA Registration Number 9000074) has been reported to be the "Jasmati" variety (A775-2-BK-9-4-1). Jasmati was developed in 1975 from a cross between Della and Labelle varieties. (Chitrakon, 1998a) Source: Summarized from Table 2-6.

Internationally, there exist several revisions of the UPOV agreements.[25] Nevertheless, Thailand is not signatory to any of these revisions. Policy-makers in Thailand have been very cautious about adopting any plant variety protection scheme that may put Thai farmers and plantbreeders at a disadvantage.

Plant variety protection systems, as the names indicate, are designed to protect plant varieties and not inventions like patent systems are. Consequently, a plant variety protection system does not require any inventive step and novelty as part of the conditions for obtaining protection like a patent system does. A plant variety qualified for protection must be new in the sense of marketing or commercialization both in UPOV 1978,[26] in UPOV 1991,[27] or even in Thailand's Plant Variety Protection Draft Act .[28]

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[25] The English translation of UPOV agreement is Convention for the International Union for the Protection of New Varieties of Plants. Versions of UPOV include 1961, 1972, 1978, and 1991, the latter of which more closely resembles a patent system than ever before. (Wijk et al., 1993)

[26] **UPOV 1978 Article 6 (Conditions Required for Protection)** (b) At the date on which the application for protection in a member State of the Union is filed, the variety (i) must not or, where the law of that State so provides, must not for longer than one year have been offered for sale or marketed, with the agreement of the breeder, in the territory of that State, and (ii) must not have been offered for sale or marketed, with the agreement of the breeder, in the territory of any other State for longer than six years in the case of vines, forest trees, fruit trees and ornamental trees, including, in each case, their rootstocks, or for longer than four years in the case of all other plants. Trials of the variety not involving offering for sale or marketing shall not affect the right to protection. The fact that the variety has become a matter of common knowledge in ways other than through offering for sale or marketing shall also not affect the right of the breeder to protection. (UPOV, 1978)

Furthermore, plant varieties eligible for protection must possess three characteristics, namely distinctness,[29] uniformity,[30] and stability,[31] often collectively called DUS.

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[27] **UPOV 1991 Article 5 (Conditions of Protection)** (1) (Criteria to be satisfied) The breeder's right shall be granted where the variety is (i) new, (ii) distinct, (iii) uniform and (iv) stable. **Article 6 (Novelty)** (1) (Criteria) The variety shall be deemed to be new if, at the date of filing of the application for a breeder's right, propagating or harvested material of the variety has not been sold or otherwise disposed of to others, by or with the consent of the breeder, for purposes of exploitation of the variety; (i) in the territory of the Contracting Party in which the application has been filed earlier than one year before that date and (ii) in a territory other than that of the Contracting Party in which the application has been filed earlier than four years or, in the case of trees or of vines, earlier than six years before the said date.; (2)(Varieties of recent creation) Where a Contracting Party applies this Convention to a plant genus or species to which it did not previously apply this Convention or an earlier Act, it may consider a variety of recent creation existing at the date of such extension of protection to satisfy the condition of novelty defined in paragraph (1) even where the sale or disposal to others described in that paragraph took place earlier than the time limits defined in that paragraph. (3) ("Territory" in certain cases) For the purposes of paragraph (1), all the Contracting Parties which are member States of one and the same intergovernmental organization may act jointly, where the regulations of that organization so require, to assimilate acts done on the territories of the States members of that organization to acts done on their own territories and, should they do so, shall notify the Secretary-General accordingly. (UPOV, 1991)

[28] **Plant Variety Protection Draft Act. Article 6 (Conditions of Protection)** New varieties of plants that are protected in this Article are protected plants announced by the Minister according to Article 12 and must possess the following characteristics (1) Being varieties not previously in existence …… **Article 8 (Novelty)** Plant varieties not previously in existence means plant varieties the propagation part of which has not been utilized, whether by selling by any type of distribution, whether inside or outside of the Kingdom, by plantbreeders or by the consent of plantbreeders over 12 months before the date of application for registration. (Thai_PVPA, 1998)

[29] **UPOV 1978 Article 6 (Conditions Required for Protection)** (1)The breeder shall benefit from the protection provided for in this Convention when the following conditions are satisfied: (a) Whatever may be the origin, artificial or natural, of the initial variation from which it has resulted, the variety must be clearly distinguishable by one or more important characteristics from any other variety whose existence is a matter of common knowledge at the time when protection is applied for. Common knowledge may be established by reference to various factors such as: cultivation or marketing already in progress, entry in an official register of varieties already made or in the course of being made, inclusion in a reference collection, or precise description in a publication. The characteristics which permit a variety to be defined and distinguished must be capable of precise recognition and description. (UPOV, 1978) **UPOV 1991 Article 7 (Distinctness)** The variety shall be deemed to be distinct if it is clearly distinguishable from any other variety whose existence is a matter of common knowledge at the time of the filing of the application. In particular, the filing of an application for the granting of a breeder's right or for the entering of another variety in an official register of varieties, in any country, shall be deemed to render that other variety a matter of common knowledge from the date of the application, provided that the application leads to the granting of a breeder's right or to the entering of the said other variety in the official register of varieties, as the case may be. (UPOV, 1991) **Plant Variety Protection Draft Act. Article 11 (Distinctness)** Distinct plant varieties mean plant varieties that are distinctly different from other varieties, whether in morphology, physiology, or possess any other characteristics that result from genetic expressions that are different from plants existing on the day of the application of registration. Such differences are related to the characteristics that are useful to planting, consumption, pharmacy, production, or transformation characteris. Plants

As a WTO Member, Thailand will be obligated to have a plant variety protection system,[32] which according to TRIPs, can be under patent law or *sui generis* law or under the combination of both laws. In 1997, Ministry of Commerce and Ministry of Agriculture and Cooperative drafted the Plant Variety Protection Act that had "breeder's exemption" similar to UPOV 1978[33] and had a built-in "farmers privileges"[34] somewhat similar to the right to save seeds in the US law.[35]

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existing on the day of the application of registration means plant varieties in common existence, including the following plant varieties: (1) already registered plant varieties, whether domestic or foreign, before domestic application date, (2) plant varieties with domestic application for registration with subsequent registration, (3) plant varieties with domestic application for registration but applicants have abandoned the applications. This provision is not applicable to subsequent application by persons other than the ones who abandoned the applications. (Thai_PVPA, 1998)

30 **UPOV 1978 Article 6 (Conditions Required for Protection)** (c) The variety must be sufficiently homogeneous, having regard to the particular features of its sexual reproduction or vegetative propagation. (UPOV, 1991) **Article 8 (Uniformity)** The variety shall be deemed to be uniform if, subject to the variation that may be expected from the particular features of its propagation, it is sufficiently uniform in its relevant characteristics. (UPOV, 1978) **Plant Variety Protection Draft Act. Article 9 (Uniformity)** Plant varieties with uniform varietal characteristics means plant varieties with uniform morphology, physiology, or other characteristics that result from genetic expressions specific to these varieties, with variations the level of which is explainable in production terms. (Thai_PVPA, 1998)

31 **UPOV 1978 Article 6 (Conditions Required for Protection)** (d) The variety must be stable in its essential characteristics, that is to say, it must remain true to its description after repeated reproduction or propagation or, where the breeder has defined a particular cycle of reproduction or multiplication, at the end of each cycle. (UPOV, 1978) **UPOV 1991 Article 9 (Stability)** The variety shall be deemed to be stable if its relevant characteristics remain unchanged after repeated propagation or, in the case of a particular cycle of propagation, at the end of each such cycle. characteristics (UPOV, 1991)] **Plant Variety Protection Draft Act. Article 10 (Stability)** Plant varieties having stability of varietal characteristics mean plant varieties that can express varietal characteristics to be protected in each round of production of propagating materials of these varieties, using conventional propagation method for that plant. (Thai_PVPA, 1998)

32 **TRIPs Article 27 (Patentable Subject Matter)** 3. Members may also exclude from patentability: (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof. The provisions of this paragraph shall be reviewed four years after the date of entry into force of the WTO Agreement. (TRIPs, 1992)

33 **UPOV 1978 Article 5 (Rights Protected, Scope of Protection)** (3) Authorisation by the breeder shall not be required either for the utilisation of the variety as an initial source of variation for the purpose of creating other varieties or for the marketing of such varieties. Such authorisation shall be required, however, when the repeated use of the variety is necessary for the commercial production of another variety. (UPOV, 1978)

34 **Plant Variety Protection Draft Act. Article 32 (Exclusive Rights):** Only the rightholders in new plant variety protection certificates have the rights to produce for sale, sell, or distribution by any means, offer for sale, import into the Kingdom, export from the Kingdom, or possess for any of the above acts, of the propagating materials of the protected varieties. Exceptions: (1) any acts without the purpose of use as propagating material, ... (4) Planting or propagating by farmers in their own fields, of the protected varieties using propagating material produced by the farmers themselves,

In addition to protecting new plant, the Draft Act has been designed to offer *sui generis* protection to native varieties, local varieties, national varieties, and wild varieties that are distinct and homogenous.[36] Registration of these local varieties requires disclosure of history of the variety[37] and the components of the registration process include publication and opportunity for others to file notices of opposition.[38]

In the case of Jasmine rice, RiceTec has seven varieties registered under US-PVPA. It is not known how many unregistered varieties of aromatic rice are owned by RiceTec. Thai experts in plant molecular biology would also like to obtain samples of the registered varieties in order to find any similarity to Thai and IRRI varieties.

Since the Thai Plant Variety Protection Act is still in the drafting stage, one may wonder what good the law would have done, if it had already been enacted some time ago. In this scenario, any variety registration and its associated registration background documents should serve as a collection of evidence supporting the statement of use, or commercial use, or existence as prior art, depending on Thailand's legal strategy. Together with data from DNA fingerprint analyses, the evidence should help Thailand make civil and

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except in the case that the varieties is on the list that the Minister, with the consent of the Committee, have announced as plants deserving promotion for improving the varieties or in the case that the plant is not important to food security, farmers may plant or propagate, in their own field, the protected plant not over three times the amount obtained. (Thai_PVPA, 1998)

[35] **US Plant Variety Protection Act, Section 113 (Right to Save Seed; Crop Exemption)** Except to the extent that such action may constitute an infringement under subsections (3) and (4) of section 111, it shall not infringe any right hereunder or a person to save seed produced by the person from seed obtained, or descended from seed obtained, by authority of the owner of the variety for seeding purposes and use such saved seed in the production of a crop for use on the farm of the person, or for sale as provided in this section. A bona fide sale for other than reproductive purposes, of seed produced on a farm either from seed obtained by authority of the owner for seeding purposes, or from seed produced by descent on such farm from seed obtained by authority of the owner for seeding purposes shall not constitute an infringement. A purchaser who diverts seed from such channels to seeding purposes shall be deemed to have noticed under section 127 that the actions of the purchaser constitute and infringement. A purchaser who diverts seed from such channels to seeding purposes shall be deemed to have notice under section 127 that the actions of the purchaser constitute an infringement. (US_PVPA, 1980)

[36] **Plant Variety Protection Draft Act. Article 44 (Protected Indigenous Plant Varieties)** Local indigenous plant varieties protected under this Article must be plant varieties with the following characteristics: (1) having distinct varietal characteristics, (2) possessing homogeneity of varietal characteristics (Thai_PVPA, 1998)

[37] **Plant Variety Protection Draft Act. Article 47 (Formality of Application)** Applications for protection of local indigenous plant varieties are to be filed with officials according to the rules and procedures stipulated in a Ministerial Decree, with the consent of the Committee. An application must contain the following items: (1) Name of plant variety and important characteristics of the variety, (2) history of the plant variety, (3) harvesting season in each year, (4) other items as stipulated in the Ministerial Decree. (Thai_PVPA, 1998)

[38] **Plant Variety Protection Draft Act. Article 50 (Notice of Opposition)** After having issued the publication according to Article 49, any community or person thinks that the application for local indigenous plant variety is not consistent with Article 44 or Article 45 may file an opposition notice with the officials within 90 days counting from the publication date in Article 49. (Thai_PVPA, 1998)

criminal cases against biopiracy of her biological resources as needed. Furthermore, if some day a variety of Thai rice happened to be registered under UPOV and the hostile registered variety under UPOV was essentially derived from the Thai original, there may be a ground for cancellation of such variety.[39]

3.3 Convention on Biological Diversity[40]

The Convention on Biological Diversity (CBD) is founded on two principles: acceptance that conservation of biological diversity is the essential target of Members and promotion of sustainable and equitable use of genetic resources. (Snape, 1996, p. 81) The Convention was finalized in the 1992 Earth Summit Meeting and was signed by almost all countries in the world.[41] Over one hundred countries that signed the Convention have already ratified.[42]

Officially, the objectives[43] of the Convention are (1) conservation of biological diversity, (2) sustainable use, (3) fair and equitable sharing of benefits arising from the use of genetic resources.[44]

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[39] **UPOV 1991 Article 14 (Scope of the Breeder's Right)** (1) (Acts in respect of the propagating material) (a) Subject to Article 15 and Article 16, the following acts in respect of the propagating material of the protected variety shall require the authorization of the breeder: (i) production or reproduction (multiplication), (ii) conditioning for the purpose of propagation, (iii) offering for sale, (iv) selling or other marketing, (v) exporting, (vi) importing, (vii) stocking for any of the purposes mentioned in (i) to (vi), above. (b) The breeder may make his authorization subject to conditions and limitations. (2) (Acts in respect of the harvested material)..... (3) (Acts in respect of certain products)..... (4) (Possible additional acts)..... (5) **(Essentially derived and certain other varieties)** (a) The provisions of paragraph (1) to paragraph (4) shall also apply in relation to (i) varieties which are essentially derived from the protected variety, where the protected variety is not itself an essentially derived variety, (ii) varieties which are not clearly distinguishable in accordance with Article 7 from the protected variety and (iii) varieties whose production requires the repeated use of the protected variety.

[40] Background information about the Convention on Biological Diversity presented here is based on a section of a chapter that the author wrote for a report commissioned by the Thai Biological Resource Knowledge and Policy Development Project (BRT) early in 1998. (Tanasugarn et al., 1998)

[41] The delegate who signed the Convention on behalf of Thailand on June 12, 1992 was Mr. Kasem Sanidvongse, Permanent Secretary of Science, Technology and Environment. A representative of the United State signed the Convention on June 4, 1993.

[42] At the time of this writing, neither the US or Thailand has ratified the Convention on Biological Diversity. The opponents of the ratification on the US side are Senator Jesse Helms (R-NC) and House Majority Leader Robert Dole (R-KS) (Snape, 1996, p. 82.)

[43] "The US government focuses on the importance of the first two objectives; developing country Parties to the Convention tend to focus on the last." (EAP/VLC, 1998, p. 8) This is one of the reasons that the US has not ratify the Convention.

[44] **Convention on Biological Diversity Article 1 (Objectives)** The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by

Taking these objectives in mind, the Convention's principles of access,[45] technology transfer[46] and technological collaboration[47] would be built upon the principles of mutual agreement, resulting from negotiation and legal contract.

The Convention on Biological Diversity emphasizes the sovereign right of a nation to manage its own biological diversity,[48] both in the principle section[49] and the section on access to genetic resources[50] as well as in section about science and technology collaboration.[51] The concept of sovereign right needs to be addressed up front in order to make clear that biological diversity is not common heritage of mankind, i.e. something that every human-being is entitled to utilize. (Rayanakorn, 1995)

Whereas the Convention accepts the sovereign right of a nation to manage its own biological diversity, the Convention establishes obligations for Members to promote or facilitate[52] several activities including access to biological resources,[53]

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appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding. (CBD, 1992 - emphasis added)

[45] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 4. Access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article. (CBD, 1992 - emphasis added)

[46] **Convention on Biological Diversity Article 16 (Access to and Transfer of Technology)** 2. Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Articles 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraphs 3, 4 and 5 below. (CBD, 1992 - emphasis added)

[47] **Convention on Biological Diversity Article 18 (Technical and Scientific Cooperation)** 5. The Contracting Parties shall, subject to mutual agreement, promote the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of this Convention. (CBD, 1992 - emphasis added)

[48] "The roots of the Convention on Biological Diversity (CBD) date to the 1972 UN Conference on the Human Environment, which first recognized the sovereign right of States to exploit their own resources pursuant to their own environmental policies, along with the parallel responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment or other States or of areas beyond the limits of national jurisdiction. (EAP/VLC, 1998, p. 8)

[49] **Convention on Biological Diversity Article 3 (Principle)** States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction. (CBD, 1992 - emphasis added)

[50] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 1. Recognizing the sovereign rights of States over their natural resources, the authority to determine access to genetic resources rests with the national governments and is subject to national legislation. (CBD, 1992 - emphasis added)

[51] Interestingly, no emphasis on this point is given in sections on access and transfer of technology and not is section about sharing of information.

[52] Since the Convention on Biological Diversity respects the sovereignty of each country, "facilitate" here means having a transparent procedure for citizens and foreigners to request access to biological or genetic

promotion of participation from the private sector in the access, collaboration, and technology transfer,[54] facilitation of information exchange,[55] and in science and technology international collaboration.[56]

The Convention on Biological Diversity rests on 6 principles as follow:

1. The principles of fair[57] and equitable sharing of benefits.[58]

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resources. The steps involved in the application and examination, as well as conditions for granting or rejecting an application must be clearly documented. "Facilitate" does not mean automatically granting access to biological or genetic resources without a thorough examination. Doing so is consistent with the principle of "common heritage of mankind," which is the opposite of the principle underlying the Convention.

[53] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 2. Each Contracting Party shall endeavour to create conditions to facilitate access to genetic resources for environmentally sound uses by other Contracting Parties and not to impose restrictions that run counter to the objectives of this Convention. (CBD, 1992 - emphasis added)

[54] **Convention on Biological Diversity Article 16 (Access to and Transfer of Technology)** 4. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that the private sector facilitates access to, joint development and transfer of technology referred to in paragraph 1 above for the benefit of both governmental institutions and the private sector of developing countries and in this regard shall abide by the obligations included in paragraphs 1, 2 and 3 above. (CBD, 1992 - emphasis added)

[55] **Convention on Biological Diversity Article 17 (Exchange of Information)** 1. The Contracting Parties shall facilitate the exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity, taking into account the special needs of developing countries. (CBD, 1992 - emphasis added)

[56] **Convention on Biological Diversity Article 18 (Technical and Scientific Cooperation)** 1. The Contracting Parties shall promote international technical and scientific cooperation in the field of conservation and sustainable use of biological diversity, where necessary, through the appropriate international and national institutions. **3**. The Conference of the Parties, at its first meeting, shall determine how to establish a clearing-house mechanism to promote and facilitate technical and scientific cooperation. (CBD, 1992 - emphasis added)

[57] In the version of the Convention as translated by the Ministry of Science, Technology and Environment, the word "fair" was translated to a Thai adjective of a noun "justice." Most academics think this translation is incorrect.

[58] **Convention on Biological Diversity Article 1 (Objectives)** The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding**. Article 15 (Access to Genetic Resources)** 7. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms**. Article 19 (Handling of Biotechnology and Distribution of its Benefits)** 2. Each Contracting Party shall take all practicable measures to promote and advance priority access on a

2. The use of mutually agreeable terms in the access of genetic resources[59] and in the access of research results.[60]

3. The use of prior informed consent[61] in the access of genetic resources.[62]

4. The use of most favorable terms in the access and transfer of technology.[63]

5. The protection of intellectual property, especially in the access and transfer of technology.[64]

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fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms. (CBD, 1992 - emphasis added)

[59] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 4. Access, where granted, shall be on mutually agreed terms and subject to the provisions of this Article. (CBD, 1992 - emphasis added)

[60] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 7. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms. **Article 19 (Handling of Biotechnology and Distribution of its Benefits)** 2. Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms. (CBD, 1992 - emphasis added)

[61] In the Ministry of Science, Technology and Energy's translation of the Convention on Biological Diversity, "prior informed consent" is translated as "advanced one-sided agreement," with a connotation that the only option available to owner of biological and genetic resources is to allow full access to the resource. Here we emphasize that even if the owner of the resource is informed in advance of the intention to access the resource, the access cannot take place unless the owner gives his consent, usually for a fair return.

[62] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 5. Access to genetic resources shall be subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party. (CBD, 1992 - emphasis added)

[63] **Convention on Biological Diversity Article 16 (Access To and Transfer Of Technology)** 2. Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Articles 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraphs 3, 4 and 5 below. (CBD, 1992 - emphasis added)

[64] **Convention on Biological Diversity Article 16 (Access to and Transfer of Technology)** 2. Access to and transfer of technology referred to in paragraph 1 above to developing countries shall be provided and/or facilitated under fair and most favourable terms, including on

6. The concerns for biosafety.[65]

Based on these 6 principles, the Convention on Biological Diversity sets out conditions and guidelines in three areas of activity:

1. Technology transfer,[66] information exchange,[67] science and technology collaboration,[68] and access to research results.[69]

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concessional and preferential terms where mutually agreed, and, where necessary, in accordance with the financial mechanism established by Articles 20 and 21. In the case of technology subject to patents and other intellectual property rights, such access and transfer shall be provided on terms which recognize and are consistent with the adequate and effective protection of intellectual property rights. The application of this paragraph shall be consistent with paragraphs 3, 4 and 5 below. **3**. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that Contracting Parties, in particular those that are developing countries, which provide genetic resources are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and in accordance with international law and consistent with paragraphs 4 and 5 below. **5**. The Contracting Parties, recognizing that patents and other intellectual property rights may have an influence on the implementation of this Convention, shall cooperate in this regard subject to national legislation and international law in order to ensure that such rights are supportive of and do not run counter to its objectives. (CBD, 1992 - emphasis added)

[65] **Convention on Biological Diversity Article 19 (Handling of Biotechnology and Distribution of its Benefits)** 3. The Parties shall consider the need for and modalities of a protocol setting out appropriate procedures, including, in particular, advance informed agreement, in the field of the safe transfer, handling and use of any living modified organism resulting from biotechnology that may have adverse effect on the conservation and sustainable use of biological diversity. 4. Each Contracting Party shall, directly or by requiring any natural or legal person under its jurisdiction providing the organisms referred to in paragraph 3 above, provide any available information about the use and safety regulations required by that Contracting Party in handling such organisms, as well as any available information on the potential adverse impact of the specific organisms concerned to the Contracting Party into which those organisms are to be introduced. (CBD, 1992 - emphasis added)

[66] **Convention on Biological Diversity Article 16 (Access to and Transfer of Technology)** especially in **3**. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, with the aim that Contracting Parties, in particular those that are developing countries, which provide genetic resources are provided access to and transfer of technology which makes use of those resources, on mutually agreed terms, including technology protected by patents and other intellectual property rights, where necessary, through the provisions of Articles 20 and 21 and in accordance with international law and consistent with paragraphs 4 and 5 below. (CBD, 1992 - emphasis added)

[67] **Convention on Biological Diversity Article 17 (Exchange of Information)** 1. The Contracting Parties shall facilitate the exchange of information, from all publicly available sources, relevant to the conservation and sustainable use of biological diversity, taking into account the special needs of developing countries. **2**. Such exchange of information shall include exchange of results of technical, scientific and socio-economic research, as well as information on training and surveying programmes, specialized knowledge, indigenous and traditional knowledge as such and in combination with the technologies referred to in Article 16, paragraph 1. It shall also, where feasible, include repatriation of information. (CBD, 1992 - emphasis added)

2. International collaborations in research and development.[70]

3. Benefit-sharing[71] with mutual agreement on fair and equitable terms

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[68] **Convention on Biological Diversity Article 18 (Technological and Scientific Cooperation)** 4. The Contracting Parties shall, in accordance with national legislation and policies, encourage and develop methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention. For this purpose, the Contracting Parties shall also promote cooperation in the training of personnel and exchange of experts. (CBD, 1992 - emphasis added)

[69] **Convention on Biological Diversity Article 19 (Handling of Biotechnology and Distribution of its Benefits)** 2. Each Contracting Party shall take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms. (CBD, 1992 - emphasis added)

[70] **Convention on Biological Diversity Article 15 (Access to Genetic Resources)** 6. Each Contracting Party shall endeavour to develop and carry out scientific research based on genetic resources provided by other Contracting Parties with the full participation of, and where possible in, such Contracting Parties. **Article 18 (Technical and Scientific Cooperation)** 2. Each Contracting Party shall promote technical and scientific cooperation with other Contracting Parties, in particular developing countries, in implementing this Convention, inter alia, through the development and implementation of national policies. In promoting such cooperation, special attention should be given to the development and strengthening of national capabilities, by means of human resources development and institution building. 4. The Contracting Parties shall, in accordance with national legislation and policies, encourage and develop methods of cooperation for the development and use of technologies, including indigenous and traditional technologies, in pursuance of the objectives of this Convention. For this purpose, the Contracting Parties shall also promote cooperation in the training of personnel and exchange of experts. **5**. The Contracting Parties shall, subject to mutual agreement, promote the establishment of joint research programmes and joint ventures for the development of technologies relevant to the objectives of this Convention. **Article 19 (Handling of Biotechnology and Distribution of its Benefits)** 1. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, to provide for the effective participation in biotechnological research activities by those Contracting Parties, especially developing countries, which provide the genetic resources for such research, and where feasible in such Contracting Parties. (CBD, 1992 - emphasis added)

[71] **Convention on Biological Diversity Article 1 (Objectives)** The objectives of this Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding. **Article 15 (Access to Genetic Resources)** 7. Each Contracting Party shall take legislative, administrative or policy measures, as appropriate, and in accordance with Articles 16 and 19 and, where necessary, through the financial mechanism established by Articles 20 and 21 with the aim of sharing in a fair and equitable way the results of research and development and the benefits arising from the commercial and other utilization of genetic resources with the Contracting Party providing such resources. Such sharing shall be upon mutually agreed terms. Article 19. Handling of Biotechnology and Distribution of its Benefits. **Article 19 (Handling of Biotechnology and Distribution of its Benefits)** 2. Each Contracting Party shall

In short, the Convention on Biological Diversity utilizes the mechanism of legal contract to specify roles and responsibility of the party requesting access and the owner(s) of biological and genetic resources. Bargaining power depends on how badly the requesting party need to access the resource, what the party has to give in return, prior technological capability of the resource owner, the experience of the negotiators and licensing specialists, etc. The domestic laws of each Member country, in addition to honoring the Convention, often define a minimum set of terms to be included in an access agreement and establish a system of performance monitoring for the access and collaboration activities.

Since Thailand has not ratified the Convention, there is not much basis to consider for protecting Thai interests in the case of Jasmati. Even if Thailand had ratified the Convention, it may help Thailand only slightly, if not at all. An exception would be the genetic resource catalog and related information (to be collected to protect the interests of Thailand) may help in the process of showing the local existence of Jasmine rice. Together with other pieces of evidence, this may help reject the novelty of an invention or a plant variety. In addition, after Thailand ratifies the Convention on Biological Diversity, the Kingdome needs to enact at least a special law as a framework for uniform material transfer and collaboration agreements. Thai businessman, researchers, and local communities can refer to this law when dealing with foreigners who want to access and transfer Thai biological and genetic resources.

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take all practicable measures to promote and advance priority access on a fair and equitable basis by Contracting Parties, especially developing countries, to the results and benefits arising from biotechnologies based upon genetic resources provided by those Contracting Parties. Such access shall be on mutually agreed terms. (CBD, 1992 - emphasis added)

3.4 Trademark and Unfair Competition

Trademark	Summary
JASMIN RICE TAMDA PHUOC LOC THO BRAND OF 100% JASMINE RICE Jasmin Rice Extra Super Quality Gao Thom "Hai Con Ket" Double Parrot Brand PREMIUM LONG GRAIN AROMATIC JASMINE RICE ARROZ JASMINA	Use and registering Jasmine rice using the mark "Jasmine Rice" or similar marks for some time by importers
THAI JASMINE RICE THAI JASMINE RICE & GAOTHOM ANGKOR WAT THAI JASMINE RICE MILGROSA MILAGROSA GAO THOM THUONG HANG JASMINE RICE THAI KING RICE PRODUCT OF THAILAND MOOT LAY HWANG MY TIE GWO	Many examples of trademarks using "Thai Jasmine Rice". The rice is actually imported from Thailand.
GOLDEN ELEPHANT FRAGRANT RICE	Example of the use of "Fragrance Rice"
GAO THOM LANG HUONG Rice King (plus foreign language characters) Herdsman Brand (plus foreign language characters) PENGUIN MILAGROSA YAAS	Foreign language words which translate to Jasmine rice of aromatic rice

Table 3-3: Summary of the Pattern Found in Trademarks Registered in USA by Jasmine Rice Importers.

Please note that, from Table Table 2-8, JASMIN RICE and THAI JASMINE RICE are registered trademark in the State of Oregon. Normally, purely descriptive phrases like JASMINE RICE are not registrable under Thai and US trademark laws. Source: Summary of data presented in Table 2-8.

In a narrow sense, trademarks are limited to words and symbols used to identify and distinguish goods. Broadly, trademarks are words, slogans, designs, pictures, etc. that enable consumers to distinguish between different "brands" of goods and services without confusion. In this broad sense, trademarks include the narrow sense of trademarks plus service marks, collective marks, certification marks, trade names, and trade dress. (McCarthy, 1995) Societies have decided to bear the cost of establishing and maintaining trademark systems because:

> The importance of trademark lies in specifying the quality of goods. In the absence of a trademark system, or if the trademark system does not work, consumers will not be able to distinguish between goods of superior quality and goods of inferior quality, leading to the collapse of reputable businesses. Aside from protecting consumers, trademarks also stimulate producers to maintain the quality of their goods, and to invest in research and development in order to improve their quality. (Benko, 1987; Klein and Leffler., 1981)

Trademark	Summary
HINODE ROYAL JASMINE	Doguet-Dishman applied for trademark registration on "Jasmine" in 1990 but later abandoned. RiceTec tried to register "Jasmine USA" in 1992 but also abandoned it later. In 1994, USPTO issued a trademark "Hinode Royal Jasmine" to Ricegrowers Association of California.
JASMATI JASMATICA	RiceTec unsuccessfully applied for trademark registration of "Jasmati" and "Jasmatica" in 1990. Prior to that, RiceTec applied for trademark on "Jasmatica" and it is still pending. Further, RiceTec applied for trademark registration on Jasmati again and got the trademark on November 30, 1993.
BASMATI	RiceTec applied for trademark protection for "Bazmati", "Basmatica" and "Basmati USA" in 1990, 1990 and 1992 but not successful yet.
KASMATI	RiceTec received a trademark on Kasmati in 1996.
TEXMATI	Farms of Texas Co. unsuccessfully tried to obtain a trademark on Texmati in 1986. Later, RiceTec tried to register it again in 1993 but also failed. Lastly, RiceTec tried again in 1994 and receive trademark later that year.
FLAVORED BY NATURE CHEF'S ORIGINALS	RiceTec registered a US trademark in 1996. No mention of Jasmine rice on the container or packaging.

Table 3-4: Examples of Jasmine Rice US Trademarks Being Registered by Importers.

Source: Summarized from Table 2-9.

Minimum protection level of trademark is specified by TRIPs,[72] based on Paris Convention.[73] Other nations are in the process of updating their laws to comply with

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[72] **TRIPs SECTION 2 (TRADEMARKS) Article 15 (Protectable Subject Matter) 1.** Any sign, or any combination of signs, capable of distinguishing the goods or services of one undertaking from those of other undertakings, shall be capable of constituting a trademark. Such signs, in particular words including personal names, letters, numerals, figurative elements and combinations of colours as well as any combination of such signs, shall be eligible for registration as trademarks. Where signs are not inherently capable of distinguishing the relevant goods or services, Members may make registrability depend on distinctiveness acquired through use. Members may require, as a condition of registration, that signs be visually perceptible. **2.** Paragraph 1 above shall not be understood to prevent a Member from denying registration of a trademark on other grounds, provided that they do not derogate from the provisions of the Paris Convention (1967). **3.** Members may make registrability depend on use. However, actual use of a trademark shall not be a condition for filing an application for registration. An application shall not be refused solely on the ground that intended use has not taken place before the expiry of a period of three years from the date of application. **4.** The nature of the goods or services to which a trademark is to be applied shall in no case form an obstacle to registration of the trademark. **5.** Members shall publish each trademark either before it is registered or promptly after it is registered and shall afford a reasonable opportunity for petitions to cancel the registration. In addition, Members may afford an opportunity for the registration of a trademark to be opposed. **Article 16 (Rights Conferred) 1.** The owner of a registered trademark shall have the exclusive right to prevent all third parties not having his consent from using in the course of trade

identical or similar signs for goods or services which are identical or similar to those in respect of which the trademark is registered where such use would result in a likelihood of confusion. In case of the use of an identical sign for identical goods or services, a likelihood of confusion shall be presumed. The rights described above shall not prejudice any existing prior rights, nor shall they affect the possibility of Members making rights available on the basis of use. **2.** Article 6*bis* of the Paris Convention (1967) shall apply, mutatis mutandis, to services. In determining whether a trademark is well-known, account shall be taken of the knowledge of the trademark in the relevant sector of the public, including knowledge in that Member obtained as a result of the promotion of the trademark. **3.** Article 6*bis* of the Paris Convention (1967) shall apply, mutatis mutandis, to goods or services which are not similar to those in respect of which a trademark is registered, provided that use of that trademark in relation to those goods or services would indicate a connection between those goods or services and the owner of the registered trademark and provided that the interests of the owner of the registered trademark are likely to be damaged by such use. **Article 17 (Exceptions)** Members may provide limited exceptions to the rights conferred by a trademark, such as fair use of descriptive terms, provided that such exceptions take account of the legitimate interests of the owner of the trademark and of third parties. Article 18 (Term of Protection) Initial registration, and each renewal of registration, of a trademark shall be for a term of no less than seven years. The registration of a trademark shall be renewable indefinitely**. Article 19 (Requirement of Use) 1.** If use is required to maintain a registration, the registration may be cancelled only after an uninterrupted period of at least three years of non-use, unless valid reasons based on the existence of obstacles to such use are shown by the trademark owner. Circumstances arising independently of the will of the owner of the trademark which constitute an obstacle to the use of the trademark, such as import restrictions on or other government requirements for goods or services protected by the trademark, shall be recognized as valid reasons for non-use. **2.** When subject to the control of its owner, use of a trademark by another person shall be recognized as use of the trademark for the purpose of maintaining the registration. **Article 20 (Other Requirements)** The use of a trademark in the course of trade shall not be unjustifiably encumbered by special requirements, such as use with another trademark, use in a special form or use in a manner detrimental to its capability to distinguish the goods or services of one undertaking from those of other undertakings. This will not preclude a requirement prescribing the use of the trademark identifying the undertaking producing the goods or services along with, but without linking it to, the trademark distinguishing the specific goods or services in question of that undertaking. **Article 21 (Licensing and Assignment)** Members may determine conditions on the licensing and assignment of trademarks, it being understood that the compulsory licensing of trademarks shall not be permitted and that the owner of a registered trademark shall have the right to assign his trademark with or without the transfer of the business to which the trademark belongs. (TRIPs, 1992)

[73] Paris Convention for the Protection of Industrial Property: Article 6 (Conditions of Registration; Independence of Protection of Same Mark in Different Countries), Article 6*bis* (Well-Known Marks), Article 6*ter* (Prohibitions concerning State Emblems, Official Hallmarks, and Emblems of Intergovernmental Organizations), Article 6*quater* (Assignment of Marks), Article 6*quinquies* (Protection of Marks Registered in One Country of the Union in the Other Countries of the Union), Article 6*sexies* (Service Marks), Article 6*septies* (Registration in the Name of the Agent or Representative of the Proprietor Without the Latter's Authorization), Article 7 (Nature of the Goods to which the Mark is Applied), Article 7*bis* (Collective Marks), Article 9 (Seizure, on Importation, etc., of Goods Unlawfully Bearing a Mark or Trade Name), Article 10 (Seizure, on Importation, etc., of Goods Bearing False Indications as to their Source or the Identity of the Producer), Article 10*bis* (*Unfair Competition*), Article 10*ter* (Remedies, Right to Sue), Article 11 (Temporary Protection at Certain International Exhibitions)

TRIPs. Unfortunately, few Thai exporters are fully aware of the implications. No exporter has ever taken any action to prevent importers in foreign countries from securing protection for trademarks that originated in Thailand.

In Western countries, trademark owners are constantly afraid that their trademarks will be used by others to mean a collective class of goods (like FAB for detergents or XEROX for photocopying) until their trademarks lose distinctiveness and become generic. Trademark owners are usually advised to use their marks as brand names or as adjectives, instead of nouns or verbs. Example are FAB brand of laundry detergents and XEROX brand of photocopying technologies.

Thailand has many questions to answer. Examples: How may Jasmine rice be protected to Thailand's advantage under the trademark law of Thailand's trading partners? How can Thailand show that the term Jasmine rice has not become generic? How can Thailand show that Jasmine rice has the status of "well-known mark"?

Theoretically, trademark protection can be considered as part of a system for the prevention of unfair competition. For example, within the allowed opposition period, the demonstration that Jasmati confuses consumers into believing that the rice is a progeny of Jasmine rice and Basmati rice, when in fact Jasmati bears virtually no genetic relationship to Jasmine rice, could provide a ground for cancellation of the trademark. Exactly how the judicial process should proceed would depend on the law of the trading partner. For example, there is a possibility for civil action in the United States.[74]

US trademark law[75] specifies conditions and duration for cancellation of a trademark, like Jasmati, as follow: [76]

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[74] **US Trademark Act §1125 (False Designations of Origin, False Descriptions, and Dilution Forbidden)** (a) Civil action (1) Any person who, on or in connection with any goods or services, or any container for goods, uses in commerce any word, term, name, symbol, or device, or any combination thereof, or any false designation of origin, false or misleading description of fact, or false or misleading representation of fact, which - (A) is likely to cause confusion, or to cause mistake, or to deceive as to the affiliation, connection, or association of such person with another person, or as to the origin, sponsorship, or approval of his or her goods, services, or commercial activities by another person, or (B) in commercial advertising or promotion, misrepresents the nature, characteristics, qualities, or geographic origin of his or her or another person's goods, services, or commercial activities, shall be liable in a civil action by any person who believes that he or she is or is likely to be damaged by such act. (2) As used in this subsection, the term "any person" includes any State, instrumentality of a State or employee of a State or instrumentality of a State acting in his or her official capacity. Any State, and any such instrumentality, officer, or employee, shall be subject to the provisions of this chapter in the same manner and to the same extent as any nongovernmental entity.

[75] Federal Trademark Act of 1946 (Lanham Act), 15 USC § 1051-1127 This law was named after Fritz Garland Lanham (1880-1965) a lawyer from Texas, who became a Democrat Representative from 1919 to 1947. (McCarthy, 1995)

[76] **US Trademark Act §1064 (Cancellation of Registration)** A petition to cancel a registration of a mark, stating the grounds relied upon, may, upon payment of the prescribed fee, be filed as follows by any person who believes that he is or will be damaged by the registration of a mark on the principal register established by this chapter, ... (1) Within five years from the date of the registration of the mark under this chapter, ..., (3) At any time if the registered mark becomes the generic name for the goods or services, or a portion thereof, for which it is registered, or has been abandoned, or its registration was obtained fraudulently or contrary to the provisions of section 1054 of this title

1. within 5 years after issue of trademark

2. at any time the mark has become generic, or is abandoned, or obtained registration in bad faith, or the mark is in the exception list,[77] e.g. being against public morale, etc. which unfortunately, are not directly related to the Jasmati issue.

(collective marks or certification marks) or of subsections (a), (b), or (c) of section 1052 of this title for a registration under this chapter. .... (US_TM, 1988 - emphasis added)

[77] The exceptions in §1064 are the first three items in §1052. Please note that the exception in (d), which should be relevant to Jasmine rice, are only applicable in the examination procedure. After the trademark is granted, an opposition has to rely on the first three exceptions. **US Trademark Act §1052** No trade-mark by which the goods of the applicant may be distinguished from the goods of others shall be refused registration on the principal register on account of its nature unless it - **(a)** Consists of or comprises immoral, deceptive, or scandalous matter; or matter which may disparage or falsely suggest a connection with persons, living or dead, institutions, beliefs, or national symbols, or bring them into contempt, or disrepute; or a geographical indication which, when used on or in connection with wines or spirits, identifies a place other than the origin of the goods and is first used on or in connection with wines or spirits by the applicant on or after one year after the date on which the WTO Agreement (as defined in section 3501(9) of title 19) enters into force with respect to the United States. **(b)** Consists of or comprises the flag or coat of arms or other insignia of the United States, or of any State or municipality, or of any foreign nation, or any simulation thereof. **(c)** Consists of or comprises a name, portrait, or signature identifying a particular living individual except by his written consent, or the name, signature, or portrait of a deceased President of the United States during the life of his widow, if any, except by the written consent of the widow. **(d)** Consists of or comprises a mark which so resembles a mark registered in the Patent and Trademark Office, or a mark or trade name previously used in the United States by another and not abandoned, as to be likely, when used on or in connection with the goods of the applicant, to cause confusion, or to cause mistake, or to deceive: Provided, That if the Commissioner determines that confusion, mistake, or deception is not likely to result from the continued use by more than one person of the same or similar marks under conditions and limitations as to the mode or place of use of the marks or the goods on or in connection with which such marks are used, concurrent registrations may be issued to such persons when they have become entitled to use such marks as a result of their concurrent lawful use in commerce prior to (1) the earliest of the filing dates of the applications pending or of any registration issued under this chapter; (2) July 5, 1947, in the case of registrations previously issued under the Act of March 3, 1881, or February 20, 1905, and continuing in full force and effect on that date; or (3) July 5, 1947, in the case of applications filed under the Act of February 20, 1905, and registered after July 5, 1947. Use prior to the filing date of any pending application or a registration shall not be required when the owner of such application or registration consents to the grant of a concurrent registration to the applicant. Concurrent registrations may also be issued by the Commissioner when a court of competent jurisdiction has finally determined that more than one person is entitled to use the same or similar marks in commerce. In issuing concurrent registrations, the Commissioner shall prescribe conditions and limitations as to the mode or place of use of the mark or the goods on or in connection with which such mark is registered to the respective persons. **(e)** Consists of a mark which (1) when used on or in connection with the goods of the applicant is merely descriptive or deceptively misdescriptive of them, (2) when used on or in connection with the goods of the applicant is primarily geographically descriptive of them, except as indications of regional origin may be registrable under section 1054 of this title, (3) when used on or in connection with the goods of the applicant is primarily geographically deceptively misdescriptive of them, or (4) is primarily merely a surname. **(f)** Except as expressly excluded in paragraphs (a), (b), (c), (d), and (e)(3) of this section, nothing in this chapter shall prevent the registration of a mark used by the applicant which has become distinctive of the applicant's goods in commerce. The Commissioner may accept as prima facie evidence that the mark has become distinctive, as used on or in connection with the applicant's goods in

Since the Jasmati trademark was registered on November 30, 1993, the opposition period should end just before November 30, 1998. As the reader is reading this review, the opposition period will have already expired and it should be a public record what route of actions the Thai Government and the Thai private sector have taken.

3.5 Well-known Mark

According to TRIPs,[78] if a trademark is quite well-known, it can be qualified as a well-known mark and afford additional protections stipulated in the Paris Convention.[79]

Currently in Thailand, the Department of Intellectual Property is assembling a database of laws and practices among APEC countries with regard to well-known marks.

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commerce, proof of substantially exclusive and continuous use thereof as a mark by the applicant in commerce for the five years before the date on which the claim of distinctiveness is made. Nothing in this section shall prevent the registration of a mark which, when used on or in connection with the goods of the applicant, is primarily geographically deceptively misdescriptive of them, and which became distinctive of the applicant's goods in commerce before December 8, 1993. (US_TM, 1988)

[78] **TRIPs Article 16 (Rights Conferred)** 1. The owner of a registered trademark shall have the exclusive right to prevent all third parties not having his consent from using in the course of trade identical or similar signs for goods or services which are identical or similar to those in respect of which the trademark is registered where such use would result in a likelihood of confusion. In case of the use of an identical sign for identical goods or services, a likelihood of confusion shall be presumed. The rights described above shall not prejudice any existing prior rights, nor shall they affect the possibility of Members making rights available on the basis of use. 2. Article 6bis of the Paris Convention (1967) shall apply, mutatis mutandis, to services. In determining whether a trademark is well-known, account shall be taken of the knowledge of the trademark in the relevant sector of the public, including knowledge in that Member obtained as a result of the promotion of the trademark. 3. Article 6bis of the Paris Convention (1967) shall apply, mutatis mutandis, to goods or services which are not similar to those in respect of which a trademark is registered, provided that use of that trademark in relation to those goods or services would indicate a connection between those goods or services and the owner of the registered trademark and provided that the interests of the owner of the registered trademark are likely to be damaged by such use. (TRIPs, 1992 - emphasis added)

[79] **Paris Convention (1967) Article 6*bis* (Marks: Well-Known Marks)** (1) The countries of the Union undertake, ex officio if their legislation so permits, or at the request of an interested party, to refuse or to cancel the registration, and to prohibit the use, of a trademark which constitutes a reproduction, an imitation, or a translation, liable to create confusion, of a mark considered by the competent authority of the country of registration or use to be well-known in that country as being already the mark of a person entitled to the benefits of this Convention and used for identical or similar goods. These provisions shall also apply when the essential part of the mark constitutes a reproduction of any such well-known mark or an imitation liable to create confusion therewith. (2) A period of at least five years from the date of registration shall be allowed for requesting the cancellation of such a mark. The countries of the Union may provide for a period within which the prohibition of use must be requested. (3) No time limit shall be fixed for requesting the cancellation or the prohibition of the use of marks registered or used in bad faith. (Paris_Convention, 1984 - emphasis added)

In Thailand's Trademark Act of 1991, well-known marks receive a special, cross-category protection.[80]

In the United States, Congress passed the Federal Trademark Dilution Act in 1995. The Act amends the US Trademark Law to provide protection for "famous" marks. In considering whether a mark is famous, the Act provides a non-exhaustive list of factors the court may consider:

(A)	the degree of inherent or acquired distinctiveness of the mark;
(B)	the duration and extent of use of the mark in connection with the goods or services with which the mark is used;
(C)	the duration and extent of advertising and publicity of the mark;
(D)	the geographical extent of the trading area in which the mark is used;
(E)	the channels of trade for the goods or services with which the mark is used;
(F)	the degree of recognition of the mark in the trade areas and channels of trade used by the marks' owner and the person against whom the injunction is sought;
(G)	the nature and extent of use of the same or similar marks by third parties; and
(H)	whether the mark is federally registered.

Table 3-5: Factors for Determining If a Mark is Famous

Source: US Trademark Dilution Act (Kirkpatrick and Klein, 1996; Sommers, 1996)

The famous mark owner can obtain injunctive relief against dilution, which is defined as "the lessening of the capacity of a famous mark to identify and distinguish goods or services." Dilution consists of "blurring" and "tarnishment," (McCarthy, 1995) which are defined and exemplified as follow: (Sommers, 1996)

> Classic blurring would occur if a Boston restaurant uses TIFFANY as its name. Even though customers would not likely confuse TIFFANY the restaurant with TIFFANY the upscale New York jeweler, the unique and distinctive link between the word TIFFANY and the New York jeweler would be weakened.
>
> Tarnishment, on the other hand, would take place, for example, when a poster company sells a poster in a script similar to the Coca-Cola trademark, proclaiming: ENJOY COCAINE. According to the court granting Coca-Cola relief under a dilution theory of

[80] **Trademark Act of 1991 Article 8 (Exclusion List)** Trademarks consisting of any of these characteristics cannot be registered: ... (11) Marks identical to a well-known mark or so similar that they may cause public confusion in the ownership or origin of goods, whether or not the well-known mark has been registered. (Thai-TM, 1991)

> tarnishment: "{P}laintiff's goodwill and business reputation are likely to suffer in the eyes of those who, believing it is responsible for the defendant's poster, will refuse to deal with a company which could seek commercial advantage by treating a dangerous drug in such a jocular fashion."

Interestingly, whether or not a mark is federally registered is merely one of the suggested factors to be considered to establish whether a mark is famous. Nevertheless, showing the distinctness may require a lot of work. If Thailand is willing to go through the ordeal of showing that Jasmine rice is a famous mark, there exists some possibility, however slight, that a US court may decide in her favor. How long the ordeal may take, how much it may cost, and the probability of winning (or losing) the case would depend on many factors, including the legal advisor used. A thorough investigation on this (and all other options) should be conducted before a strategic decision is made.

3.6 Certification Mark

Certification marks are in daily use in Thailand and Thailand's Trademark Act of 1991 has a special provision for this type of mark.[81] So does the US Trademark law.[82] Although it is probably too late to consider this option for the Jasmati case, the use of certification marks is an interesting long-term option.

In the third quarter of 1998, Thai Government officials stated that Thailand had applied for some Jasmine rice certification marks in foreign countries. Although the author has not seen the marks, the wording in one of them was reported as "Khao Hom Mali Thai," which means "Thai Jasmine Rice." Since virtually nobody outside of Thailand is familiar with the new mark, this measure should belong to the long-term strategy. Surely, Thailand will have to use aggressive public relation campaigns to promote the use and acceptance of such certification mark.

One way of Jasmine rice promotion that the author and other participants suggested, in a brainstorming session following a video teleconference with US experts supported by USIS in Bangkok on October 9, 1998, is for the Ministry of Commerce, with the help of the Tourism Authority of Thailand, Rice Export Association of Thailand, etc. to hold "Rice Tasting Parties" at strategic locations worldwide. Participants can sample Thai delicious dishes, along with samples of steamed rice, the varieties of which are unmarked. Once the most delicious variety of rice has been selected, the varieties are revealed. This sounds like a good opportunity to advertise tourism, Thai food, and Thai culture, along with Jasmine rice.

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[81] **Trademark Act of 1991 Article 4 (Certification Mark)** "Certification Marks" means marks that the owner of the marks use or will use as indication to or connection with goods or services of other persons for certifying about appellation of origin, composition, method of production, quality, or any other characteristics of the goods, or for certifying about the condition, quality, kind, or any other characteristics of the services. (Thai-TM, 1991)

[82] **US Trademark Act §1127** The term "certification mark" means any word, name, symbol, or device, or any combination thereof - (1) used by a person other than its owner, or (2) which its owner has a *bona fide* intention to permit a person other than the owner to use .... to certify regional or other origin, material, mode of manufacturer, quality, accuracy, or other characteristics of such person's goods or services... (US_TM, 1988)

3.7 Geographical Indication

Geographical indication is different from other regimes of intellectual property protection in that so far different countries or regions have quite different systems of protection with respect to definitions, scope of protection, and the historical origins of such systems. For example, the German system evolved from consumer protection concerns while the US system evolved from the prevention of unfair competition. (CU, 1996)

Before the establishment of the World Trade Organization, there exist three international agreements related to geographical indication: Paris Convention for the Protection of Industrial Property, Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods, and Lisbon Agreement for the Protection of Appellation of Origin and their International Registration. Here we will try to compare the principles in these systems, to see whether Jasmine rice can be considered a geographical indication.

Paris Convention, designed to protect industrial properties, is based on the principle of national treatment. Indication of source or appellation of origin[83] is protected both as industrial property and as measure against unfair competition.[84]

Madrid Agreement for the Repression of False or Deceptive Indications of Source on Goods serves as a special augmentation to Paris Convention, so it is also based on the principle of national treatment. The scope of rights under Madrid Agreement is quite broad, covering any indication of source related to the sale or display of goods that may deceive the public. Interestingly, Madrid Agreement does not emphasize the intention of users but focuses on the result of the use in deceiving consumers of the goods' origin, whether the use is direct (on the goods) or indirect (on advertisement, on letterheads, etc.). (CU, 1996)

Lisbon Agreement for the Protection of Appellation of Origin and their International Registration is an agreement with more substantive details than Paris

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[83] **Paris Convention**, **Article 1 (2)** The protection of industrial property has as its object patents, utility models, industrial designs, trademarks, service marks, trade names, indications of source or appellations of origin, and the repression of unfair competition. (Paris_Convention, 1984 - emphasis added)

[84] **Paris Convention**, **Article 10*bis* (Unfair Competition)** (1) The countries of the Union are bound to assure to nationals of such countries effective protection against unfair competition. (2) Any act of competition contrary to honest practices in industrial or commercial matters constitutes an act of unfair competition. (3) The following in particular shall be prohibited: 1. all acts of such a nature as to create confusion by any means whatever with the establishment, the goods, or the industrial or commercial activities, of a competitor; 2. false allegations in the course of trade of such a nature as to discredit the establishment, the goods, or the industrial or commercial activities, of a competitor; 3. indications or allegations the use of which in the course of trade is liable to mislead the public as to the nature, the manufacturing process, the characteristics, the suitability for their purpose, or the quantity, of the goods. (Paris_Convention, 1984)

Convention. The special feature of Lisbon Agreement is the establishment of an international registration scheme that serves as an international system for protection of appellation of origin. Article 2 of Lisbon Agreement defines appellation of origin as "geographical name of a country, region, or locality, which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors."[85] Being a geographical name is the first prerequisite for an appellation of origin.

In addition to setting up a registration system for appellations of origin, Lisbon Agreement also contains a provision that prevents appellation of origins from becoming generic[86] and stipulates that Members are obligated to prevent semi-generic uses of appellation of origins.[87] Countries that allow semi-generic uses of appellation of origin naturally do not subscribe to the principle of Lisbon Agreement. Consequently, the number of Lisbon Members is quite small (about 16 countries). Madrid Agreement, which does not allow appellation of origin for wine to become generic, also has few Members (about 30). (CU, 1996)

At present, the most acceptable agreement regarding geographical indication can be found under TRIPs. Geographical indication is defined very broadly as "indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin."[88] TRIPs also requires Members to enact legal instruments against the use of geographical indications to mislead consumers of the true geographical origins of the goods, along with the use of geographical indications in

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[85] **Lisbon Agreement for the Protection of Appellations of Origin and their International Registration, Article 2 (Definition of Notions of Appellation of Origin and Country of Origin)** (1) In this Agreement, "appellation of origin" means the geographical name of a country, region, or locality, which serves to designate a product originating therein, the quality and characteristics of which are due exclusively or essentially to the geographical environment, including natural and human factors. (2) The country of origin is the country whose name, or the country in which is situated the region or locality whose name, constitutes the appellation of origin which has given the product its reputation. (Lisbon, 1958 - emphasis added)

[86] **Lisbon Agreement for the Protection of Appellations of Origin and their International Registration, Article 6 (Generic Appellations)** An appellation which has been granted protection in one of the countries of the Special Union pursuant to the procedure under Article 5 cannot, in that country, be deemed to have become generic, as long as it is protected as an appellation of origin in the country of origin. (Lisbon, 1958)

[87] **Lisbon Agreement for the Protection of Appellations of Origin and their International Registration, Article 3 (Content of Protection)** Protection shall be ensured against any usurpation or imitation, even if the true origin of the product is indicated or if the appellation is used in translated form or accompanied by terms such as "kind," "type," "make," "imitation," or the like. (Lisbon, 1958)

[88] **TRIPs Article 22 (Protection of Geographical Indications)** 1. Geographical indications are, for the purposes of this Agreement, indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin. (TRIPs, 1992 - emphasis added)

unfair competition within the meaning of Paris Convention (Please see Footnote 84).[89] Furthermore, Members must set up legal instruments for cancellation of trademarks that incorporate geographical indications of the goods, if the use of such trademark would mislead the public as to the true geographical indication.[90] Moreover, TRIPs minimum standards in case of geographical indications would work against geographical indications that, "although literally true as to the territory, region or locality in which the goods originate, falsely represents to the public that the goods originate in another territory."[91]

In Thailand at the time of this writing, the law protecting geographical indications is in a draft form at the Ministry of Commerce. By the time the article is published, the draft law may be under the Cabinet's consideration.

Coming back to Jasmine rice, the immediate question is whether Jasmine rice (Fragrance rice or Hom Mali rice, etc.) can be qualified as geographical indication under the meaning of TRIPs and under US laws.

One general opinion is that a geographical indication must be a geographical name (country, city, river, mountain, etc.) in the first place, just like the Lisbon's requirement for Appellation of Origin. The geographical name would then be linked to the goods by virtue of the origin or the quality that the geographical origin imparts on the goods, depending on the law of each country. Jasmine rice cannot be considered a geographical indication because the name itself is not a geographical name.

Nevertheless, other legal experts[92] believe that Jasmine rice may be considered a geographical indication since TRIPs' definition of geographical indication[93] does not require the indication to be a geographical name. TRIPs only requires that the indication helps consumers make mental connection between the goods and the geographical origin, which imparts a given quality, reputation, or other characteristics to the goods.

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89 **TRIPs Article 22 (Protection of Geographical Indications)** 2. In respect of geographical indications, Members shall provide the legal means for interested parties to prevent: (a) the use of any means in the designation or presentation of a good that indicates or suggests that the good in question originates in a geographical area other than the true place of origin in a manner which misleads the public as to the geographical origin of the good; (b) any use which constitutes an act of unfair competition within the meaning of Article 10bis of the Paris Convention (1967). (TRIPs, 1992)

90 **TRIPs Article 22 (Protection of Geographical Indications)** 3. A Member shall, ex officio if its legislation so permits or at the request of an interested party, refuse or invalidate the registration of a trademark which contains or consists of a geographical indication with respect to goods not originating in the territory indicated, if use of the indication in the trademark for such goods in that Member is of such a nature as to mislead the public as to the true place of origin. (TRIPs, 1992)

91 **TRIPs Article 22 (Protection of Geographical Indications)** 4. The provisions of the preceding paragraphs of this Article shall apply to a geographical indication which, although literally true as to the territory, region or locality in which the goods originate, falsely represents to the public that the goods originate in another territory. (TRIPs, 1992)

92 For example, the Honorable Judge Vichai Ariyanuntaka made a comment to this effect at a roundtable discussion on geographical indication held at DIP on July 14, 1998.

93 TRIPs Article 22 defines geographical indication as: indications (no requirement to be geographical names) which identify a good as originating in the territory of a Member ... where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin. (TRIPs, 1992)

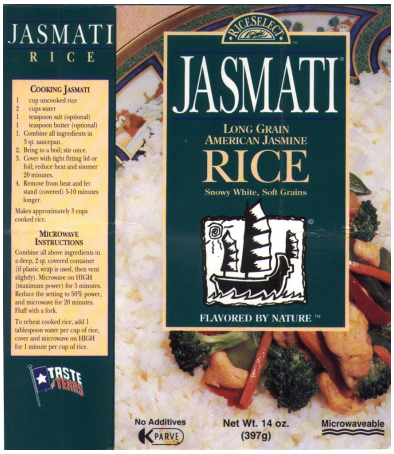

Figure 3-1: Jasmati Rice Box

Front and side panel views of Jasmati Rice Box. The front side is labeled: RICESELECT™ JASMATI® Long Grain American Jasmine RICE Snowy White, Soft Grains. FLAVORED BY NATURE™ No Additives Net Wt. 14 oz (397 g) Microwaveable

The right panel shows cooking instructions: Cooking Jasmati: 1 cup uncooked rice, 2 cups water, 1 teaspoon salt (optional), 1 teaspoon butter (optional): 1. Combine all ingredients in 3 qt. saucepan. 2. Bring to a boil; stir once. 3. Cover with tight fitting lid or foil; reduce heat and simmer 20 minutes. 4. Remove from heat and let stand (covered) 5-10 minutes longer. Make approximate 3 cups cooked rice. Microwave Instructions: Combine all above ingredients in a deep, 2 qt. covered container (if plastic wrap is used, then vent slightly). Microwave on HIGH (maximum power) for 5 minutes. Reduce the setting to 50% power, and microwave for 20 minutes. Fluff with a fork. To reheat cooked rice, add 1 tablespoon water per cup of rice, cover and microwave on HIGH for 1 minute per cup of rice.

The left panel: shows nutritional value of the product: Nutritional Facts: Serving size 1/4 cup (45 g) Serving Per Package About 9. Amount Per Serving. Calorie 150. Total Fat 0g, Sodium 0 mg, Total Carbohydrates 34g =11% Daily Values (DV) - are based on a 2,000 calorie diet, Protein 3g. Ingredients: Jasmati Rice. Try Our Other Rice Select Products: Texmati White Rice, Texmati Brown Rice, Texmati Light Brown Rice, Kasmati Rice, Royal Blend Rice, Risotto Rice. Please call if you have any questions between 8:00 Am-5:00 PM CST Mon-Fri (800) 232-RICE. RICESELECT RiceTec, Inc. P.O. Box 1305, Alvin, TX 77512, USA. Jasmati is a registered trademark of RiceTec, Inc.

On the back panel of the box is a recipe for Jasmati Fried Rice and a “blurp” about the product: Jasmati combines the traditional easy cooking qualities of American long grain rice, with the unique flavor, texture, and aroma of exotic Asian jasmine rice. Sweet aroma and snowy white, soft, tender grains make Jasmati rice and ideal choice for Asian cuisines and rice desserts. It is also a delicious alternative to ordinary rice. If you’ve purchased any RiceSelect product before, you know exactly what to expect - the world’s best tasting rice. RiceSelect is different! We are dedicated to bringing you the world’s best tasting rice. We’ve even developed our own patented processes and special seed. And, only the best farmers are chosen to grow RiceSelect. To keep our rice select, we inspect each grain. Then, our own special packaging seals in all the freshness and natural flavor. This may seem like a lot of extra work to you, but we care about our rice from the seed to the store, from your pantry to your plate.

This sounds plausible in theory but, again, may take an ordeal to prove in court. So, further study and legal consultation should be in order.

In the future, Thailand should take advantage of the system for protecting geographical indications. In addition to Jasmine rice, Thailand also has many geographical indications for locally-produced goods, some of which are exported to Asian and Caucasian consumers around the world.

3.8 Consumer Protection

In addition to intellectual property lines of defense for Jasmine rice, the Thai Government is also considering other lines of litigation based on consumer protection laws of the United States and other relevant countries. The details in this section is still regarded as confidential information.

4. Recommendations

4.1 Urgency of the Crisis

How urgent is this Jasmine Rice Crisis? For the past couple of months, the urgency has been on Thai government officials, who tried to form a budget-conscious strategy for such a sensational issue. The Thai Government tried not to take the role of the private sector in defending Jasmine rice. Nevertheless, if the Government did not act to help the exporters and farmers at all, economic Ministers would become scapegoats during the upcoming No-Confidence Parliamentary Debate, especially when there is a clear example of US Government intervention on behalf of its private sector in a trademark case where the Thai Government subsequently made a decision in favor of the US company.

Initially, Thai rice exporters did not seem to pay any attention to Jasmati since they perceived RiceTec in general, and Jasmati in particular, to belong to a different market segment from theirs with respect to Jasmine rice. What they did not realize (but they do now) is the potential threat to their own market segment if companies such as RiceTec is allowed to name and advertise their product, deceptively of course, on the world-famous Jasmine rice, which RiceTec acknowledged having no genetic connection with the rice variety contained in Jasmati box.

The author took time to review the India's Basmati case in order to illustrate a concrete example of how something like this was done successfully. The Thai private sector, with the help of the Thai Government, should take a close look at this example to learn that it can be done, even in the Basmati case, which superficially seems like a worse scenario than the Jasmati case because the Basmati case involves patent, plant variety protection, and trademark regimes.

Thai people, like other good Buddhists, forgive and forget easily. After the deadline for filing oppositions to Jasmati trademark has passed, will the Jasmati assault be forgotten, especially if the Thai Government does not try to have this US trademark

canceled? Thais should not forget that easily in this case and should go after RiceTec in Criminal and Civil Courts of any appropriate country, to protect the interest of Thailand.

4.2 Need of Competent Local Legal Counselors

Only losers try to go through a judicial process without a good legal counselor. Competent lawyers[94] are not hard to find if one can afford the price. It makes a big advantage to have a competent lawyer on your side, especially if you are betting on the future of your country's No. 1 agricultural export. In actual practice, different types of lawyers and specialized counselors will be required and their fees add up very fast.

Where can competent lawyers be found? Convenience does not mean competency so it does not make any sense to choose a lawyer solely because his office is down the hall from yours. Competent lawyers are known in his or her circle and are likely to be listed on professional specialization lists. Word-of-mouth from reliable sources that are carefully weighted can also help. The Thai Government has some experience with a few law firms in Washington, DC and should be able to help the private sector with choosing a team of competent and experienced American lawyer to work with the Thai counterparts.

Where can one find money to pay for legal fees? The Indians went through a similar ordeal with victory in the end. They financed their operations from a small percentage taken from rice export revenue. This is certainly an option for Thailand since the Government does not have to pay anything directly. Initially, though, some financial assistance from the Export Promotion Trust Fund should be appropriate in this case.

4.3 Passive Measures

Many things can be done in passive ways, i.e. without any need for confrontation or litigation. For example, new Jasmine trademarks can be applied for by Thai companies. The Thai Government, with collaboration with the Thai private sector, has started working towards getting Thai geographical indications to be recognized and protected worldwide. The Thai Government has already applied for some certification marks abroad. Taken together, these measures as well as others will help Thailand in the long run.

Another very important passive measure is intellectual property education on the part of farmers, scientists, and exporters. This must be strengthen very quickly if Thailand wants to be competitive in the age of Globalization. The Department of Intellectual Property (Ministry of Commerce), with the help of universities and other organizations like the Thai Invention Association, should be responsible for education of various and different sectors. For example, the Thais should be taught (by case studies) to realize and appreciate the value of trademarks and the need to prevent trademarks from becoming generic.

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[94] At the end of the third quarter of 1998, the Royal Thai Embassy in Washington, DC reportedly selected a legal counselor from a pool of about 5-6 firms: Dickstein Shapiro Morin & Oshinsky, White & Case, Adduci, Mastriani & Schaumberg L.L.P., etc.

4.4 Active Measures

In addition to passive measures, there are a few active measures that can or should be done. The most obvious group are attempts to have the offending trademarks, plant variety certificates, patents (if any), etc. rejected, canceled, invalidated, or revoked in all countries. Injunctions and other financial remedies can and should also be sought from criminal and civil cases, if possible.

As pointed out earlier, this option will require patience, substantial funding commitment and good counseling backup. It was pointed out[95] that such a case has to be taken to the court of law as a matter of principle, regardless of how much it may cost, just like the lawsuits brought to the Central Intellectual Property and International Trade Court by American rightholders. During the lawsuit, Thailand should use this opportunity to publicize the quality and the fame of Jasmine rice, perhaps by staging "Rice Tasting Parties," as suggested earlier, while condemning Jasmati and RiceTec for what they really are.

Other active measures are available besides going to court. For example, business consultations or negotiations can be set up between the Thai private sector, with the help of the Thai Government, with RiceTec, or RiceTec AG in Liechtenstein. Diplomatic routes should also be explored if it can be confirmed that the leader of Liechtenstein has something to do with the Jasmine Rice Crisis.

Since officials of the US Government made a point that the Thai Government should not get involved in disputes between Thai and US private sectors, Thai officials and critics should remind the US Government of what it did when a US cigarette company had a trademark problem in Thailand, and of the Thai response. Until these officials swallow their own comments, the US Government should be accused of hiding behind the US legal system in order to create an effective double-standard for government-private sector interaction in intellectual property matters.

Finally, if all else fail, other retaliatory options are still available such as a worldwide campaign to expose the sins of RiceTec, a Do-Not-Buy-RiceTec-Products Campaign, and other un-diplomatic actions targeted at Liechtenstein. Hopefully Thailand would not have to resort to such extreme measures.

4.5 Lesson for Other Industries

Other Thai industries should learn a lesson from the Jasmin Rice Crisis. What they should be aware of are the multiple intellectual property protection systems available to them, depending on the nature of their goods or services. Some of these protections can even extend to other countries owing to international conventions or treaties.

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[95] The Honorable Judge Vichai Ariyanuntaka made this remark during a brainstorm discussion after the video teleconference session at USIS in Bangkok on October 9, 1998. Nevertheless, a legal scholar from Thammasat University is quite convinced that there is no chance of a Thai plaintiff winning such a case in any US court of law.

Some rights, such as copyright, are obtained without having to apply for. Others rights, including patents and trademarks, are not automatically given. Inventors and mark-owners will need to make a small investments in prosecuting patent and trademark applications but the protection will pay off in the long run.

As far as trademarks are concerned, Thai industries should appreciate the need to prevent the distinct names from falling into the generic domain. If the reputation and goodwill that they had accumulated over the years in their trademark was taken advantage of by a trademark infringer, they should be prepared to defend their rights, often through the judicial process.[96]

4.6 Roles of the Thai Government

How can rightowners know that their patents or trademarks have been infringed? In industrialized countries, there exist agencies specializes in monitoring specific segments of the market for possible infringements. Most people in Thailand, the author believe, have not heard of such agencies or service. The Government should encourage such agencies to be established.

Regarding the supportive and promotional role of the Government, Thailand also lacks patent attorney offices and competent patent attorneys. Most patent practitioners are good at filing Thai patent applications that are translated from foreign languages. In addition, Thailand lacks licensing specialists. At present, virtually all licensing agreements are drafted by lawyers, who often do not have technical backgrounds even to understand what they are licensing.

One thing that the Department of Intellectual Property did well in the past and should keep doing is in public relation to make Thai businessmen treat intellectual property protection systems as tools for global competition. The System can also serve as information sources to solve problems and generate new ideas and inventions. By upgrading publicly-accessible intellectual property databases, local inventors, researchers and industrialists will benefit greatly.

Coming back to Jasmine rice, the Thai Government should provide the private sector with information and, like India, may even help organize the defense team for them at the outset. Moreover, funding for whatever action taken should come from both the Government and the private sector.

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[96] In Asia, disputes of this kind may be resolved quickly through negotiation and/or arbitration, often chaired by a person who is highly respected by both parties. Different types of alternative dispute resolutions (ADR) are cost-effective in Western countries but parties should still be ready to go through litigation if negotiation breaks down.

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