



THAI HERBS

and Herbal Products



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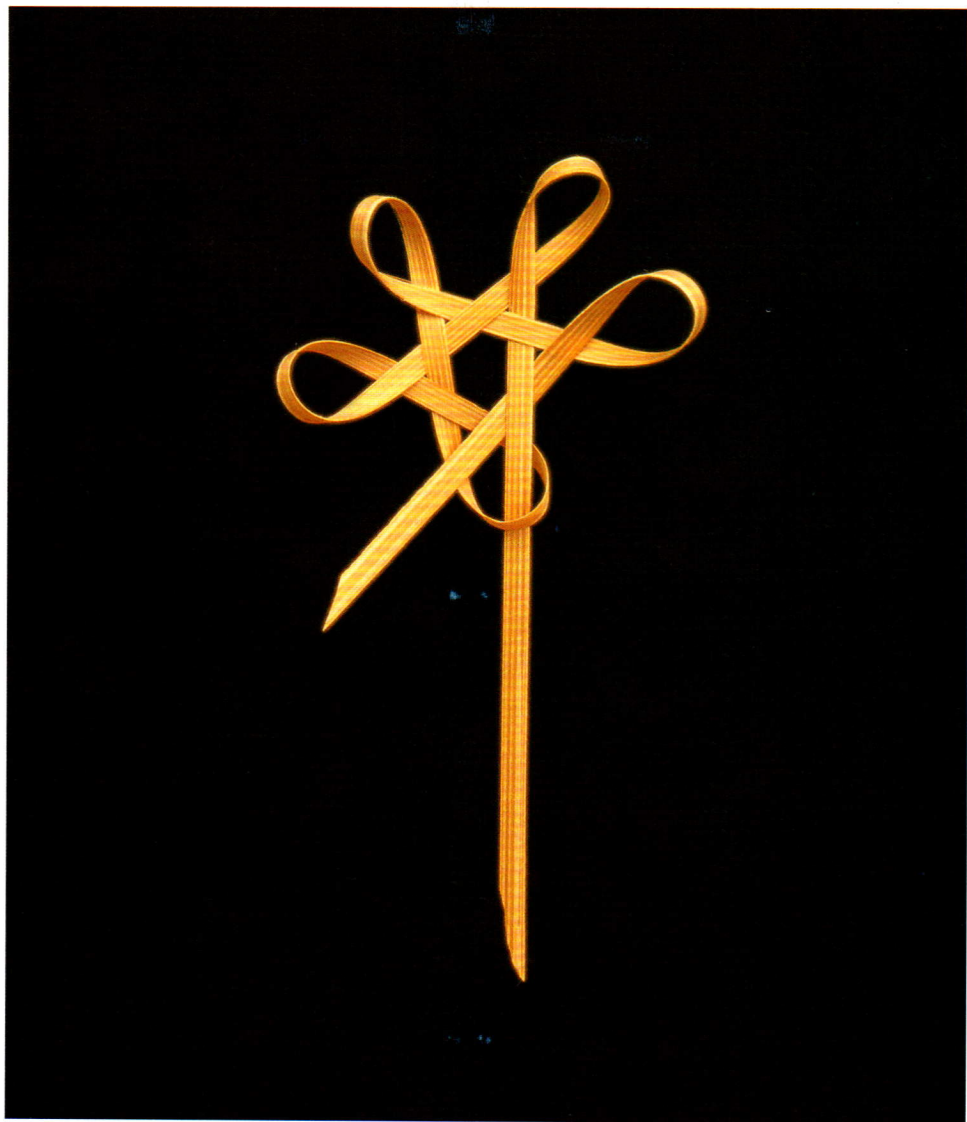
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'Chaleo'

A symbol created by bending and interlacing a silver of bamboo to form a five-pointed star, is placed by tradition Thai herbalists on top of earthenware pots whilst brewing herbal medicine, to prevent people or evil spirits from tampering with the potions.

CONTENTS

CHAPTER ONE

The History and Evolution of Traditional Thai Medicine and Thai Medicinal Plants

9

CHAPTER TWO

The Art of Drug Compounding in Traditional Thai Medicine

33

CHAPTER THREE

Spices

53

CHAPTER FOUR

Thai Dishes of 4 Regions

85

CHAPTER FIVE

Thai Food: Food for Health

105

CHAPTER SIX

Herbal Beverages

129

CHAPTER SEVEN

Cosmetic Products for Community Economy

167

CHAPTER EIGHT

Thai Perfumeries

195

CHAPTER NINE

Yaa Dong Lao (Fermented Liquor): A Product of Thai Local Wisdom

231

PREFACE

This volume of *Thai Herbs and Herbal Products* is a collection of valuable articles on Thai local wisdom concerning herbs and their qualities, highly appreciative on national and international levels.

The book covers knowledge of various kinds of herbs, naturally grown in Thailand; among them (are) Takrai, Krajieb, Makaam, Bua Bok, etc. These herbs have their unique qualities as both food and medicine.

Not only is the book an explanation of herbs and their values, but it is also about Thai food for health in the four regions of Thailand, includes cosmetic products made from some specific kinds of herbs such as Khamin, Talingpling, Faa Talai Jone, Makaam and Anchan flowers.

The value of *Thai Herbs and Herbal Products* lies in its information about Thai people's wisdom from the ancient time back to the periods of Thai old capitals: Sukhothai, Ayudhaya, Thonburi and the earlier Ratanakosin. The reader can find out from this book, Thai taste which indicates the Thai art of living as well as Thai refined culture.

National Identity Board
September 2004



Bai kaphrao



Bai maenglak



Bai horapha
(Sweet basil)



Panom Rung Castle in Buri Ram Province.

THAI HERBS

and Herbal Products



A typical clay pot used for brewing herbal drug concoction.



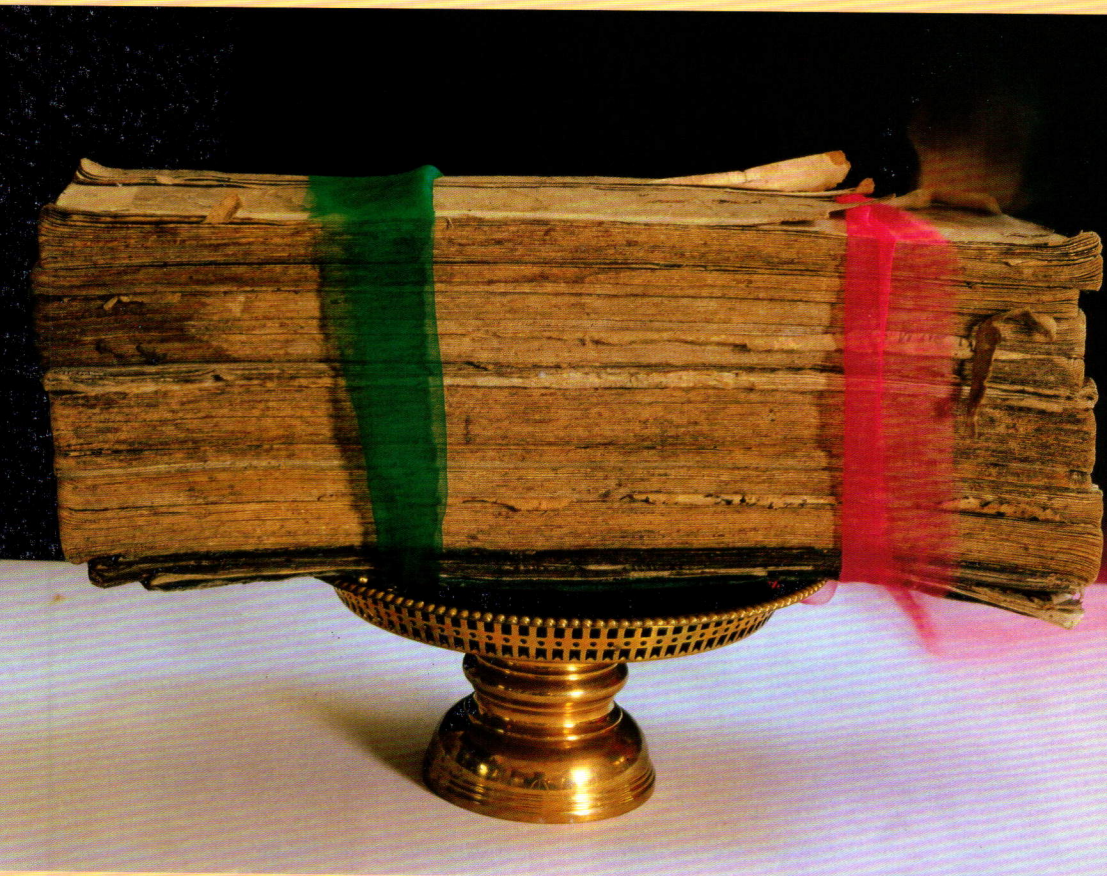
An assortment of crude drugs.



(Above) Figures of hermits at Wat Phra Chetuphon or Wat Po in Bangkok.
(Opposite) Smud Khoi.



THAI HERBS AND HERBAL PRODUCTS



CHAPTER ONE

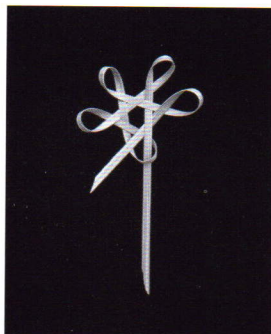
The History and Evolution of Traditional Thai Medicine and Thai Medicinal Plants



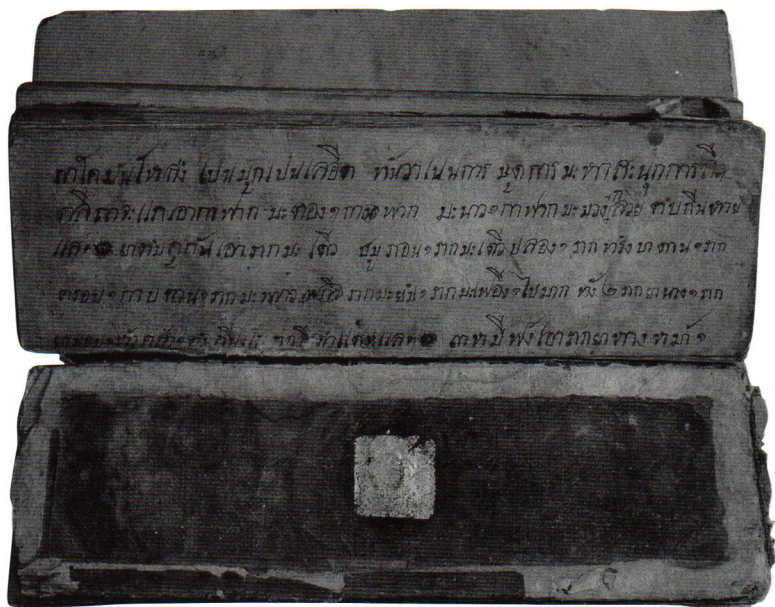
Historical site in Ayutthaya.

The possession of a
sound mind and

body is considered man's greatest gift. In his quest to attain good health, man has been impelled to search for cures for his ailments. The act of physical healing constitutes, in all probability, one of the most important of human endeavours. Through the test of time, ethno medicine has evolved into an intricate art which has been perpetuated by the passage of knowledge down the generations within each ethnic group. Early civilizations spawned highly developed systems of medicine such as those practised by the ancient Egyptians, the Chinese and the Indians. Evidence regarding the use of drugs and drug compounding technique, dating back some 3,000-4,000 years, exists in the form of old herbals such as the Chinese "Sern Nong Pen Lao" and the famous Egyptian "Eber Papyrus". From these writings, it is evident that knowledge on drug usage is probably as old as the human race. Such knowledge must have been acquired together with the highly intricate art of drug compounding. The Eber Papyrus recorded the use of over 800 drugs which could be dispensed in a variety of dosage forms, such as snuffs, gargling solutions, inhalants, suppositories, ointments as well as oral dosage forms.

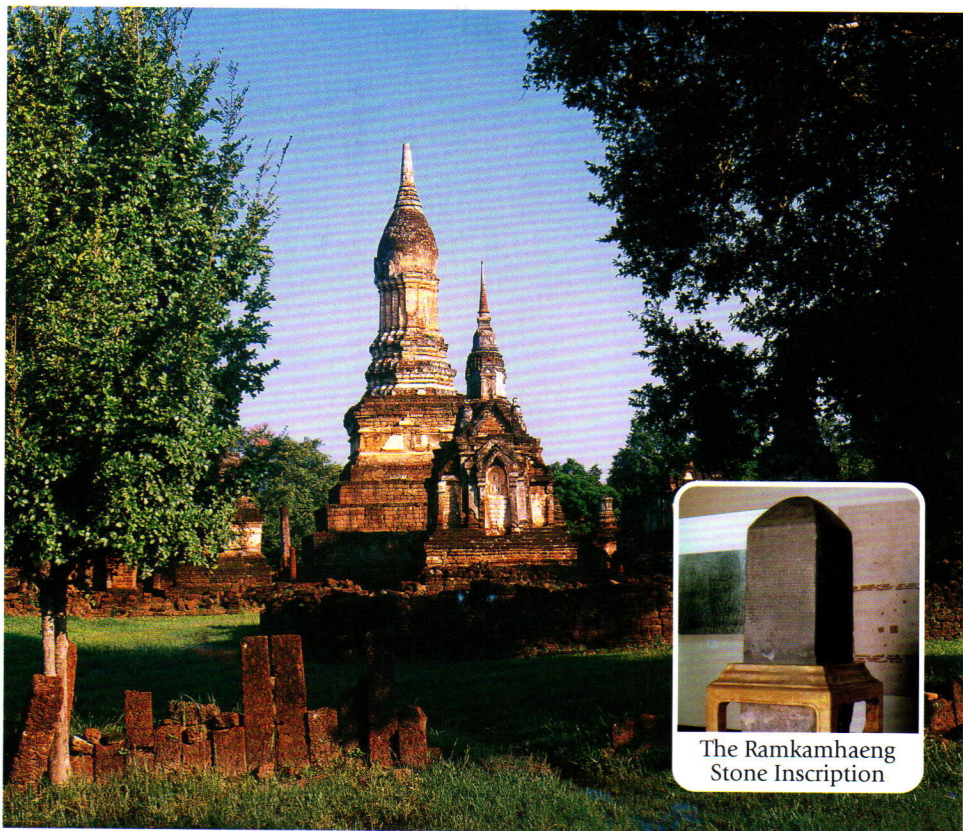


Chaleo



Samud Khoi

From existing evidence on drug usage by various ethnic tribes, it may be surmised that the inhabitants of the Indochinese Peninsula must have developed their own systems of traditional medicine long before Sukhothai became the thriving capital of the region. No evidence has yet been found to substantiate such claims except a stone inscription, dating back to the ancient Khom Empire, which stated that during 1182-1186, King Chaiworaman VII made merit in accordance with the Buddhist belief by ordering the establishment of one hundred and two Arokayasala (hospitals) in an area which is now the north-eastern part of Thailand.



Historical site in Sukhothai.

The Ramkamhaeng Stone Inscription

Thai Medicine in the Sukhothai Period

No evidence has been forthcoming on the subject but it is believed that a form of traditional medicine utilizing naturally derived drugs must have been in use during this period. The discovery of a stone metate and roller used in drug compounding from the Dvaravati period, which predated the Sukhothai period, lent support to this theory. Furthermore, a study of the content of the “Ramkamhaeng Stone Inscription” revealed that, during his reign, the King had ordered the establishment of a large medicinal plant garden atop Kao Luang or Kao Suppaya which now lies in the district of Kirimas, a Sukhothai province. The garden was to serve as a source of drugs for the remedy of ailments for his subjects.



Historical site in Ayutthaya.



'Khumpee Bai Laan'
containing
herbal drug
recipes.

Thai Medicine in the Ayutthaya Period

The system of medicine practised during the Ayutthaya period was probably much the same as that of the Sukhothai period. Historical evidence pointed towards an integrated system of medicine incorporating the Indian derived Ayurvedic system and the Chinese system amalgamated with a deep-rooted belief in the supernatural, mystique and astrology. The principal philosophy of Thai medicine leans heavily toward the Ayurvedic teaching which is the attainment of an equilibrium among the four basic elements, namely earth, water, wind and fire, the very essence of life. To command respect from their patients, traditional doctors or healers must possess honesty and goodness in all their deeds. One of their virtues was to have veneration for their teachers. In Thai medicine, one of the most revered teachers was Chewaka Komarapaj, the royal physician of King Pimpisarn of India and personal physician to



A typical clay pot used for brewing herbal drug concoction.





(Opposite) An assortment of crude drugs.
(Above) Pills.

the Lord Buddha. He was lauded for his vast knowledge on drug matters as well as his skill in surgery.

During the reign of King Narai the Great, the existence of a number of drug stores serving the general public was well documented. There also existed a royal dispensary within the royal palace. In 1504, western style medicine was introduced into the kingdom for the first time by Portuguese merchants. Subsequently, there was an establishment of a western style hospital called "Ayutthaya Hospital" which was administered by a group of French missionaries. Under the pressure of such development, the royal Thai physicians united together to comply, for the first time in the history of Thai medicine, a book of Thai drug recipes called "Tamra Phra Osod Phra Narai". Nonetheless, a number of French physicians found favour in the royal court and was, therefore, invited to contribute certain western drug recipes to this important document. Western medicine continued to flourish in Siam until the reign of Phra Ped Raja who ordered the banishment of all missionaries from the kingdom.



The Grand Palace, Bangkok.

Thai Medicine in the Rattanakosin Period

After the fall of Ayutthaya in 1767 and the establishment of a new capital in Bangkok, the revival of the nation's economic, cultural and public health systems began to take place.

King Rama I, the founder of the present Chakri Dynasty, ordered the renovation of Wat Po or Wat Potharam in Bangkok and renamed it "Wat Phra Chetupon Wimonmangklaram". The King also gave instructions for the inscription of herbal drug recipes onto the walls of the temple in addition, there was an establishment of a royal dispensary in the royal palace similar to the one in Ayutthaya.

During the reign of King Rama II under royal guidance, there was an attempt to assimilate together a number of drug recipes to replace those that were lost during the war with the Burmese. Furthermore, Phra Chao Lukyather Kromameun Jesadabordin ordered the restoration of



Mural painting at Wat Machimawas, Songkla.

Wat Chom Thong and renamed it “Wat Raj Oros”. In the process of restoration, a number of drug recipes was ordered to be inscribed onto the walls of Phra Viharn and Phra Ubosod (principal buildings) of this temple.

In 1816, a Royal Decree governing the roles of royal drug dispensers was promulgated, thus emphasizing the importance placed on drug dispensing as a highly sophisticated art. Those bestowed with the title of royal drug dispensers must possess a high degree of honesty and integrity. It was, therefore, believed that these highly sought after titles probably remained within a few chosen families.

After his ascension to the throne, King Rama III began the task of the second renovation of Wat Phra Chetupon. He also ordered the inscription of drug formulae onto marble tablets to be used to decorate the walls of the principal building as well as the surrounding walls. In



addition to the drug recipes, these inscriptions also included the diagnosis as well as the cure for each ailment. Furthermore, numerous useful medicinal plants together with some rare species were planted within the temple's compound. This move marked the first attempt to educate the general public on the attributes of Thai medicinal plants. Similarly, the restoration of Wat Raj Oros was effected with the inclusion of tablets bearing drug recipes which were used to adorn the columns supporting the corridors of Phra Viharn of the Reclining Buddha. During this reign, there was a reintroduction of western medicine by missionaries. The effort was spearheaded by an American physician by the name of Dr. Dan B. Bradley. Bradley introduced, for the first time in the kingdom, the practice of vaccination against smallpox as well as the use of quinine as a cure for malaria. It was a turning point in the history of Thai medicine.

The reign of King Rama IV saw many changes towards the adoption of various aspects of western civilization. There was much trading between the kingdom and the western countries. With the arrival of numerous trade missions, came western trained doctors. One doctor by the name

of Samuel Reynold Haus, was said to have received much favour from the King. He was accredited with the introduction of modern obstetrical practice into the health system. The majority of public, however, remained faithful to the old tradition and culture.

During the reign of King Rama V, Siriraj Hospital was established in 1888, combining both western and traditional medical practices. There was, however, a scarcity of trained personnel to serve in the hospital. Therefore, Prince Dumrong Rajanuparp ordered the establishment of the first medical school within Siriraj Hospital. The school was to train western-styled surgeons and general practitioners. A course on traditional Thai medicine was also incorporated into its three-year-curriculum. In 1895, the first medical textbook called **Paetsart Sonkhrau** was published. The series consisted of three volumes combining western and traditional Thai medical doctrines. A new edition of this textbook appeared in 1904, in which the section on traditional medicine was virtually omitted. There were four volumes in this series. Next came **Vejasart Wanna** in 1907. It consisted of two volumes, wherein references were made to the various khampees or old writings on traditional drug matters. The 2-volume **Tumra Paetsart Sonkhrau Chabub Luang** consisting of ten old writings on herbal drugs and traditional medicine constituted the first Thai National Formulary considered too complicated for most scholars, Phraya Pitsanu Prasartvej, in 1908, wrote a simplified version of this book, noting only relevant information. This series was entitled **Tumra Paetsart Sunkape** and consisted of three volumes. These, together with the aforementioned **Tumra Paetsart Sonkhrau Chabub Luang**, are still in use today.

On the administrative side, the royal dispensary, first set up during the reign of King Rama I, was changed into the Department of Health in 1888. Its main functions were to take care of the sick, to make arrangements for the vaccination of the population against smallpox, to establish and oversee the operation of public hospitals including Siriraj

Hospital, as well as to train doctors.

In 1891, two general drug stores, under the jurisdiction of the Department of Health, were opened in Bangkok. These were called "Osod Sala" or drug pavillions. The first of these was taken over from a missionary doctor and only sold western-styled drugs while the second only dispensed Thai medicine. Subsequently, other drug stores and clinics were opened in other provinces around the country.

In 1902, the first government pharmaceutical operation, called "Osod Sapa" was set up in order to manufacture drugs for the general public. At first, only western drugs were produced but they were not well received by the people. Therefore, a number of Thai drug formulae was also included. During the reign of King Rama VI, many changes were forthcoming. Firstly, in 1913, the teaching on traditional Thai medicine was discontinued in the medical school since the two doctrines were considered incompatible and, therefore, tended to confuse the students. A course on the formulation of Thai medicine was also ordered to cease after being taught for only five years.

In 1916, the Department of Health was further expanded and three years later, all health related agencies were combined together to form the Department of Public Health under the jurisdiction of the Ministry of Interior Affairs. In 1923, a decree governing the practice of the medical professions was promulgated in order to safeguard the welfare of the general public.

The reign of King Rama VII saw more development which resulted in the complete segregation of the two systems of medicine. A law was promulgated which defined different classes of medical practitioners and, in 1929, came a ministerial regulation separating the medical practice into modern medicine and traditional medicine. This dealt a detrimental blow to indigenous Thai medicine which was already losing favour. During this period, however, the government dispensary was still producing ten traditional drug formulae for sale to the public. The

Krabong Daeng



Yaam Daeng

In the early part of the Rattanakosin era, royal herbalists were conferred with 'Krabong Daeng' (Baton Rouge), meaning red sceptre, accompanied with 'Yaam Daeng' (Scarlet Bag). The holders of these sacred articles had absolute authority to collect drug ingredients from anywhere within the kingdom.

cessation of the production of these traditional drugs by the government dispensary in 1941 marked the end of official involvement in traditional medicine.

Subsequent development on Thai medicinal plants was directed entirely toward modern medicine from the start of the first medical school in Siriraj Hospital through to the inception of the first Faculty of Pharmacy. With the establishment of the Government Pharmaceutical Organisation in 1940 and the Ministry of Public Health in 1942, serious attempts were made to examine the attributes of indigenous herbal drugs in order to transform them into modern drugs.

Due to the shortage of modern medicine during the Second World War, Professor Dr. Ouy Ketusingh was motivated to carry out a clinical study at Sattaheep Hospital on a number of Thai medicinal plants reputed to possess antimalarial properties. The study confirmed the efficacy of certain medicinal plants such as the barks of *Oroxylum indicum* and *Nyctanthes arbor-tristis*. However, the problem of drug shortage did not

dissipate with the end of the war. The Royal Thai Government took measures to rectify the situation by assigning the Government Pharmaceutical Organisation to produce drugs from Thai indigenous plants. To achieve this goal, the Government Pharmaceutical Organisation engaged a German expert, Dr.Charlor, to conduct research on Thai medicinal plants and set up a medicinal plant garden at Baan Ang in the district of Makham, Chantaburi Province. As the result of this study, a report, listing some 400 plants which had already been investigated, was published in both Thai and English. Prior to this, a project was initiated in 1938 to cultivate *Cinchona* species in Chiang Mai for the production of quinine. The project was later abandoned because it was not deemed economically feasible.

After the situation regarding the scarcity of modern drugs somewhat eased, the interest in medicinal plants also diminished. Sporadic research activities on Thai medicinal plants, nonetheless, still took place in certain departments of the Ministry of Public Health and various academic institutions over the years.



The Development of Traditional Thai Medicine and Thai Medicinal Plants

Over the past decades, government agencies have renewed their interest in traditional Thai medicine and Thai medicinal plants. This is probably a direct repercussion from the World Health Organization (WHO) conference on indigenous medicines held in 1977. The following year the WHO issued an announcement of Alma Ata urging member countries to do their utmost to preserve their national heritage in the form of ethnomedicine and to include the use of medicinal plants into their primary health care systems.

In 1979, the Ministry of Public Health, in response to the WHO's call for the revival of indigenous medicines, recommended a strategy on the development of primary health care to be included into the Fourth National Economic and Social Development Plan (1977-1981). The ministry was also responsible for appointing a committee called "The National Committee on the Development of Thai Medicinal Plants" presently "The National Committee on Thai Medicinal Plants", to study ways and means of integrating the use of herbal drugs into community activities. In the same year, Mahidol University hosted a seminar on indigenous Thai medicine culminating in a recommendation for the





promotion and development of traditional Thai medicine via the integration of both systems of medicine as well as the promotion of herbal drug usage.

In 1980, the National Economic and Social Development Board commissioned the Faculty of Pharmacy, Mahidol University to conduct a study on the strategies for the development of Thai medicinal plants. This resulted in the recommendation of the following strategies to be carried out :

1. The development of Thai medicinal plants for use in primary health care.;
2. The development of Thai medicinal plants for use in traditional and modern drug industries;
3. The development of Thai medicinal plants as strategic supplies in case of war; and
4. The development of Thai medicinal plants for export.

In 1981, the government made a commitment to survey and implement the use of raw material from indigenous sources for the local drug industry in order to be self-sufficient. Research on the efficacy and safety of traditional drugs was also conducted so that they could be employed in primary health care. In order to realize these goals, a new division was set up under the jurisdiction of the Ministry of Public Health. The division, known as "the Medicinal Plants and Traditional Medicine Section", was directly responsible for the promotional and supporting activities relating to the use of medicinal plants and traditional Thai medicine in primary health care.

The year 1982 was another turning point for traditional Thai medicine, in that a foundation called "The Foundation for the Promotion of Traditional Thai Medicine" was established by Professor Dr. Ouy Ketusingh. Its objectives were to revive, promote and upgrade traditional Thai medicine, as well as to promote the research and usage of medicinal plants. The foundation also set up the "Ayurved-Vidyalaya" (Chewaka



Statues of white hermits
undergoing self-treatment
at Wat Phra Chetuphon
or Wat Po in Bangkok

Komarapaj) in order to train a new class of traditional practitioners who not only possessed skills in traditional medicine but were also knowledgeable in modern diagnostic procedures.

During the Fifth National Economic and Social Development Plan (1982-1986), the Ministry of Public Health initiated a pilot project on the promotion of the use of medicinal plants under the sponsorship of UNICEF. The project, put into operation during 1984-1985, covered a total of 1,000 villages situated within 25 provinces and primarily involved the selection of 66 medicinal plant species based on available data on their efficacy and safety so that they could be recommended for use in the primary health care system within the designated areas. Other project activities included short training courses for rural health personnel as well as the production and distribution of promotional materials. With the cooperation of the Forestry Department, propagation and distribution programmes for selected medicinal plants were set into motion. Part of

the funding went towards the setting up of a medicinal plant information centre as well as the mass production of a number of commonly used traditional drug recipes. Moreover, to promote scientific interest in medicinal plants, a number of research grants was offered for the studies on scientific, toxicological and clinical aspects of various medicinal plants.

Following the success of the UNICEF-sponsored project, another project on the use of medicinal plants in primary health care was initiated in 1985. Funded by the Federal Republic of Germany through the GTZ programme, this project concentrated on the formulation and clinical usage of five selected drug plants, namely *Curcuma longa* (turmeric), *Andrographis paniculata*, *Cassia alata*, *Cilnacanthus nutans* and *Aloe vera*. The projected area of operation was reduced to five community hospitals.

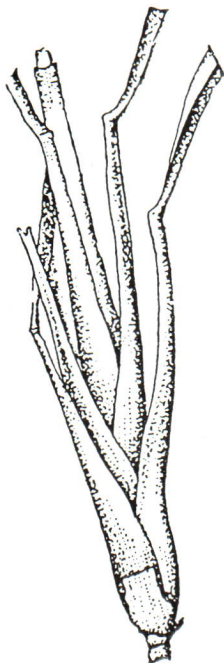
During the Sixth National Economic and Social Development Plan, further progress was made towards the development of Thai medicine and Thai medicinal plants. As the result of the GTZ funded project, a new project called "The Development of Thai Medicinal Plants into Drugs" was introduced into the National Plan. In 1987, there was an amendment to the Royal Decree governing the practice of the medical professions to accommodate the newly trained Ayurvedic doctors. In the revised version, traditional practitioners were divided into two categories, namely the general and the applied traditional practitioners.

In that same year, the Ministry of Public Health published a book called "Traditional Thai Medicine—The Art of Self-Reliance" which acted as a guideline for future development. Two years later, a centre for the coordination of the development of traditional Thai medicine and herbal drugs was established. Its task was to devise strategies and coordinate activities leading to the advancement of Thai medicine and herbal drugs.

The government's endeavor to affect the advancement of Thai medicine and herbal drugs continues incessantly as is evident in its Seventh National Development Plan (1992-1996) whereby traditional Thai medicine, herbal drugs as well as other forms of indigenous health-

related technologies, such as traditional massage, were to be revived, promoted and integrated into the existing health service system.

The success of the government's efforts in the revival and preservation of an invaluable national heritage in the form of traditional Thai medicine and herbal drugs for future generations will depend on the attitude and perception of the entire nation. It is not unreasonable to envisage public consensus in the use of herbal drugs for common ailments and as health foods. Herbal drugs should be made available to the general public both in traditional dosage forms, such as pills, fluid extracts and alcoholic



macerates, and in modern dosage forms, e.g. capsules, tablets and ointments. When being ill, a person should have the option of choosing between traditional and western forms of treatment. The revival and preservation of traditional Thai medicine necessitates the commitment and cooperation of all parties concerned, including knowledgeable traditional practitioners, interested individuals, scientists, and health as well as law enforcement agencies. Such endeavor will not only help to perpetuate an important part of our national inheritance but will also result in the improvement in the quality of life for the whole nation.





THAI HERBS AND HERBAL PRODUCTS



CHAPTER TWO

The Art of Drug Compounding in Traditional Thai Medicine



(Big) A typical clay pot used for brewing herbal drug concoction.
(Small) Drug grounding apparatuses.

ithin the past decade, there has

been an increase in global awareness of environmental issues including the proper usage and preservation of natural resources. Thailand, in an effort to become self-reliant, has strived to fully utilize and protect the existing natural resources including medicinal plants. In solving the country's health problems, the government has resorted to the use of medicinal plants in order to provide basic health care for the people. In spite of the fact that much of the research carried out on Thai medicinal plant has, in the past, been directed towards the isolation of active compounds for use as modern drugs, it is recognized that appropriate modification and development of indigenous drugs are of equal importance.

The intrinsic principles of traditional Thai medicine are propounded on the knowledge of

1. **Drug matters.** This concerns the basic knowledge of each drug ingredient which may be derived from plant, animal or mineral. Traditional practitioners must be knowledgeable on the names, description, colour, odour and taste of each drug.
2. **Drug attributes.** In Thai medicine, drugs are divided into groups according to their pharmacological actions. The tastes ascribed to the formulated drugs are believed to be correlated to their ability to cure certain ailments. For instance, drugs with a cooling taste are said to cure ailments caused by the fire element while those with acrid taste are prescribed for the restoration of the wind element. Individual drugs are recognized as possessing astringent, sweet, bitter, acrid, nutty, salty or sour tastes.





3. **Drug grouping.** To facilitate drug prescription in traditional Thai medicine where a recipe may consist of 30-40 ingredients, a number of drug ingredients are grouped together. These may be ingredients with similar nature or attributes or they may be different drugs grouped together to form specific entities. Each of these drug groups may consist of two to nine ingredients. An example of these entities is "the two licorices" comprising Thai licorice (*Albizia myriophylla*) and Spanish licorice (*Glycyrrhiza glabra*).
4. **Drug dispensing or compounding.** In traditional Thai medicine, a drug refers to two or more ingredients mixed together into an appropriate dosage form. The ingredients contained in each recipe

(Above) Drugs in various dosage forms.

(Opposite, above) Turmeric : dried and powdered rhizomes.

(Opposite, bellow) An old style balance for weighing herbal drugs.



(Above and opposite) Various forms of drugs.

may be classified into three main categories, namely the principal drug(s), the adjuvant(s) and the flavouring agents. In general, twenty-five dosage forms are recognized. These include the more common preparations, such as pills, decoctions, alcoholic macerates, snuffs, poultices and suppositories. In addition to these traditional dosage forms, the Ministry of Public Health has permitted two more modern dosage forms for traditional drugs, i.e. tablets and capsules. Preservatives are also allowed to be used in traditional drug formulation.

Besides the main principles as outlined above, other factors also have to be taken into consideration. These are

1. **Specific knowledge of drug ingredients.** Since more than one drug plant may possess identical common or local names,

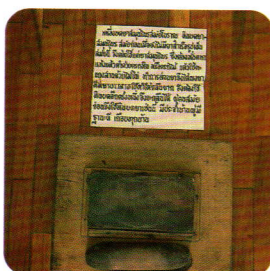
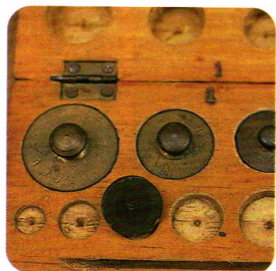


The mixture may be shaped into small round balls by hand or with the aid of a special tool.



traditional practitioners must be able to identify the correct species and to differentiate between useful species and poisonous ones. The knowledge on the part or parts of medicinal plants to be used is also essential. Other pertinent information includes the forms in which the drug ingredients are required. Some ingredients are best used fresh while others are used in the dried form. Certain ingredients may need to be detoxified prior to use.

2. **Doses.** The appropriate amount of each ingredient is usually measured out using the old system of measurements. An example



of traditional Thai system of measurement for weight is given below.

1 chang (1.200 g)	=	20 tum-lueng
1 tum-lueng (60 g)	=	4 baht
1 baht (15 g)	=	4 salueng
1 salueng (3.75g)	=	2 feung
1 feung (1.875g)	=	4 pai
1 pai (0468 g)	=	2 utt

Traditional systems for measuring lengths and capacities also exist.





3. **Vehicles.** These are liquids used in drug formulation in order to dissolve or to extract active constituents from drug ingredients. In many cases, they may act to potentiate the action of the principal drug. Vehicles used in traditional drug formulation include water, spirit and lime water, for instance. The potency of the elixir may depend on the choice of vehicle used.
4. **Methods of preparation.** Of the 25 dosage forms previously mentioned, in practice only four or five are in common use and these are briefly described below.





Preparation of Drug Ingredients

All ingredients must first be washed and then cut into small pieces if they are to be used fresh. If dried ingredients are required, fresh ingredients are sliced thinly and sun dried.

Fluid Extracts

Both fresh and dried ingredients may be prepared in the above explanation. The method is suitable for ingredients which are water soluble but may be unappetizing in their crude forms. To prepare an extract, the plant materials are placed into a utensil which may be a clay, an enamelled or stainless steel pot. Water is added as stipulated in the recipe or until it just covers the ingredients. The mixture is then boiled for 2-30 minutes depending on the types of ingredients used.

Infusion

A somewhat simpler version of the above procedure, the method entails the addition of boiling water onto finely shredded ingredients contained in a small cup or glass with a lid. The mixture is set aside to brew for 3-5 minutes, after which the clear supernatant is decanted.

Alcoholic Macerates

This method is mostly used for extracting water-insoluble constituents from dried drug ingredients. Air-dried drugs are weighed, wrapped in a piece of muslin and then placed into a glass jar with a tightly fitted lid. Sufficient quantity of spirit (28-40 degree proof) is then added to just cover the ingredients. With daily stirring, the maceration process is usually allowed to proceed for a period of 1-5 weeks.

Pills

To prepare pills, binding agents such as honey or syrup are used. Dried and finely powdered ingredients are placed into a bowl and a small amount of honey is gradually added. This mixture is then kneaded into a large ball. The mixture may be shaped into small round balls by hand or with the aid of a special tool. The finished pills are then sun dried for 1-2 days. The pills produced in this way may be stored in closed jars for up to one month.

As outlined above, the techniques of drug compounding in traditional Thai medicine are, in most cases, kept simple with minimum requirement for sophisticated equipment, so that they could be practised at household and community levels. With the advancement of today's technology, however, the methods of indigenous drug production could be vastly improved to make the drugs more effective, safer and more acceptable to the modern generation.



The mixture may be shaped into small round balls by hand.

Tamarind

Scientific name: *Tamarindus indica* Linn.

Family: GEGUMINOSAE

Vernacular name: Ma-khaam



The pulp is used as a laxative in traditional Thai medicine while the kernels from roasted ripe seeds are used as an anthelmintic for threadworms in children. The pulp contains 12-15 percent of organic acids including tartaric, citric and lactic acids.

Plaunoi

Scientific name: *Croton sublyratus* Kurz

Family: EUPHORBIACEAE

Vernacular name: Plaunoi



Indian Senna

Scientific name: *Cassia angustifolia* Vahl

Family: LEGUMINOSAE

Vernacular name: Ma-khaam-khaek

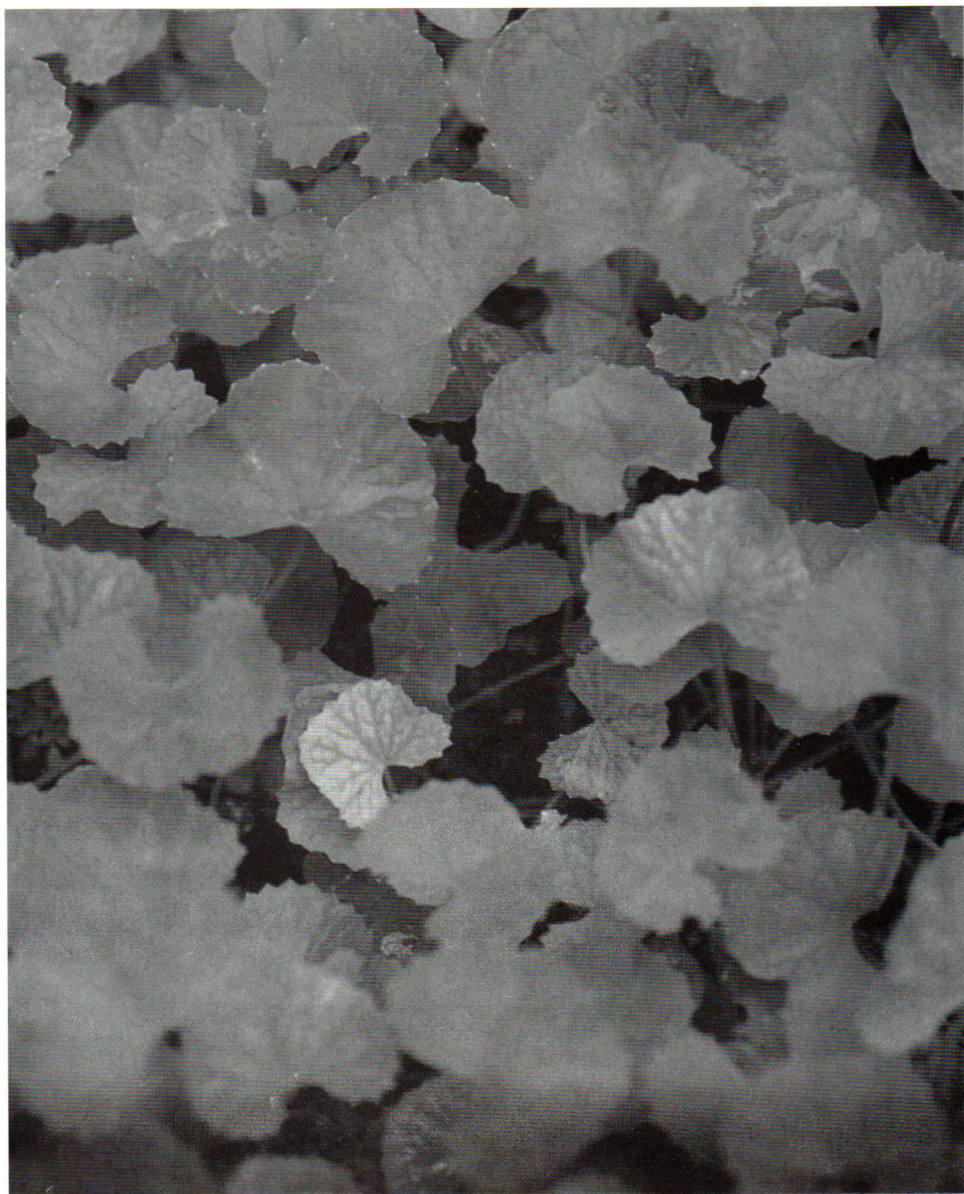


Asiatic Pennywort

Scientific name: *Centella asiatica* Urban

Family: UMBELLIFERAE

Vernacular name: Bua-bok



Plai

Scientific name: *Zingiber cassumunar* Roxb.

Family: ZINGIBERACEAE

Vernacular name: Plai

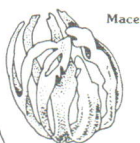
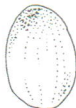


The pressed juice from pounded fresh rhizomes has long been used to relieve sprains. The powder derived from the dried rhizomes is used in traditional medicine as an anti-asthmatic agent.

Bay leaf



Nutmeg



Mace



Sesame seeds



Cumin or cummin



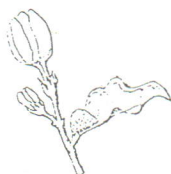
Cardamom



Cinnamon



Pandanus leaf



Jasmine



Mint



Pepper



Lime



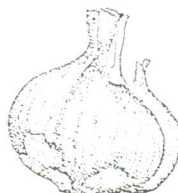
Kaffir lime



Citron



Mandarin or tangerine



Garlic



Phrik yuak

Phrik khi nu

Chillis

THAI HERBS AND HERBAL PRODUCTS



CHAPTER THREE

Spices



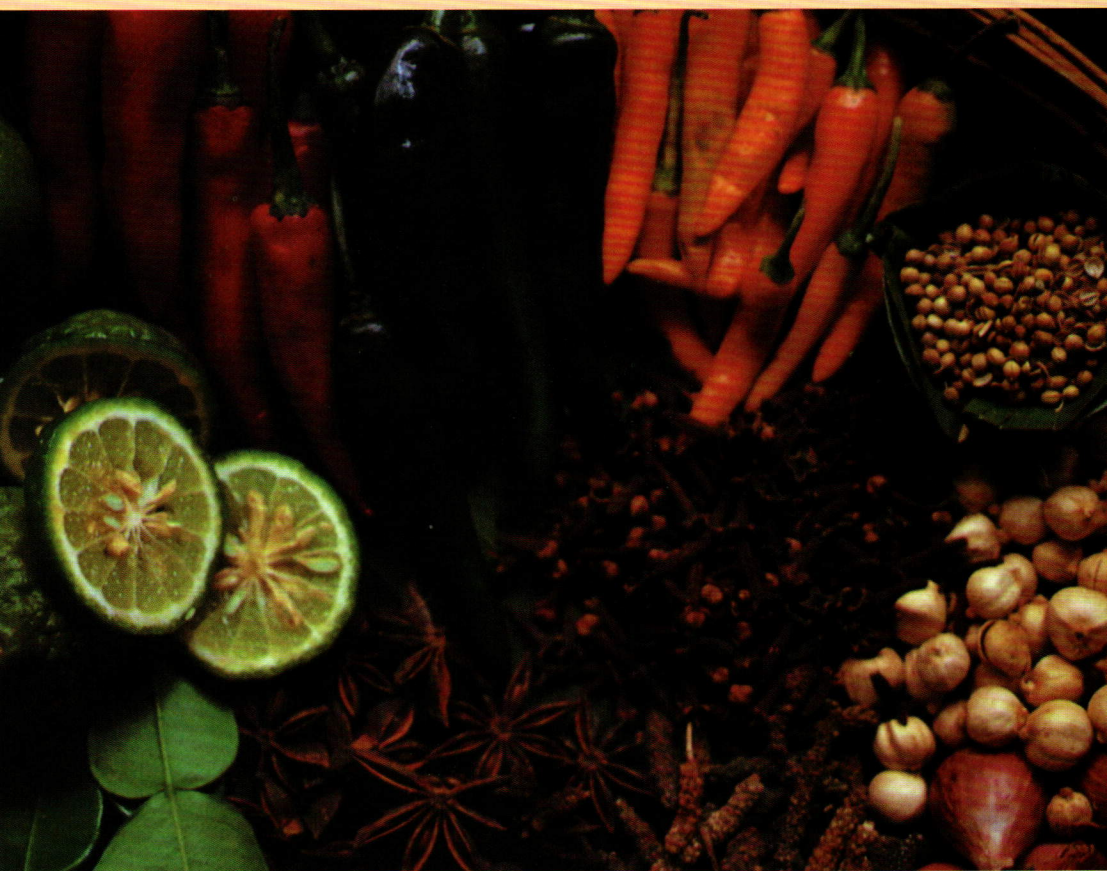
Bai kaphrao

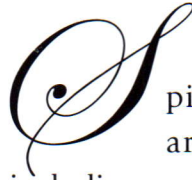


Bai maenglak



Bai horapha
(Sweet basil)





pices are parts of aromatic plants

which usually obtained from the tropics, including seeds, flowers, leaves, bark or roots. They are often in whole or ground form, and used for imparting flavour aroma and piquancy for seasoning foods. Many spices such as Pepper, lemon grass, cloves, ginger, nutmeg, mace and others were used in large amount in the kitchens for flavouring and preserving food. Hundreds of herbs and spices were used for making drugs, medicines and cosmetics. They helped to preserved food, to make it digestible, and at the same time provided the basis of their medicines. Spices not only flavour and improve the taste of the food, but supply us with many nutritinal prophylatic substances.

Spices have long been concerned in Thai cooking. A quantities of species are also being consumed within the country for flavouring foods and also needed in medicine, pharmaceutical, perfumery, cosmetics and other industries. The plants are planted both ornamental and agriculture. Spices played an important role both in the religions and Thai cooking since Sukhothai period. Until Ayutthaya's territory (1350-1767), spices came from India as dried materials which were used for religious purposes such as Kritsana (*Aquilaria agallocha* Roxb.), Kamyan (*Styrax* spp.) by preparing just sticks, for food by using dried leaves and mature seeds of Krawan (*Amomum testaceum* Ridl.), Krawan pa (*A. uliginosum* Koen.) and Krawan thet (*A. cardamomum* Moton.). They were pounded and mixed together to brownish powder and used for medicine, perfume and seasoning food. The seeds of Krawan (Cardamon) and Camphor



(*Cinnamomum zeylanicum* Nees) were used as aromatic plants. By the end of Ayutthaya period, Thai food were cooked by adding more spices which came from Japanese and. Malaysian, e.g. the rhizome of Khamin Daeng (*Curcuma longa* L.) gave the yellow colour for the soup, the powder used to make desserts, the mixture with Indian spices used for curry. In Rattanakosin period, spices were used more for instance Yi ra (*Cuminum cyminum* L.), Horapha (*Ocimum basilicum* L.), Kra phroa (*Ocimum tenuiflorum* L.), Maeng lak [(*Ocimum americanum* L var. *pilosum* (Willd.) Paton] Sims., Saranae (*Mentha cordifolia* Opiz ex Fresem), Ta khrai (*Cymbopogon citratus* Stapf.) Prik Thai (*Piper nigrum* L.), Prik (*Capiscum annuum* L.), Kra thiam (*Allium sativum* L.), Ma nao (*Citrus aurantifolia* (Christm) Swingle) Ma khuea thet (*Cyphomandra betacea* Cav.) etc. others. Nowadays spices are an accepted part of Thai daily lives of cooking. Spices are used as a whole or grounded as powder to be the mixture in sources, curry paste etc. They are used from cooking to medicine.

Most Favourite Spices

Translated by Ms. Kongkanda Chayamarit



Pepper

Scientific name: *Piper nigrum* Linn.

Family: PIPERACEAE

Vernacular name: Prik Thai



Pepper is native to the monsoon forests of the Malabar coast in southwest India. The pepper vine is now grown in much of tropical Asia. Pepper is the most popular spice in most of the recipes in cookery, to aid digestion, to preserve food and to enhance its flavour. Pepper has a warm, woody smell that is fresh, pungent and agreeably aromatic. Pepper is neither sweet nor savoury, just pungent, and can therefore be used in

both types of dish. It is so popular that it has given its name to a wide range of dishes.

Pepper is a perennial vine with stout stem, dark green leaves, white flowering spikes and green to dark red fruit. The vine takes seven to eight years to reach full maturity, and continues to bear fruit for 15-20 years. It is trained up posts of the trees grown for shade in coffee plantations.

There are black, white and green peppercorns. The black pepper which are the whole berries picked unripe and sun dried until shrivelled, is the most widely used, while the white peppercorns are ripe berries with the red skins removed before being bleached white by drying in the sun. It is hotter and less subtle than the black. It is mostly used by sprinkling it in powdered form on many cooked dishes. Green peppercorns are the immature berries pickled in brine or freeze-dried while still fresh, is not as hot and has a clean, fresh taste.

Pepper is said to help relieve flatulence and to have diuretic properties. It is the main source of heat in tropical Asian food.





Lemon Grass

Scientific name: *Cymbopogon citratus* Stapf

Family: GRAMINEAE

Vernacular name: Ta Khrai

Lemon grass is found throughout Southeast Asia. The culinary stem and leaf have a distinct lemon flavour. The base and lower shoots of the plant are used in cooking, and give a fresh, elusively aromatic taste in many Thai dishes.

A perennial tufted grass, up to 1.5 m has clumped, bulbous stems becoming leaf-blades and a branched panicle of flowers. Lemon grass grown readily in almost any soils, its bulb and leaves constantly multiplying. It is easily grown and thrives in a hot, sunny climate with some rainfall. It is better suited in sandy soil, which produces a higher content of the essential oil.

It is a common ingredient in Thai cooking. The coarse, long flat leaves are normally discarded, and only around 10-15 cm of the bulbous base used. If the lemon grass is to be eaten raw, the outer layers of the bulb should be peeled away until the pinkish ring inside appears; the tender portion is then finely sliced. Lemon grass is also bruised and added whole to many curry dishes, or sliced before pounded to a paste with other ingredients and added to many dishes. Lemon grass remains fibrous after cooking, so avoid chewing it. It combines well with garlic, shallots and chillies, and with fresh coriander to flavour fish, shellfish, chicken and pork.

In the past, lemon grass was prescribed to relieve flatulence and as sedative. The culinary stem is used for stomachache, diarrhea, headaches, fevers and flu, and is antiseptic. The essential oil is used for cosmetics and food, and in aromatherapy to improve circulation and muscle tone. The antiseptic oil treats athlete's foot and acne, and when sprayed, reduces air-borne infections.





Garlic

Scientific name: *Allium sativum* Linn.

Family: ALLIACEAE

Vernacular name: Kra-thiam

Garlic has long been recognised all over the world as a valuable condiment for foods, and a popular remedy medicine for various ailments and physiological disorders. It is hardy bulbous perennial with narrow flat leaves, and bears small white umbel of edible flowers and bulbils. Kra thiam clustered made up of several bulblets called cloves enclosed in a papery white or pinkish sheath. Garlic is used practically all over the world for flavouring various dishes. Fresh garlic is used in several food preparation in Thailand. Fried Garlic in oil is the most popular for seasoning in Thai dishes. Raw garlic can be used in the manufacture of garlic powder packed into capsules. Garlic purifies the blood, helps control acne, and reduces blood pressure, cholesterol, and clotting. Garlic clears catarrh, thus providing treatment for colds, bronchitis, pulmonary tuberculosis, and whooping cough.

The dried, mature bulbs are a popular condiment in Thai cuisine. Garlic is used in numerous Thai dishes where it serves as a flavouring as well as preservative. Thinly-sliced garlic, fried to a crisp golden brown colour, is used to garnish savoury Thai dishes.





Chilli Pepper

Scientific name: *Capsicum annum* L.

Family: SOLANACEAI

Vernacular name: Prik

Chillies grow in all parts of the tropics, usually grows to 30 cm - 1 m (1-3 ft) high. There are many varieties of Chillies, varying in shape, colour, size and pungency of fruits. Generally, the large, round, fleshy varieties are milder than the small, thinskin, pointed types. They are used ripe, when they may be red, orange, yellow or purple, and unripe, when they are green. Ripe chillies are available dried, crushed, flaked and ground. Dry chillies are extensively used as a spice in all types of curry dishes. Fresh chillies are rich in vitamin C, they help in the digestion of starchy foods and may be taken as a tonic. In large doses, chillies may cause stomach and intestinal burns.





Ginger

Scientific name: *Zingiber officinale* Rosc.

Family: ZINGIBERACEAE

Vernacular name: Khing

One of the oldest and most important spices is now widely grown. The fresh rhizome is knobbly, off-white of buff-coloured and often branched. The pale yellow flesh should not be too fibrous. The ginger plant grows up to 1 m on partly shaped sloped. It has narrow pointed leaves and small yellow, purple-lipped flowers. The hard, knobbly rhizome is about 2 cm in diameter. Rhizomes are used fresh or preserved. Ginger's flavour is hot and slightly biting. In cooking ginger is mostly used fresh. It is an essential ingredient of curry powder and other spice blends, and is found in gingerbread, biscuits, cakes, puddings, pickles and many Asian vegetable dishes. It is widely used in medicine as a digestive aid. Ginger tea made by infusing dried or fresh rhizome in boiling water for five minutes. It is a warming drink and thought to improve the circulation.

An erect plant with thickened, fleshy and very aromatic rhizome. The stem is 0.4 to 1 metre high with long and narrow leaves arranged alternately in two ranks along the stem. The inflorescence is cone-shaped, borne on a long stalk which emerges from the underground stem. Individual flowers are greenish-yellow with a small dark purple tip. The rhizomes differ in shape and size in the different cultivars.





Nutmeg Tree

Scientific name: *Myristica fragrans* Houtt.

Family: MYRISTICACEAE

Vernacular name: Chan-thed

Myristica fragrans is unique among spice plants as it produces two distinct spices: nutmeg and mace. Nutmeg is the kernel of the seed, mace is the lacy growth, known as the aril, which surrounds the seed. Nutmeg was being used in China as a medicine for digestive disorders. The Indians and Arabs valued it as a treatment for digestive, liver and skin complaints, and both nutmeg and mace were held to be aphrodisiacs. The nutmeg tree is an evergreen that grows to 12 metres or more in height. It has dark green oval leaves and small pale yellow flowers. Nutmeg and mace are similar in aroma and taste, but mace is more refined. The aroma is rich, fresh and warm. The taste is warm and highly aromatic-sweetish in nutmeg and more bitter in mace. Europeans have used nutmeg and mace most extensively in both sweet and savoury dishes. Nutmeg is a standard seasoning in many Thai recipes. The flesh of the fruit is used to make a sweetmeat.

An evergreen tree growing to the height of 8 to 17 metres. Its leaves are leathery, shiny, dark green and oblong-ovate in outline with acute apex and base. Its pistillate flowers are small, yellow and axillary. Its fruit is a yellow, nearly ovoid, fleshy, 2-valved capsule. The seed is surrounded by a fleshy, orange-red to red aril. It is cultivated in the southern part of Thailand.

The dried ripe seeds (nutmeg) and dried arils (mace) are used as spices. Medicinally it is used as a stimulant and a carminative. The seeds and arils contain myristica oil which is composed mainly of myristicin and saffrole.





Krachai

Scientific name: *Boesenbergia rotunda* (Linn.)
Mansf.

Family: ZINGIBERACEAE

Vernacular name: Krachai

Krachai has finger-like rhizomes, shoots with up to four leaves, and a spike of white or pink flowers with a pink-spotted white lip. They are widely cultivated in Thailand and Indonesia for the spicy flavour. Yellow-fleshed rhizome flavours Thai food including soups, fish dishes, and curries. They are also used to reduce flatulence and to treat diarrhoea, dysentery, and worms. In Thailand the leaves are regarded as an antidote to certain poisons.

A perennial herb with a small, slightly branched dark brown rhizome. The fleshy roots are cylindrical to spindle in shape, yellowish brown in colour and are arranged at right angle to the rhizome. The leaves are fairly large, oval in outline with acute apex. The inflorescence is composed of 4-6 flowers, the flowers blooming gradually from the base towards the apex of the inflorescence. Individual flowers are reddish purple in colour.

The aromatic tuberous roots are used as condiments in Thai food. The rhizomes and roots are reputed to increase physical efficiency. They are used as an antidiarrhoeal and a carminative in traditional Thai medicine. The rhizomes contain 0.08 percent of volatile oil, composed of cineol, boesenbergin A, camphor, etc.





Coriander

Scientific name: *Coriandrum sativum* L.

Vernacular name: Phak chi

All parts of the plant, that is, tender stem, leaves, flowers and fruits have a pleasant aromatic odour. It is a popular flavouring herb and spice. An annual coriander grows from 30-80 cm tall and bears small clusters of tiny white or pink flowers. The seeds are spherical, ribbed, and 3-4 mm in diameter. The plant grows best in sunny situations. Whole seeds are brittle and easy to grind to a fine powder. Coriander fruits are usually dry roasted before grinding to enhance flavour. It is actually the housewife's secret of tasty dishes, It is used almost essential ingredient in curry powder. Coriander fruits are used to be carminative, diuretic, tonic, stomachic, antibilions, refrigerant and aphordisiac. Thai dishes are flavoured with fresh leaves of coriander.





Kaffir Lime

Scientific name: *Citrus hystrix* DC.

Vernacular name: Ma krood

The rind of the fruit and the leaves are used in Thai cooking. The Kaffir lime is a small tree with double leaves and a clean lemon taste. It gives a distinctive taste to chicken and fish dishes. They are used with fruit peel in Thai cooking and medicine.



Long Pepper

Scientific name: *Piper longum* Linn.

P. retrofractum Vahl

Family: PIPERACEAE

Vernacular name: Dee-plee



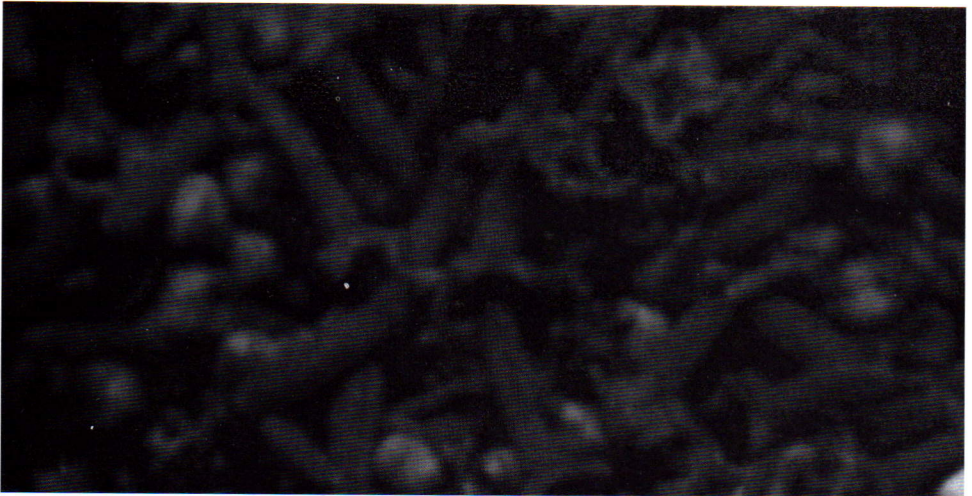
Long pepper is the entire spike of immature fruits derived from either of the above species. It resembles black pepper in taste and odour but is quite distinctive and is less strong. It contains about 1 percent of volatile oil, 6 percent of piperine and a pungent resin, chavicin. In traditional Thai medicine, long pepper is used as a carminative and an expectorant. It is also used as a spice in pickling.



Clove

Scientific name: *Syzygium aromaticum* (L.) Merr. & L.M. Perry

Vernacular name: Kan phlu



Cloves are the unopened flower buds of a small evergreen tree to a height of 10-12 metres. Cloves are picked when the buds reach full size but before the petals open. The buds are then dried over several days in the sun. Cloves are very aromatic that is warm and rich. The taste of a clove is biting sharp, hot and bitter and it leaves a lasting numb sensation in the mouth. To have a few cloves in the mouths keep the breath sweet. Clove has stimulating properties and is one of the ingredients of betelnut chew. Cloves go well with sweet or savoury foods. It is used for flavouring curries, spice mixtures and pickling spice. It is highly valued in medicine as carminative, aromatic and stimulant. The essential oil is used in medicine as an aid to digestion and for its antiseptic and antibiotic properties in tooth-ache. The essence is a food preservative.



Turmeric

Scientific name: *Curcuma longa* L.

Vernacular name: Khamin

Turmeric is used for its flavour and attractive golden colour. A robust herbaceous perennial grows to a height of 1 metre with a short stem and tufted leaves. Turmeric is usually propagated from fingers or small sections of rhizome. The rhizomes grow best in a hot, moist climate. Turmeric smells peppery and fresh with a hint of oranges and ginger. It tastes pungent, bitter and musky. Turmeric is also an important flavouring for many Thai dishes, especially in curry powder. Turmeric is used commercially in sauces and in processed food. It is often added to mustard blends. Turmeric is taken as a tonic and as a remedy for liver problems. The juice of the raw rhizomes added to ointments is applied to treat skin diseases. Turmeric is a traditional textile dye. In paste form it is applied as a beauty mask.



Cumin

Scientific name: *Cuminum cyminum* L.

Vernacular name: Yira

Cumin gives a distinctive warm flavour to an enormous range of savoury dishes. The seeds are oval and 5-6 mm long with longitudinal ridges and a few little bristles. They are usually light brown, but may be greenish or greyish. Cumin is one of the main constituents of curry powders. It is an annual and a hot-climate plant, grows to a height of 30-45 cm and produces a stem with many branches bearing long, finely divided, deep green leaves and small flowers, white or rose colour, borne in umbels. The smell of cumin is quite pronounced, strong and heavy with acrid or warm depths. Cumin seeds taste slightly bitter, sharp and warm, and their pungent flavour persists for some time. Cumin is generally dry roasted before use to bring out its flavour. It is also found in pickles, ground cumin is frequently added to minced meat dishes and to vegetables. Cumin seeds are used as a remedy for diarrhoea flatulence and indigestion.



Mint

Scientific name: *Mentha cordifolia* Opiz ex Fresen

Vernacular name: Saranae

Saranae belongs to the genus *Mentha* which consists of about 40 species of aromatic perennial herbs distributed mostly in the Northern hemisphere. In Thailand, *Mentha cordifolia* are reported to grow naturally. They have erect, square, branching stems, aromatic foliage, and flowers in leaf-axils. It is used in beverages, flavour sauces, salads, desserts, and savoury dishes. Their teas are popular for a cool and refreshing taste. They flavour confectionery, drinks, cigarettes, toothpastes, and medicines. Mints are stimulant, aid digestion and reduce flatulence. It is included in ointments for cold remedies, and is given for headaches and other aches and pains.



Common Basil, Sweet Basil

Scientific name: *Ocimum basilicum* L.

Vernacular name: Horapha

Sweet Basil is an erect glabrous herb, 30-90 cm high, has square stems with strong, fresh, clove-scented, toothed leaves and small, white, scented flowers. It is easily grown at home or in gardens in ordinary soil. The warm, spicy taste of this popular herb's leaf combines well with garlic, tomatoes, aubergines, and many Thai dishes. The fresh leaves is important seasoning in Thai beef curry, fish soups, meat pies, etc. The essential oil flavours condiments, liquours, perfumes and soap. The plant is considered stomachic, aphrodisiac, expectorant, carminative and stimulan. An infusion aids digestion and is anti-bacterial, inhaling the essential oil refreshes the mind and stimulates a sense of smell dulled by viral infection. In massage oils, it is a nerve tonic and eases over-worked muscles. Basil should be avoided on sensitive skin and during pregnancy. It is delicious in sauces and with chicken.



Holy Basil, Thai Basil

Scientific name: *Ocimum tenuiflorum* L.

Vernacular name: Ka phrao

The plant with pink or white flowers. Fresh leaves are used as spice for flavouring Thai dishes. The flavour is warm, sweet and somewhat pungent and peculiar. The odour of Thai basil leaves is aromatic, extensively used in many kinds in meat dishes.



Hoary Basil

Scientific name: *Ocimum americanum* L. var, *pilosum* (Willd.) Paton

Vernacular name: Maeng lak

The uses are more like Sweet Basil. The seeds of the plant when steeped in water, they liberate a mucilage which is semi-transparent and nearly tasteless.



Op choei

Scientific name: *Cinnamomum bejolghota*
(Buch.-Ham.) Sweet

Vernacular name: Op choei



Op choei is the dried bark of a tree of *Cinnamomum bejolghota*. The agreeably sweet woody aroma is quite delicate and suite to both sweet and savoury dishes. The spice is widely used for flavouring in making incense, pomanders and pot-pouris. This evergreen, with silky panicles of tiny, cream, malodorous flowers and purple berries, is coppiced to create finger-thick stems for harvesting. The bark quills are added to savoury dishes in Asian and African cookery, and desserts and drinks in Europe. Essential oil in the leaves, bark, stems, and roots flavour and scent food and perfumes. Leaf oil is used for its antiseptic, tonic, and warming properties to treat nausea, and hypertension.

THAI HERBS AND HERBAL PRODUCTS



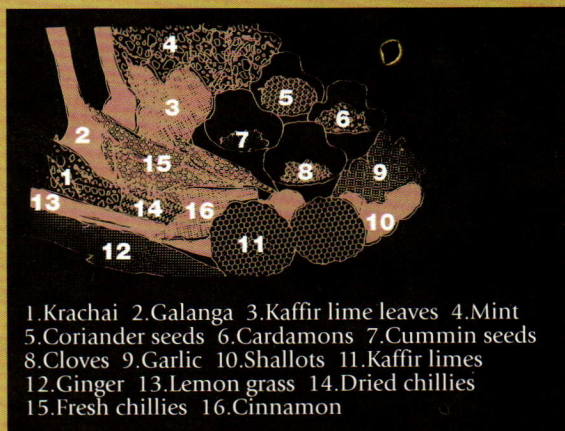
CHAPTER FOUR

Thai Dishes of 4 Regions

Translated by *Chanthana Chaichit*



Herbs in the Thai kitchen



1. Krachai 2. Galanga 3. Kaffir lime leaves 4. Mint
5. Coriander seeds 6. Cardamons 7. Cummin seeds
8. Cloves 9. Garlic 10. Shallots 11. Kaffir limes
12. Ginger 13. Lemon grass 14. Dried chillies
15. Fresh chillies 16. Cinnamon

According to Thai
medical treat-

ment, Thai dishes which wholly contain every flavor have medicinal qualities. Ingredients are classified as the followings:

Hot and Spicy Flavor: Ginger, galanga, lemon grass, krachai (a kind of herb whose roots are used in cooking), pepper, horapha (sweet basil), chillies, onion, garlic, etc. have medicinal qualities to get rid of chest discomfort, help digestion, relieve stomach discomfort and stimulate appetite.

Bitter, Cool and Mild Flavor: Various kinds of vegetables such as fug (a kind of Thai squash or melon), young melon, dog-caea (a kind of flowers from a tree whose family is *sesbania grandiflora* Pers.), bitter melon, taamlyn (a kind of plant whose family is *Coccinia grandis* Voigt.), eggplants, etc. are to stimulate appetite, relieve high fever, help digestion and nourish the body's chemical elements.



Sour Flavor: Lime, tamarind paste, maadun (a kind of tree whose family is *Garcinia schomburgkiana* Pierre.), mango, young leaves of maagok (a kind of big tree whose family is *Spondias pinnata* Kurz.), phaaktiew (a tree of *Cratoxylum* family) and taew (a tree of *Cratoxylum maingayi* Dyer. family) are laxatives, medicine to cure cough, get rid of phlegm and cure colds.

Astringent, Sweet, Creamy and Salty Flavor: the flower cluster of the banana tree, coconut, shrimp paste and sugar are used to nourish tendons, the whole body and energy.

With medicinal herbs as main ingredients, Thai dishes are considered the crown of all food, containing low calories as they are cooked with various kinds of local vegetables.

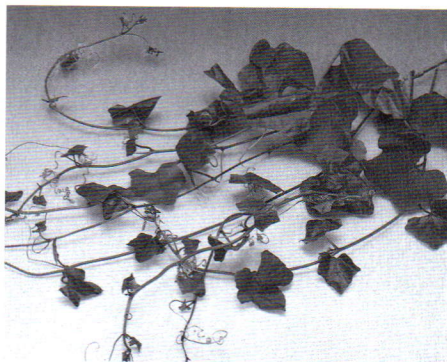


Local vegetables are medical herbs. To eat local vegetables, then, is to take Thai medicine. Nutrient and medicinal values are completely found in Thai, local vegetables.

The Thai people can have local vegetables for the whole year either in the rainy, summer, or cool seasons.

Thao Yaa Naang (a kind of plant)

with its young leaves, blossoms and fruits are edible. The leaves are crushed to get juice as an ingredient flavoring the pleasing taste of soups such as Bamboo soup, and Kaeng Kaea, etc.



Local vegetables have their special qualities as the followings:

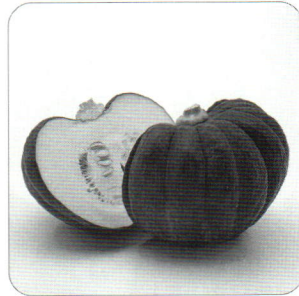
Hot and Spicy Flavor with Fragrant Smell: Chillies, Coriander seeds, cardamoms, cloves, lemon grass, kaffir lime leaves, pepper, deeplee (a kind of long pepper), kaprao (a kind of sweet basil), krachai (kaempferia pendurata), bai maenglak (a kind of sweet basil) and phakphai (or phakphaew, a kind of fragrant leaves of polygonum odoratum Lour. family).

Giving Pleasing, Sweet and Sour Flavor: Tamarind, maadun, lime, maaeyk (a kind of bush of Solanum stramonifolium Jacq.), maasaank (a kind of sour fruit whose family is Feroniella lucida Swing.), rakam (a kind of red, sour edible fruit), taalingpling









(a kind of sour fruit whose family is *Averrhoa bilimbi* Linn.), somkhaeg (a kind of sour fruit), somsiew (another kind of sour fruit), namtaantanoad (sugar made from taan palm) and namtaan-maapraow (sugar made from coconut palm)

Coloring: young chillies, red and yellow chillie, turmeric, pumpkin, wild tomato, anchan flowers (a kind of flower with its dark blue colour growing of a creeping plant), various kinds of eggplants, Sokaanaam flowers (orange color flowers of the *Asoka* of indica Linn. family).

All of the local vegetables mentioned above, either dried or fresh, are valuable to Thai main dishes and desserts. Thai vegetables and local Thai herbs are both food and medicine.





Nam phrik num

Thai Dishes of 4 Regions

The North

Queen of vegetables of the North is Phaak Chiangda. Its fresh leaves are creamy with a sweet, fragrant flavour when fully boiled.

1. *Kaeng Kae Kai Sai Chiangda (Chicken Curry with Kae flowers and Chiangda leaves)*

Medicinal value: the Chiangda leaves help relieve the body's high temperature, nourish chemical elements and reduce sugar level in blood.

2. *Lhaam Bon (Roasted Bamboo stuffed with certain kinds of Northern meat and young leaves of "Bon" plants)*

Medicinal value: Lhaam Bon helps improve the digestion



1.Khanom chin nam ngiao 2.Nam phrik ong 3.Kaeng hang lay 4.Kaeng ho 5.Khao soi





1.Khaep mu 2.Naem 3.Sai ua 4.Mu tot 5.Nuea nueng

3. *Nam Prig Oong (a kind of chilli sauce of northern style)*

Vegetables to dip in: Cucumbers, long-podded cowpea, Kraathin (a kind of young leaves of the krathin bush of the *Leuceana leucocephala* de Wit family), Thuapu (a kind of green, long bean), etc. Various kinds of boiled vegetables are taken side by side. Among those are eggplants, phakbung (an aquatic morning glory), huapli (the flower cluster of the banana tree), the tops and flowers of kae (white or red flowers of the kae tree), pumpkin and green melon.

Medicinal value: Nam Prig Oong with many vitamins from vegetables helps stimulate appetite, and improve digestion.

4. *Saa Hua Pli (or Hua pli Yam)*

Medicinal value: The astringent and cool flavor of Hua Pli helps the colon's digesting system and cures anemia.

5. *Saa Maa Khuea (or Eggplant Yam)*



1.Nam phrik ma kham sot 2.Nam phrik long ruea 3.Kaeng som dok khae
4.Nam phrik phak chim 5.Kaeng chuet 6.Phat phak 7.Kaeng som



The Central Part

Tamlyn (a kind of creeping plant of which its green leaves and tops are edible) is the vegetable Queen of the central region. The cool flavor of the Tamlyn's leaves and creeping stems cooked as food help relieve heat in the summer time.

1. *Nam Prig Maakhaan Sod (Fresh Tamarind Chilli Paste)*

Vegetables to be taken with:

Parboiled vegetables are Tamlyn, the tops of Maafaak Kaew (a kind of green melon), Maa Kwaeng ji, grilled young Paekaa pods (kinds of pods from the Paekaa tree of *Oroxylum indicum* family) and the tops of Faak Khaw (a kind of fruit from the Faak Khaw creeping plant)

Fresh vegetables are Thua pu, Phaak Hin, Phaak Poom Pla (a kind of short-life circle plant with its tender stem) and the tops of wild olive leaves.

Medicinal value: Fresh Tamarind Chilli Paste helps get rid of phlegm in the intestines, releases the bowel movement, improves women's blood circulation and stimulates the appetite.

2. *Nam Prig Maengda (Chilli Sause with Water bug)*

Medicinal Value: Nam Prig Maengda helps stimulate the appetite, gets rid of chest and stomach discomfort, and nourishes the body's wind element.

3. *Nam Prig Plaa Too with Tamlyn's (Shrimp Paste Dip)*

Medicinal Value: Plaa Too (Mackerel) provides Proteins; Vegetables give vitamins and minerals. Tamlyn has its value in reducing sugar in blood and getting rid of internal heat.

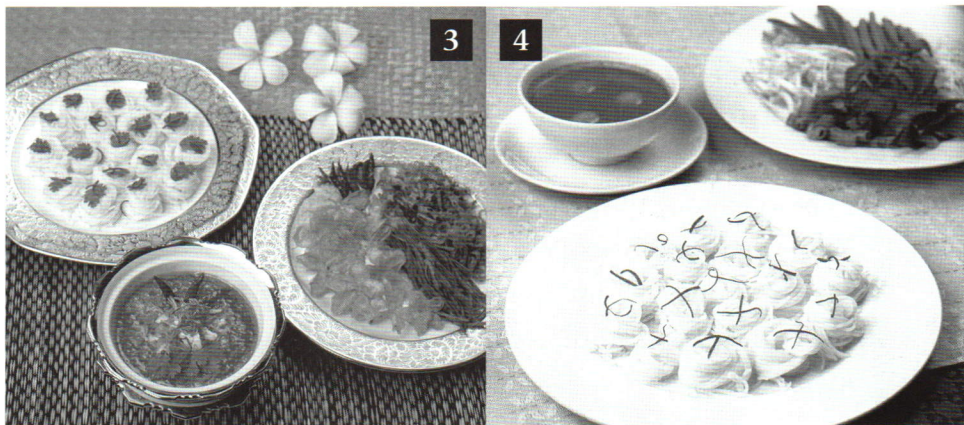
4. *Tom Yam Kung (Sour Prawn Soup)*

Medicinal value: Tom Yam Kung helps get rid of sweat, relieves discomfort and stimulates appetite.

5. *Kuai Tiao Phad Thai (Thai Fried Noodles)*



1.Kaeng lueang 2.Kaeng tai pla 3.Khanom chin nam phrik 4.Khanom chin nam ya



The South

Phaak Mhieng is the Southern Queen of vegetables. With its sweet, creamy flavor, this vegetable gives a high quality of nutrition, causing the body's strength. Chewing the fresh and young Phaak Mieng leaves helps reduce the thirstiness.

1. *Phaad Phaak Mhieng Sai Kung Haeng (Fried Phaak Mhieng with Dried Shrimp)*

2. *Kaeng Lyang (Southern Style Soups)*

Medicinal value: This Southern Style Soup helps get rid of stipulation, stomach discomfort and body nourishment. Fishes cooked in the soup give proteins.

3. *Kaeng Tai Plaa (Fish Kidney Soup)*

This Southern Style Soup gets rid of sweat, and wind; helps digestion and bowel movement.

4. *Phaad Saator Sai Kapi (Fried Saator's seeds with Shrimp Paste)*

Medicinal value: Food cooked with saator seeds helps stimulate appetite and nourishes tendons. Food ingredients also stimulate appetite.

5. *Khaaw Yam (Rice Mixed with Various Kinds of Herbs in Southern Style)*

Medicinal value: The Southern-Style mixed rice is a kind of medicinal food to improve the body's chemical elements. Khaaw Yam consists of many flavors: creamy flavor of coconut meat, sour flavor of raw mangoes and lime, and salty and sweet from the "boodoo" sauce (a kind of sauce taken with Khaaw Yam) along with the hot flavor from powdered chillies.



The North East

Phaak Tiew (Leaves of Tiew tree of the *Cratoxylum* family) is the Queen of the North-eastern vegetables. Young tops, leaves and blossoms are taken with *Laab* (a kind of dish of which the most important ingredients are minced meat or fish mixed with chillies and lime juice as well as roasted rice and mint leaves), *Goi* (a kind of dish like *Yam* but mostly with raw meat as main ingredient), *Naam Prig, soup*, and *Khanom Chin Naam Ya* (Steamed Rice Noodles with Curried Fish Sauce). Soup with Phaak Tiew has sour flavor.

1. *Soup Dog Phaak Tiew (Soup with Phaak Tiew Blossoms)*

Medicinal value: Soup with Phaak Tiew Blossoms is a laxative, and also medicine to get rid of phlegm, to nourish the water element of the body, and relieve nerve-pain.

The soup is harmful to the people having kidney disease, if taken, the body would be swollen.

2. *Khaaw Nieu Som Tam Kai Yang (Steamed Glutinous Rice, Papaya Salad and Roast Chicken)*

Medicinal value: This dish, with its delicious flavor, helps stimulate appetite, improves digestion and relieves stomach discomfort as well as urinary problem.

3. *Kaeng Oom:* According to Dictionary (*The Royal Academy Version of B.E. 2525*), Kaeng Oom is a kind of curry like *Kaeng Kua* - but with bitter melon and many kinds of vegetables. Kaeng Oom of

(Opposite) 1.Khao niao 2.Lab mu 3.Kaeng om
4.Larb pla duk 5.Som tam 6.Kai yang 7.Sup no mai



Isaan area is thicken. Frogs, small green frogs, fish, crabs, shellfish, chicken, pork or beef can be an ingredient of Kaeng Oom.

Qualities: Besides having a pleasing flavor, *Kaeng Oom* helps nourishment and improvement of the body's chemical elements, as well as provides 5 groups of nutrition. Herbal ingredients provide medicinal values.

4. *Plaa Chon Jim Jaew (Steamed Serpent-head Fish with powdered chilli in fish-soy sauce)*

Qualities: Fish provides protein; vegetables give vitamins and minerals. According to the ancient Thai midicine, *Plaa Chon's* meat is good to all chemical elements. Its helps get rid of the wind element, relieves the pain caused by pustles, cures children's disease as well as releases all toxins.

5. *Jaew Bon (Minced Fish preserved with salt mixed with local herbs)*
Qualities: Jaew Bon gets rid of sweats, releases stomach discomfort, stimulates appetite and nourishes the body's chemical elements.
6. *Soup Nor Mai (Bamboo-shoots soup)*

The Isaan people have Soup Nor Mai as their daily food. Besides digging bamboo-shoots in the woods, they grow bamboos near houses. Bamboo-shoots which are abundant in their proper season are preserved in metal containers as pickled, or boiled.

Fresh Bamboo shoots have a bitter flavor and a high amount of cyanide. They must be boiled, before taken with food, to decrease the bitterness, and the cyanide acid. Boiling fresh bamboo shoots to get rid of the bitter taste and dangerous acid reveals the local wisdom of Thai folks.

Qualities: Bamboo shoots have a great amount of fibres which helps smoothen the bowel movement. Salted fish and vegetables which are main ingredients of this soup provide vitamins and protein.

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THAI HERBS AND HERBAL PRODUCTS



CHAPTER FIVE

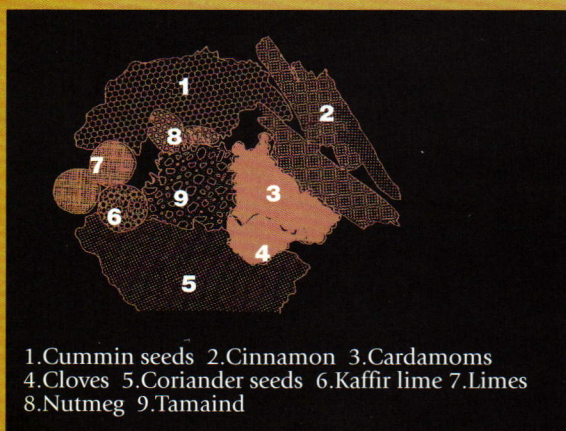
Thai Food: Food for Health

Written by *Srisamorn Kongpun*

Translated by *Chanthana Chaichit*



Herbs in the Thai kitchen



- 1.Cummin seeds 2.Cinnamon 3.Cardamoms
- 4.Cloves 5.Coriander seeds 6.Kaffir lime 7.Limes
- 8.Nutmeg 9.Tamaind



here are no less than
200-300 Thai dishes.

Each has its own characteristics in flavor and feature.

It is not difficult to cook in the pre-historic era. Humans began their eating with raw trees: flowers, leaves, roots and bulbs. After having tasted the vegetables' bland flavor, they added some sour ones to make tastier, or mixed variety of vegetables. Later, they knew how to make simple cooking, for example, burning vegetables or putting rice into roasted bamboo (which was called "kaawlaam" or a glutinous rice with coconut cream topping stuffed in a bamboo section and roasted). As the time passed by, they knew how to cook in various ways: frying, making soup or curry, steaming, making yam (salad) and preserving.

Food cooking is both science and art. Some foods need time, man power and delicacy in cooking, including an artistic decoration. Cooperation in cooking helps create unity and warmth among family members.

The process of Thai cuisine explains Thai life: its tradition, custom and culture as well as confirms that Thai family is a big one in which its members live together with warm relationship. In cooking Thai food, family members have their share of helping, as a teamwork. Either the grown ups or the young ones, males or females, can participate. In some old families, the elders knew how to manage the young offsprings giving their hands in cooking. Small kids could help with light works, e.g., nipping off miniature egg plants, or sweet basils from the stem; whereas the bigger ones could peel onions, garlicks, pluck off vegetables, squeeze coconut meat, and pound chillies and spices, for example.

Accordingly, it is clearly seen that food cooking creates closeness



(Above) Kung yad sai, (Below) Pu nim yam krathiam tone, (Opposite) Pla chon bo ran





among family members in talking and chatting to one another. Young kids knew how to help, and to cook as well as to be trained to have responsibility and discipline in working. The whole family, then, has a warm relationship and in turn produces worthy people for society in general.

Names :

Thai food always has its meaningful names which indicate its features or methods of cooking. Khanom Pui Fai is light, soft and yellowish white like cotton wool. Mi Krop (Crispy noodles) must be crispy. In the old days, most Thai people usually had a sense of humour and they often named foods, poetically, to stimulate the appetite. Among those foods are Joraka Lonson (Black bean in coconut milk), Naree Jaamseen (Banana in coconut milk) Ho Mujcha Chailai (Steamed curried fish), Paad Paakdong Fong Raga (Pickled vegetable fried with egg).



(Above) Pla ka pong samunprai, (Below) Pla ka pong nunge krathiam,
(Opposite) Som tam pu kai dong





The Flavor of Thai Food :

Regional Dishes :

The North: The food of the North has its light flavor, with a little spices, not very hot with chillies, not salty and without sugar, except in Phak Jo, Kaeng Kae, Kaeng Oom Moo, Sai Uaa, etc.

The North-East: The North-Eastern food has a strong flavor with chillies, salt, herbs and spices. Examples are Lap Pradook, Som Tom, Oomsab, Tomsab, etc.

The Centre: The Central food has a moderate flavor with herbs and sugar. Kaeng Khieo Wan, Kaeng Som, Tom Yam, Tom Khaa Kai, Phanaeng, Choochee, are examples.

The South: The South has a very strong flavor of food with spicy herbs. Examples are fried or grilled tumeric - powdered fish, Kaeng Lyan, Tom Som, Pla Krabok and Kaeng Taipala.



Kung nang yam takrai sod

In fact, Thai food always has various kinds of vegetables as main ingredients. These can be found in Kaeng Liang, Kaeng Som, Kaeng Noppakaaw, Kaeng Kae, Kaeng Nor Mai. and Kaeng Hua Pli. Of the "yam" (salad) type, are Yam Hua Pli and Yam Kalaampli. There are many foods that are good eaten with vegetables. Isaan's vermicelli, as well as that of the South, Kaeng Tai Pla and Kaeng Lyan are very delicious having vegetables as their parts. The Som Tam of any region either Issan's Som Tam Malakor or the North's Tam Som O or Tam Mamuang are to be with Chaom's tops, Chapluu leaves, Kratin's tops and Tong Laang's tops. For Plaa (a Thai salad with raw or partially cooked meat), Lon (a kind of shrimps or crab sauce) and Lap (a kind of minced beef, or chicken or pork salad), including Namprig (Chilly sauce), raw or boiled vegetables are needed to eat with.

The Thai food of the Central part needs vegetables to be side by side; examples are Khanomchin Namya and Namprig Chaonaa. Bai Horapa (Sweet Basil) and Pagkaad Hom (Romain lettuce) are served



Lab mu tod

with Po Pia Tod (Spring rolls). Various kinds of Miang (minced meat wrapped up by leaves): Miang Khanaa, Miang Mamuang, Miang Kaam are served with fresh vegetables.

Besides producing fibre, the green leaves of Khannaa, Pakbung, Tamloeng and lettuce help reduce the body's lack of Vitamin B2 when taken with meat. Vegetables' green leaves consist of Vitamin A which is very useful to the body, taken with the fat in cooking oil. Deep green and yellow vegetables produce Betacarotene, an anti-cancerous substance which turns to be Vitamin A needed by human body.

Yam (Thai salad) has a small quantity of meat but its main ingredients are vegetables. All yams have low fat ingredients; examples are Yam Yod Krathin, Yam Bai Bua Bok, Yam Hua Pli, Yam Tawai, Yam Mamuang, Yam Yuan, Yam Yai, and Yam Woon Saen.

As the Thai food's ingredients are small quantity of fat and meat (with about 20% of fat), the Thai people, then, are fortunate in their fat taking less than the western people, and less risky of having breast cancer.







The Values of Thai Food :

1. **Food Values:** Thai food has values obtained from ingredients which are vegetables, spices and herbs.
2. **Herb and Spice Values:** As Thai food has its main ingredients consisting of herbs and spices, then, it has a great value.
3. **Folk Wisdom and Art and Culture Values:** In general, each of the Thai food has its own natural flavor and features, for example, Kaeng Khi Lhek, which consists of the leaves of Khi lhek with their bitter flavor but by the old generation's folk wisdom in mixing these bitter leaves with spices, coconut milk and meat, Kaeng Khi Lhek becomes a delicious cuisine.

The Charm of Thai Food

Thai food is an international favorite. The charm of Thai food depends on:

1. **Flavor:** Each Thai dish has more than 3-4 flavors. The ingredients of each dish help not only harmonize all different flavors but also make delicious. Miniature egg plants with their bitter flavor in Kaeng Khiao Wan help reduce the greasiness and the hot flavor.
2. **Decoration:** Thai food has an attracting decoration inducing to appetite and it is also convenient to take.
3. **Ingredients:** The flavor of Thai food comes from herbal spices without flavoring substances.
4. **Values:** Thai food has both values of nutrition and medicine.
5. **Harmony:** Thai food can be harmoniously taken with other food, for example, Panaeng Kai can be used as sandwich filling, Paad Kaaprao as spaghetti's top over.

The Thai food, then, should be internationally promoted.

Chao Wang Food : (Food Prepared for Royal or High-Class Families)

The food which is prepared for Royal family members or of the high-class people is different from that of the ordinary people. The Chao Wang food has its own delicate cooking; for example, Khieo Wan Kai must have only chicken meat without any bones, whereas the ordinary people's Khieo Wan Kai contains with chicken both of meat and bones. The Chao Wang Namprig has beautifully carved vegetables, side by side, to take with.

Some Bits about Thai Food :

Thai food is a Thai national symbol. It reveals the characteristics of the Thai people: their delicate taste, discipline, rules of conduct, artistic taste and human relationship. Thai cuisine is an art to learn.

There is a certain process of each Thai food cooking. It also needs cooperation. Thai food has its unique name with precise meaning of feature, flavor or the methods of cooking, Tong Yip and Foi Thong are examples of Thai sweets in this case. To understand causes and effects of Thai food cooking is to achieve.

To preserve the Thai nationality, the learners of how to cook Thai food should both keep Thai national values of the past and also accept any new ones.

Thai Food of Each Festival :

Thai food is cooked in agreement with Thai festivals organized according to Thai religious customs.

The fifth Month (April):

The old Thai New Year is celebrated in this month of April (between April 13 and April 15). To relieve the hot weather in the summer month, the dainty Khao Chae, (-a luncheon dish which includes rice served in

scented water with jasmine and rose petals, and with seven or eight side dishes-), is used to serve monks, relatives and friends in the merit-making occasion. Kaaraamae (a Thai caramel) is made as well as Khao Niew Dang (Sweetened red glutinous rice) to give among friends and relatives.

The Sixth, Seventh, Eighth Months:

The Eighth Month (July) is in the rainy season and the Buddhist Lent. Fruits are in abundance so they are preserved in many techniques of cooking: stirring, or cooking as well as soaking in thick syrup. Durian Guan, Kluai Guan, Kluai Taak, Sabparod Guan are examples. Fully ripe chillies are sundried for the needed time. Fully ripe and sour tamarind is pitted, sprinkled with salt, pasted and preserved for the coming days. Fishes which are also plentiful, are sundried or grilled, for the next days.

In these months, Thai people do their merit-making at the temple. They offer foods to the monks in the form called "Salaag Puut", that is, the monks are offered foods by drawing slots. The baskets offered to the monks, contain with both fresh and dried foods. The people, offering foods to the monks, are very excited to see who is going to get their basket by drawing lots.

The Eighth Month is also the time for young Thai males to enter the monkhood. Folks helps bringing foods and sweets to join the occasion. The foods are of various kinds with ingredients of vegetables, fishes, coconut or sugar. One example of those is Yam Kamoei cooked with any food stuff found at hand but delicious with its sauce made with crunched, red chillies, garlic, vinegar, fish soy, lime and sugar.

Main dishes are often many kinds of curries and lon (a kind of sauce served with raw vegetables). For the funeral, Plara Lon (a sauce made with fishes which are fermented by salted and roasted rice) and foods with noodle-ingredients are avoided because of Thai superstition of death prolongation.

The Ninth Month (August):

The Ninth Month is the most favorable month for wedding ceremony, new house merit making, and age meritorious performing. Favorite Thai sweets, symbolized fortunes and honors, Khanom Chaan (sweetened, light color pudding with many layers) and Khaaw Niew Kaew (sweetened, glassy glutinous rice) are favorably cooked.

The Tenth Month (September):

The Tenth Month (September) is the month for Sart Thai Festival. Krajaa Sart (sweetened, roasted, and popped rice mixed with peanuts and sesames) and Khaaw Yaa Koo (a cake made of sugar boiled with water received from crunched young rice grains) are popular sweets.

The Eleventh, Twelfth Months:

The Eleventh Month (October) and *the Twelfth Month (November)* are months of Krathin Ceremony (the offering of Krathin Cloths to the monks) and Oogpaansaa (the outing of the Buddhist Lent). Khaaw Tom Paad (glutinous rice wrapped by banana or bamboo leaves cooked by steaming) are offered to the monks in this festival. Other favorite foods are rice cooked and wrapped in lotus or banana leaves accompanied by fried food such as Paad Prig Khing, dried curries, Namprig Makaam Paad, Namprig Makaam Piak and Namprig Taa Dang including salted food as salted meat and salted eggs, along with vegetables plucked along the way.

The First Lunar Month (Dyan Aai or January):

The First Lunar Month (Dyan Aai or January) of the old days was full of shrimps in the canal. The main ingredients of food in this month, then, were shrimps.



A Bit about Thai Khanom (Sweetstuff)

The *Tri Bhumi Praa Ruang* is currently the most ancient document giving information of Khanom stuff. However, it is very difficult to judge exactly the origin and deviation of the "Khanom" word.

In the former days, "Khanom" was made of two important ingredients: flour (powdered rice) and sugar. Later, coconut milk became an adding ingredient. It is believed that the Thai dessert had its origin in the Sukhothai Era. Market place, in which sweetstuff was sold, was called "Paa Khanom" ("Dessert Forest") in the Kung Sri Ayudhya Era. Usually, after the main course prepared of meat or fish, the Thai people of the old days had dessert.

Snacks are taken between meals at 10 a.m. or 3-4 p.m.

Fruit Preservation is the result of the need to keep various kinds of fruits of different seasons for long-period eating. There are many methods of Thai fruit preservation.



Stirring:

Kluai Guan, Sabparod Guan, Durian Guan, etc.

Sundrying:

Kluai Taak.

Soaking in thick syrup:

Madaan, Makaam.

Cooking in thick syrup:

Jaaw Taan, Kluai, Pudsaa.

Coating with sugar:

Kluai, Pueag.

In ancient times, sweetstuff was classified for specific occasions. Khanom used in ***Khaan Maak Ceremony*** (the ceremony for the groom to pay respect to the bride's parents on their engagement or wedding day) or *Tid Kaan Taesana* (Money offering to the Preaching Monk) are:

Khanom Kong Guien

Khanom NomSao

Khanom Phing

Khanom Farang

Khanom Baabin

Khanom Faakbua

Khanom Sam Kloe

Khanom Kraaboukorn

Khanom Sai Sai

Khanom Raang Nok

Khanom Fong Mook

Khanom Chaan

Khanom Naa Nuan

Khanom Grob

Khanom Kaihia

Khanom Thong Muan

Khanom Laebmuenang

Khanom Ochaaros

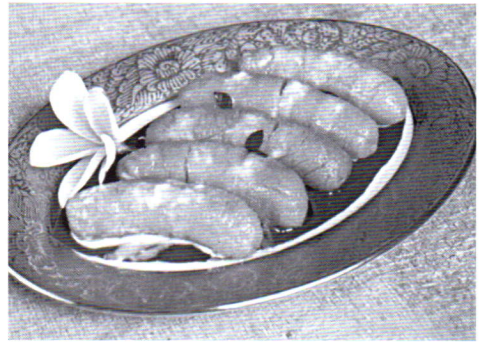
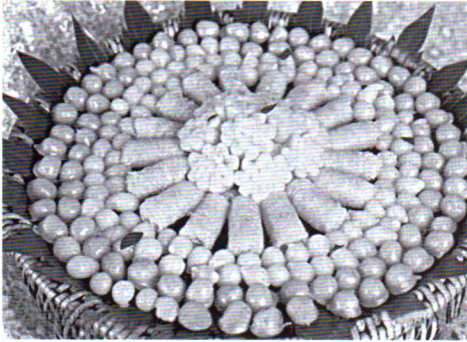
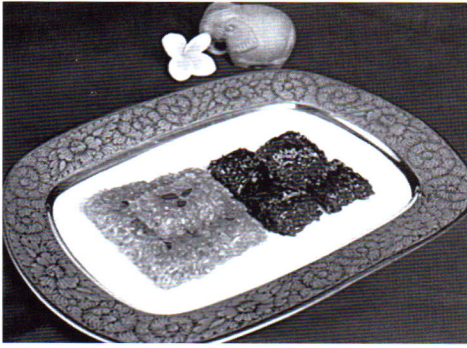
Khanom Hua Phaakgaad

Thong Yib

Thong Yod

Foi Thong (different from the one as a part of dessert for the people who join the same occasion).

First Class Khanom for monks and guests which are different from those used in Khaan Maak Ceremony are as the followings:



Khanom Tien Kaew

Thong Aek

Khanom Chormuang

Khanom Makhuataed

Thong Yib

Foithong

Khanom Sampanni Oon

Khanom Kraachaang

Saangkhayaa

Med Khanoon

Thong Yod

All of these are the crown of ancient Thai sweets.

The following Khanoms are widely sold in all markets:

Khanom Dorklhek

Khanom Tomkhao

Khanom Hoi Kraeng

Khanom Thong

Khanom Piakpoon

Khanom Duang

Khanom Kruai

Khanom Tomdaeng

Khanom Taan

Khanom Saaisai

There Are 4 Features of Thai Sweets

Liquid: Krong Kraeng, Khanom Kai Tao, Khanom Bualoy, Lodchong, Saarhim, sweets containing coconut milk and sweets made of sour fruit meat in syrup and salt.

Dry: Khanom Phing, Khanom Farang, Kahnom Ochaaros, Khanom Saampanni, Khanom Hin, Foi Thong, Khanom Praya Sawaei, Khanom Thong Ake, Khanom Thong Muan, Khanom Dinsor Pong, Khanom Krajaang, Khanom Nha-nuan, Khanom Proang, Khanom Hooheeb.

Soft: Khanom Paantong, Khanom Sodsai (Saaisai), Khanom SonLook, Khanom Krok, Khanom Duang, Khanom Nok Kraajok, Khanom Tom Daeng, Khanom Niew.

Firm or half-soft: Khanom Thuaj, Khanom Chaan, Khanom Hua Paak Gaad, Khanom Piakpoon, Khanom Mor Gaeng, Khanom Kruai.

In the Krung Sri Ayuddhaya Era, Chao Praya Wichyaen's wife, Thao Thong Geeb Mah, taught the Thai people to make sweetstuff using eggs as main ingredients. They were Thong Yib, Thong Yod, Foi Thong, and





Khanom Mor Gaeng. The Portugueses ate these sweets along with grilled meat as their main dishes. In the old times, in upcountry there was an abundance of Foi Thong plants which was eaten with Namprig. At the present time, the Foi Thong plants with their yellow thin thread-like limbs are rarely seen.

Khanom Made for Tradition (or Special Occasions)

1. *Khanom Tom Khao* made with glutinous rice flour wrapping sticky brown sugar.
2. *Khanom Tom Daeng* made with glutinous rice flour in thin sheets mixed in soft Naa Kracheek (sweetened shredded coconut meat).
3. *Khanom Khoe* similar to Khanom Tom Khao but without salt in flour.

All of these traditional Khanom Toms are used in the Ceremony of Sacrifice to Divine Beings.





Thai desserts



THAI HERBS AND HERBAL PRODUCTS



CHAPTER SIX

Herbal Beverages

Translated by *Chanthana Chaichit*



Takhrai (Lemon Grass, Lapine)

Cymbopogon citratus Stapf

Family: GRAMINAE

Other Names: Takhrai Gang (The Central Part) Jakrai (Tha Northern Part) Loekroei Hawwartapo (Karen-Mae Hangsorn) Krai Pilek (The Southern Part) Huakaising (Khmer-Prachin) Cherdkroei (Khmer - Surin)

Usage:

As foods Fresh lemon grass is used as flavoring and seasoning ingredients for sour soups (tom yam) and salads (yam) as well as juice.

Food value The plant consists of sweet vaporized oil, and if extracted, will give the lemongrass oil which is able to stop the bacterial growth. Menthol, camphor, Vitamin A, phosphoric acid, calcium and others are main elements of the oil.

As medicine The plant is used to cure asthma, stomachache, to help discharge urine and to cure cholera. It is used as balm for massaging.

The head of the plant is for curing chloasma, stomach and urinary discomfort, and gallstone as well as for improving the body's chemical elements.

Fresh leaves help reduce high-blood pressure and high fever.

Roots are for curing high fever, stomachache and diarrhea whereas the plant is for diminishing stomach and chest discomfort, stimulating appetite, getting rid of broken hair-tips, curing urinary problem, gallstone and improving the body's chemical elements.

Nam Takhrai (Lemon Grass Juice):

Ingredients Takhrai, Fresh water, Sugar



Krajieb (Jamaican Sorrel, Rosella)

Scientific Name: *Hibiscus sabdariffa* Linn.

Family: MALVACEAE

Other Names: Krajieb Prieu (The Central Part) Sompormaoh
Somsgenkeng (The Northern Part) Somtalaenkraeng)
Sompoo (Shan / Njiew - Mae Hongson) Pakgenkeng,
Sompordee (Isaan) Baisomma (Ranong)

Botanical features:

Trunk

A small - sized bush of about 1-2 metres length and one-year life. The trunk and its branches are reddish - purple.

Leaves A leaf's stem is about 5 cm. long. There are various shapes of leaves : a curved leaf with 3 deep crests or a smooth shape, or an oval, pointed shape.

Blossoms A pink, single flower with the darker color in the center than in the outer part grows at the fork of the leaves. The stem of the flower is short. There are 8-12 petals of the pointed petals underneath the pink, single flower. The sepals are growing spreading out together to cover the seeds. With their diameters of 6 cm. the deep red sepals are easily broken.

Fruit A pointed - oval - shaped fruit of about 2.5 cm. length is covered with red sepals.

Usage:

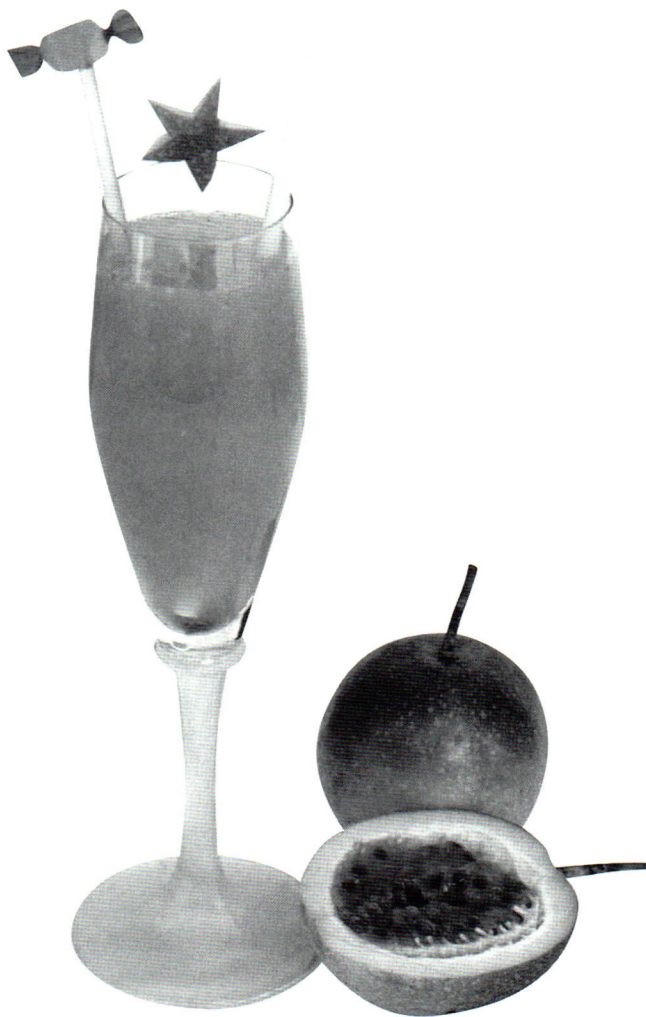
As foods Young leaves and tops are used for sour soups (kaeng som) and tom som (sour soup without chillies).

Food value The sepals and various - shaped leaved consist of Vitamin C, citric acid and Vitamin A. The leaves consist of Vitamin A with high quantity of 12,583 IU / 100 grammes of the edible part, as well as high quantity of calcium, phosphorus and others.

As medicine Tops and leaves help digestion, phlegm dissolution, relieving urinary problem, as well as improving the body's chemical elements and being laxatives. For outer usage, put crushed tops and leaves on the pustules ; clean the wounds with water boiled with tops and leaves, as well. Sepals help body refreshment, bile improvement, fever relief, cough cure, gallstone treatment, and thirsty relief. Seeds help reduce cholesterol, improve blood cells and the body's chemical elements, destroy bile and relieve urinary problem.

Nam Krajieb (Rosella Juice):

Ingredients Dried Rosella, sugar, powdered salt, fresh water



Sawvaros (Water - Lemon, Passion Flower)

Scientific Name: *Passiflora laurifolia* Linn.

Family: PASSIFLORACEAE

Other Names: Katokrok, Katokrokyak, Passion Fruit

Botanical features:

Bush A rounded creeper.

<i>Leaves</i>	A deep green, glossy, single leaf with a deeply curving edge. There is a gland at the leaf's stem. There are plenty of thick leaves.
<i>Blossoms</i>	A large single flower is in its upside down form like a lantern, with green bract. The outer petal is in a cylinder shape, jagged at the edge. The petal's back side is dark green whereas the inner part is light purple sprinkled with red dots. The inner petal is like the outer petal's jag, with its color of light purple or light pink, and also sprinkled with red dots. There are two layers consisting of central petals which are rather round. The petal's color is deep purple streaked with white and red at its edge. At the center is the light green pollen. The passion flower gives a very strong smell.
<i>Fruit</i>	The passion fruit has an oval shape with smooth skin. Of various kinds, some have purple skin, whereas others have yellow or orange - brown. The fruit is edible. There are many seeds at the center.
Usage:	
<i>As foods</i>	The fruit is edible at its being fully ripe as well as being made into juice. The seeds can be eaten with ice-cream. The passion fruit juice is used for flavoring ice-cream, jelly, candies, cake and wine.
<i>Food value</i>	Katokrok Farang consists of various organic acids, including Vitamin C, sugar and others.
Nam Sawvaros (Passion Fruit Juice):	
<i>Ingredients</i>	Ripe Sawvaros Boiled water Powdered salt Syrup Crushed ice



Manao (Common Lime, Lime)

Scientific Name: *Citrus aurantifolia* Swing

Family: RUTACEAE

Other Names: Manao Masiew (Chiangmai) Leemaneebeeh (The Southern Part - Malayu) (Shan - Mae Hongson) Panaugale Manawtalae Manaodlae (Karen - Mae Hongson) Maakfah Panongkolyan (Karen - Kanjanaburi) Kroachama (Khmer - Surin)

Botanical features:

Trunk A perennial plant with smooth bark and tender, thorny

branches.

Leaves

The leaves of a lime tree are arranged in alternative order in an oval shape. The end of the leaves are pointed; whereas their bases are round and narrow; their edges are jagged.

Blossoms

About 5-7 blossoms are in a cluster, or a single flower. The lime flower is white with 4-5 petals.

Fruit

A smooth - skinned round shape which is in deep green when very young and turns yellow when fully ripe.

Usage:

As foods

Lime juice is used to give sour taste to food. Juice and rind are eaten with miang (kinds of snack wrapped by leaves such as miang kum, and miang lao).

The whole fruit is prickled for cooking, and made juice.

Food value

Lime juice consists of many organic acids : citric, malic, Vitamin C and other substance. Lime skin has vaporized oil, Vitamins A and C, Calcium and phosphorus. Lime juice also contains some bitter substance.

As medicine

Lime leaves: water boiled with lime leaves is used as medicine for cough, phlegm dissolution, stomach discomfort and appetite increase. Fruits: lime juice is for relieving thirst, reducing internal fever, improving the body's chemical elements and increasing appetite. Lime juice is also used to prevent scurvy and to get rid of parasitic worms. Prickled lime is used to dissolve phlegm and to refresh the throat. Water, boiled with dried lime get rid of stomach discomfort, stomachache as well as to dissolve phlegm and nourish stomach. Fresh roots are used to relieve pain from bruises.

Nam Manaaw (Lime Juice):

Ingredients

Lime juice, granulated sugar, powdered salt, fresh water



Mandarin, King Orange, Tangerine

Scientific Name: *Citrus reticulata* Blanco

Family: RUTACEAE

Other Names: Sompae Keema, Sompae Kradaan, Somkaew Boran, Somsangthong, Som Tranganoo, Som Jantaboon (Krung

tep) Somchiengtung, Majook, Makhang, Makhun (The Northern Part) Mabaang, Makiew (Chiangmai) Leemayeubo, Leenajeena (Malay - The Southern Part)

Botanical features:

- Trunk* A small - sized perennial plant with plentiful branches.
- Leaves* The leaves of an orange plant are in compound form with glossy skin. Fresh leaves have a unique smell.
- Blossoms* Either single or cluster, the blossoms are white with fragrance and easily fall off the branches.
- Fruit* A round, rather flat - shaped fruit has glossy and green skin when very young. The skin turns yellow when it is fully ripe.

Usage:

- As foods* Oranges are edible as fruit when well-ripe, and made juice.
- Food value* An orange consists of Vitamins C, A, B, Calcium, Iron, Phosphorus and many kinds of organic acids. Out of its edible part of 100 grammes, an orange has 4,000 I.U. of Vitamin A. An orange's rind has sweet vaporized oil and Vitamin C.
- As medicine* The rind is extracted to make tingeriodine, to give flavors to medicine and to relieve chest and stomach discomfort as well as to be an ingredient of ya-hom (a medicine to cure dizziness). Orange juice gives Vitamin C to prevent scurvy, to cure coughing and to dissolve phlegm.

Nam Som Kaan (Orange Juice):

- Ingredients* Oranges
Lime juice
Syrup
Powdered salt
Crushed ice



Makaam (Tamarind)

Scientific Name: *Tamarindus indica* Linn.

Family: CAESALPINIACEAE

Other Names: Makaam, Makaam Thai (The Central Part) Ampial (Surin) Talooob (Nakornsritammaraj) Maakkang (Shan-Mae Hongson) Samawgale (Karen-Mae Hongson) Makaam gadaan, Makaam Keemaew

Botanical features:

Trunk A medium / large sized perennial tree of about 60 ft. height. Branches are growing on the tree top. The bark is light-brown with splits in the skin.

Leaves The leaves of a tamarind tree are in compound form arranged in pairs on the midrib of about 10-18 pairs. The leaves' tips and bases are dark green and somewhat round.

Blossoms About 10-15 blossoms are in a cluster at the end of the twigs. The petals are yellow with scattered, red dots at the center. The flowers produce a sour taste.

Fruit The tamarind's fruit is brittle, with its grayish brown colour. The flesh is light yellow which turns brown, when fully ripe. Inside the flesh, there are seeds in their rather round shape.

The skin of the fruit is dark or deep brown and smooth.

Usage:

As foods Young leaves and blossoms with their sour flavor are used for cooking tom yam (sour soup) and tom kloang (a kind of sour soup which uses dried fish, onion and tamarind leaves to be main flavor). The young, sour pods are main ingredients of namprig makaam (pepper souce with tamarind). The fully ripe pods, also sour, give sour flavor to kaeng som (a kind of sour soups made with tamarind paste), and kaeng kua (a kind of curry depending its sour flavor on tamarind paste).

Food value The fully ripe tamarind flesh consists of high organic acid, calcium, phosphorus, a little of Vitamins C and A, and also gum, pectine and others. The tamarind seeds have high mucilage, fat, carbohydrate, semidrying fixed oil and others.

As medicine Fully ripe leaves are used to cure cough problem, dysentery and get rid of phlegm in colons. Flesh is used as laxative to cure constipation as well as cough and phlegm. Fully grown seeds are laxatives to help get rid of parasitic worms imbedded in children's abdomen.

Nam Makaam (Makaam Juice):

Ingredients Fresh tamarind flesh, granulated sugar, powdered salt, fresh water



Farang (Guava)

Scientific Name: *Plsidium guajava* Linn.

Family: MYRTACEAE

Other Names: Sida (Nakornprathom) Maguoiga Mamuun (The Northern Part) Maguoi (Chiangmai (Majeen (Tak) Yaring (Lawaa - Chiangmai) Magaa (Mae Hongson)

Yaa moo, Yamu (The Southern Part) Joompo (Surattanee) Chompuu (Pattanee) Yamubutae - panya (Malay - Naratiwas) Pakgia (Taejiew Chinese)

Botanical features:

- Trunk* A small-sized perennial tree with its smooth bark scattered with light brown spots. Young branches are in square forms.
- Leaves* The leaves of the guava tree are in single forms, thick and crude. The leaves' underneath part has streaks with soft yellowish hair.
- Blossoms* A cluster with 1-3 white blossoms or a single flower. The sepals are quite hard.
- Fruit* The guava fruits are big and round or oblong with green color which turns whitish - green when fully ripe, and white when overripe. The skin is very soft and the flesh is white with special smell ; seeds are brown and quite hard.

Usage:

- As foods* Guava is eaten as fruit and made into juice.
- Food value* Fully ripe guavas consist of high Vitamin C which is reducing in quantity when the fruits are over ripe. The fruits also have Vitamins A, B1, B2, B6, Iron, Calcium, various organic acids and a little sugar.
- As medicine* Guava leaves are used to cure diarrhea. The flesh of well ripe fruits is used as laxative. Organic acids in the fruits help prevent scurry.

Nam Farang (Guava Juice):

- Ingredients* Fully ripe guava
Syrup
Powdered salt
Fresh water



Matoom (Bael Fruit, Bengal Quince)

Scientific Name: *Aegle marmelos* Corr.

Family: RUTACEAE

Other Names: Mapin (The Northern Part) Gatanta-tale, Toomtaang, Toom (Pattanee) Mapisaa (Khmer - Mae Hongson) Panoang (Khmer)

Botanical features:

Trunk A middle-sized perennial plant with the maximum length of 10-15 metres. The Matoom trunk is growing straight in its single form. The trunk and branches are with long and pointed thorns.

Leaves The leaves of the Matoom tree are in a finger-like, compound form, consisting of about 3 small leaves. The small leaves have an oval shape with pointed tips, and glossy, smooth skin.

Blossoms A cluster of white blossoms growing between leaves and at the tips of branches. A blossom has 4 petals of which the outer part is light green and creamy white inner, with slimy substance.

The tree produces blossoms in the summertime.

Fruit The Matoom fruit has an oval shape : round or oblong, with a diameter of about 2.5-4 inches. The skin is smooth whereas the husk is thick, glossy and hard. The young fruit's husk is green which turns yellowish green when it is fully ripe. The meat is yellowish orange and soft, with many seeds.

Usage:

As foods Young tops and leaves are eaten with namprig (for example, hot-shrimp paste sauce). Young leaves are also ingredients for kaaw yum (a kind of Southern dish) and eaten with Khanomchin (Thai vermicelli). Fully ripe fruits are sweetened cooked.

Food value Fully ripe Matoom fruit has sugar, mucilage, Vitamin A, Calcium, phosphorus, sweet vaporized oil and bitter substance.

As medicine Young fruits are medicine for improving the body's chemical elements, increasing appetite and relieving stomach discomfort. Fully ripe fruits are used to get rid of phlegm, help digestion and nourish human fire element. Ripe fruits are also used to cure bloody bowel movement and to relieve thirst. The skin of the root and the bark are used as medicine for malaria and for relieving stomach discomfort. The root is used to relieve the pain caused by pustles' inflammation, and to nourish the bile.

Nam Matoom (Matoom Juice):

Ingredients Dried Matoom, Granulated sugar, Fresh water



Buabok (Ariatic Pennywort)

Scientific Name: *Centella asiatic* (L.) Urb.

Family: UMBELLIFERAE

Other names: Pakwaen (The Southern Part, Chantaburi, The Eastern Part) Pak nork (The Northern Part) Panahaekhadhao (Karen-Mae Hongson) Tiakamchao Hukkuk (Chinese)

Botanical features:

- Trunk* A short-life cycle plant easily grows on wet soil. Roots grow on the plant's joints from which leaves straightly develop.
- Leaves* The leaves of Buabok plant are in a single form with long stems and a kidney shape. At the base of each leaf, there is a deep curve. Leaves are jagged around in a triangular form.
- Blossoms* Umbrella - like blossoms are growing from 2-3 joints consisting of 3-4 flowers. Each flower has 5 petals of reddish purple arranging in order with stamens.
- Fruit* The fruits of the Buabok are dark and very small, durable in flooded area.

Usage:

- As foods* The whole plant is taken as fresh or briefly boiled and eaten with khanomchin and namprig, any curries, or as an ingredient for yam, (a salad) as well as Buabok juice
- Food value* Buabok consists of sweet vaporized oil including bitter substance, glaicocide, high Vitamin A, Calcium and others.
- As medicine* The whole Buabok plant is used as medicine : water boiled with Buabok cures bruises, relieves inflammation, and thirstiness. Crushed Buabok leaves are used to cure fresh or burnt wounds, to discharge urine as well as to be made into cream to relieve skin inflammation.

Nam Buabok (Buabok Juice):

- Ingredients* Buabok leaves
Fresh water
Syrup
Crushed Ice



Taan (Palmyra Palm, Lontar Palm, Pan Palm, Brab Palm)

Scientific Name: *Borassus flabellifer* Linn.

Family: PALMAE

Other Names: Taantanoad, Taanyai (The Central Part) Taang (Chiangmai-Karen-Taak) Toowthoo (Karen-Mae Hongson) Taan (Shan-Mae Hongson) Noad (The Southern Part) Tanaaw (Khmer)

Botanical features:

Trunk A perennial tree is about 30 metres high. The trunk which is long and tapering does not produce any branch. The husk contains hard splinters.

Leaves A Taan leaf has a single, fan-like form. Leaves grow abundantly at the crown of the stem; each leaf is like a long sword of about 140 cm. The end of the leaf is divided into 2 jags ; two edges of the leaf contain small scales. The midrib of the leaf is a thick, hard coir with thorny, pointed, and dark edges.

<i>Blossoms</i>	Blossoms are in a branching out, big cluster. Small blossoms are separated in gender growing on different trunks of the Taan tree. The male blossoms have a long, cylinder form in green color which turns brown when fully ripe. The blossoms of the Taan palm are called “Jaan”, which produces sugar.
<i>Fruit</i>	The fruits of the Taan palm grow as a bunch/cluster. They are dark at the bottom when fully ripe, and yellow at the head. The Taan fruits give sweet smell.
Usage:	
<i>As foods</i>	Young blossoms male or female, are ingredients of curries. “Jaan” is used to make sugar : Namtaan Poek, sugar boiled down in pack, and Namtaan Peep, sugar boiled down and put into a quadrilateral container.
<i>Food value</i>	Young Taan fruits have phosphorus, calcium, a small quantity of Vitamin C, and others. “Jaaw Taan” (an edible part growing inside the Taan fruit) contains high phosphorus, Vitamin C and others. Nuang Taan (the spadix of the Taan palm) which consists of various kinds of sugar is used to make Namtaan Tanoad (sugar made from Taan syrup).
<i>As medicine</i>	The roots of the Taan palm are used to cure internal fever and relieve thirst, as well as to be remedies for tonsil inflammation, for nourishing body's health and getting rid of parasitic worms. The leaves are used to improve mental health after birth delivery, powdered leaves, taken through smoking or blowing, help decrease high blood pressure. The Taan spadix is used to cure Taan sang (a kind of children's disease), and get rid of parasitic worms. Fresh coir or midrib, made hot by fire and extruded for water, is a medicine for diarrhea and mouth disease.



Sabparod (Pineapple)

Scientific Name: *Ananas comosus* Merr.

Family: BROMELIACEAE

Other names: Sabparod lai (Krungthep) Lingthong (Petchboon) Kanoonthong, Yanaad Yaannaad (The Central Part) Sabparod (Ranong) Makhanaad, Manaad (The Northern Part) Bornaad (Chiangmai) Nae (Karen-Mae Hongsorn) Naesaa (Karen-Taak) Maakgaeng (Ngiew-Mae Hongsorn) Maanya (Khmer)

Botanical features:

Trunk A kind of plant whose life cycle is not short has a short stalk of about 1-3 feet high. There are no branches but spathes that cover the stalk.

Leaves The leaves of a pineapple tree are growing in a clump, in a spiral form with pointed, tapering ends and without stems. The leaves' bases cover the stalk with their thorny edges. The leaves' skin is smooth with dark green and

red streak on the upper part and bluish white color on the underneath.

Blossoms

A big bunch of flowers grows from the middle of the pineapple clump. The stems are big and strong. There are 3 small petals of which the upper part is purplish blue and the underneath is white. There are 6 pollens arranging in 2 layers.

Fruit

A pineapple fruit has an oblong shape with a broader base. At the end of the fruit, there are dark green leaves in lumps. The fruit is big and has “eyes” around itself. It is green when young and bright yellow when fully ripe, with juice.

Usage:

As foods

The young crown, briefly boiled, is eaten with namprig (for example, hot-shrimps paste sauce). Fully ripe, sour fruits are ingredients for fried foods whereas the sweet ones are eaten as fruit.

Food value

The meat of pineapple has a high quantity of Vitamin C, sugar and many kinds of organic acids including bromelin (also bromelain) which is an enzyme that hydrolyzes proteins.

As medicine

Every part of the whole plant and fruit is used for urinary discharge. Fresh leaves are laxatives : Raw fruits are used as medicine for improving menstruation, getting rid of parasitic worms. Fully ripe fruits help digestion, sweat discharge and nourishment. Pineapple rinds help improve kidney. The young crown, as well as the roots, is a medicine for gallstone. Moreover, the roots are for Krasai sickness (the sickness that causes thinness and weakness) and for cleaning the urinary vessel.

Nam Sabparod (Pineapple Juice):

Ingredients

Pineapple, granulated sugar, powdered salt, fresh water



Toei Hom (Pandanus)

Scientific Name: *Pandanus odorous* Ridl.

Family: PANDANACEAE

Other names: Waan Khaaw Mhai (The Northern Part) Panaeoring (The Southen Part) Panaegueji (Muslim Thai) Pannaan (Narathiwas-Pattanee) Paanluung (Chinese)

Botanical features:

Stalk A grass - type plant branching out in a big clump is born from underground stem. The stalk of Toei Hom is under the ground. The stem and leaves are about 2 feet high growing up on the ground.

Leaves The leaves of Toei Hom grow on the stalk and around which abundantly arrange themselves in order. They are green, about 8-10 inches long with an oblong shape, pointed tips, and smooth edges. When crushed, the fresh leaves will give sweet, cool smell. The Toei Hom does not have blossoms.

Usage:

As foods Water squeezed from the Toei Hom leaves is used to flavor and colour Thai sweets.

Food value Fresh Toei Hom leaves are fragrant, sweet with odorous vaporized oil including chlorophyll, the green substance used for colouring foods.

As medicine Water boied with fresh leaves is used to drink for relieving thirstiness and nourishing heart's working system. Toei Hom's stalk and roots are medicine for urinary discharge, diabetes and bladder problem.

Nam Bai Toei Hom (Toei Hom Leaves Juice):

Ingredients Toei Hom leaves
Fresh water
Granulated sugar
Crushed Ice

syrup) liquor, and vinegar. Coconut milk is made into margarine and cooking oil. Coconut meat is squeezed into coconut milk or coconut cream for cooking, and sweet dainties and coconut oil.

Food value Coconut meat contains of about 65% oil with high phosphorus, calcium, carbohydrate, and others. Coconut oil contains varieties of fatty acids which produce rancid smell if left too long.

As medicine Ashes of the burnt fresh bark of the coconut palm are used to cure toothache and scabies. Fresh or dried coconut meal is for nourishing body's energy, decreasing urinary discomfort and getting rid of parasitic worms as well as being medicinal drug. Coconut milk, a laxative and medicine for diarrhea, helps solve urinary problem, gallstone and blood vomit. Oil extracted from coconut meat or the hard husk is used to cure the wounds burnt by hot water.

Nam Mapraaw (Coconut Juice):

Ingredients Mapraaw Namhom (Sweet-smell coconut milk)
Syrup



Tea

Tea, a drink made from herbs, could be divided into two types. First is the tea made from green tea leaves. Second, is the one made from other parts of herbal plants including petals, fruits, bark or roots. To make a cup of tea, we use heating water to bring out certain characters of herbs in a brief period. Thus it helps us avoid an excessive amount of natural chemicals, and at the same time, reserve nice aroma and taste.



Western countries are becoming more fond of herbal beverage. As the word's second most popular beverage (the first is said to be plain water), tea could be divided into three groups: the "Black Tea",





"Green Tea" and "Herbal Tea". The Black and Green Tea are made of fresh young leaves of tea plant (*Camellia sinensis*) while the Herbal Tea comes from a method of medication production. Spices, dried fruit and flowers could be added into any type of herbal tea to create unique aroma and taste. Therefore, some would be reluctant to define herbal drinks as tea because it may not contain any tea leaves.

Popularity of Tea

It is estimated that more than a half of the world's population drinks tea everyday as a different beverage than plain water. Tea does not only possess inspiring aroma, it is also good for health.

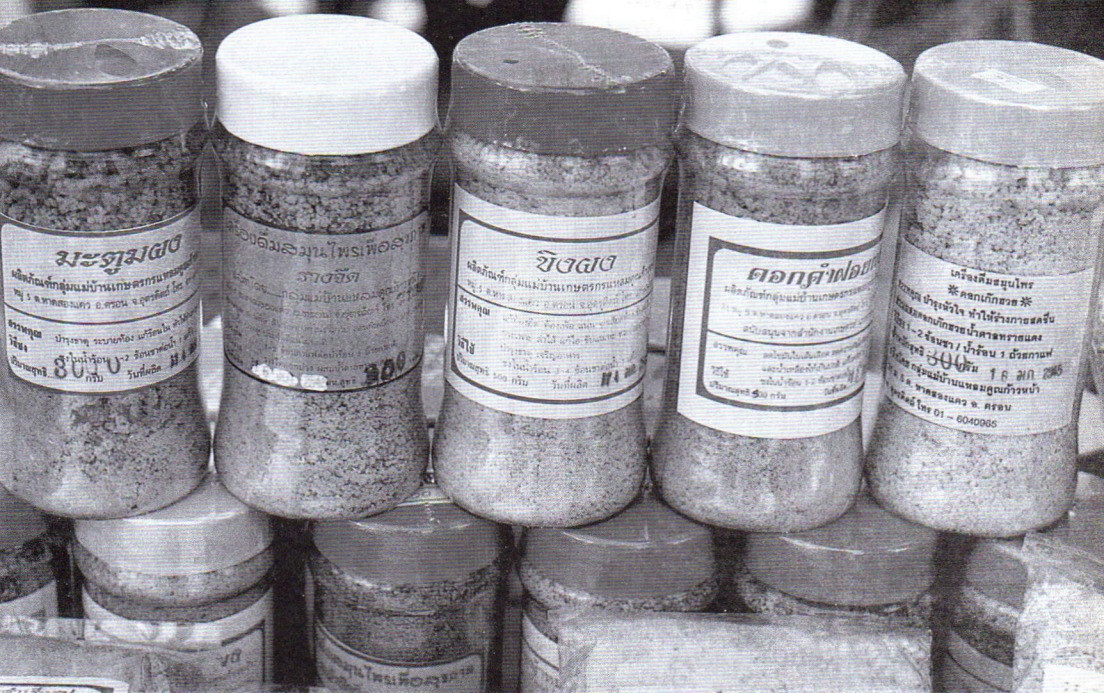
The Chinese found a proper way to brew their tea by letting hot water to give certain medical substance in a brief period. This also prevents unwanted substances to come out as well as preserving the needed substances with fine taste and fragrance.



How we brew tea is critical to a healthy result. From a study in China, one of the world's best tea plantation, found that a daily consumption of a cup of tea, either the Black or Green tea, during a 6-month period can reduce risk of lung cancer, gastronomic diseases, liver and skin cancer. The study also indicated that a regular consumption of tea can prevent heart diseases, reduce cholesterol fat and maintain normal blood pressure because it contains Flavonoid, an anti-oxidant.

There is also an advice not to take tea while it is too hot because the heat may lead to oral cancer, and not to add milk because it can reduce an action of anti-oxidant. A suitable flavourings is sugar, honey, or lemon juice.

In Thailand, tea plantation is found in the northern region and tea products are distributed nationwide as generally served beverage. In many coffee shops in Thailand, a cup of tea shall be complementary served together with an order of coffee. It is because tea could reduce an acid



character of coffee, which could be spiced up inside the stomach. Moreover, tea, containing lesser caffeine, also provides Tannin, a natural anti-biotic, to preserve the stomach's tissue. Other substances of tea, theobromine and theophylline, help clearing heart's blood circulation, reducing congested water in the lungs, and de-urinating.

However, a quantity of tea consumption has to be cautious. An over consumption or concentration of tea intake could compress the heart, kidney, while an excessive amount of tannin can reduce Vitamin B.

Herbal Tea

Herbal Tea comes from the same process of ordinary tea brewing. Fans of herbal tea also want to enjoy delicate aroma while gaining medicinal results. It is said that a cup of herbal tea can miraculously influence both body and mind. The first taste of herbal tea may be different from those of other beverages such as tea and coffee. But this





will bring about a herbal taste and aroma. Regarded as a healthy drink, the Herbal Tea becomes more famous among new generations and anyone who wants a substitute beverage than coffee.

However, there is still a serious consideration to determine which Herbal Tea is a “healthy” drink or “medicative” drink, by calculating a quantity of herbs and consumption, as well as a possible side-effect from a long period of intake. If we drink the Herbal Tea because we love its taste and aroma, while its medicative action is a by-product, we may not have to worry about over-consumption. But if we want to take it for a certain result on our health, we have to drink the Herbal Tea at suitable quantity and select the right “herb” as desired results. Not all Herbal Tea is safe and healthy to everyone. Some could be allergic to certain herbs.

Therefore, we should learn about herbs well before taking its tea as medication. Each herb contains different results and limit of consumption. We could divide Herbal Tea according to purposes of drinking into three groups.

First is the Herbal Tea that we just want only good taste and nice aroma with some health benefits. This group of tea is usually not harmful. People could drink it as casual beverage. Thai Herbal Tea in this group include Gek-huay (*chrisantimum*), Ginger, Bai bua bok, Krajiab, Matoom, and other tea made of flowers such as Sarapee, Bunnag, Pigul, and Boa mali.

Second is the Herbal Tea with minor medicative action such as Nuad Maew grass, Rang-jued (*Thunbergia laurifolia*), Dok Kumphoi, Dok Khao grass. Herbal Tea in this group could be taken twice a day, one in the morning and another at night, for several days without side effects. Herbal Tea made of Nuad Maew grass could help de-urate and eliminate common bile duct stones at a daily intake of 3 cups for 5 - 7 days. Rang-jued grass could help reduce fever and other mild poisoning by an intake of 4 hours a cup or every time the fever happens, or as normal drink for 2-3 days.

Dok Khao grass can help reduce stomach congestion, or a fever with coughing, at an intake of 3 glasses a day until recover. This quantity of intake should be reduced for those who just want a "healthy" drink.

Dok Kumphoi is a mild laxative, good for heart, blood system and menstruation. However, pregnant women are prohibited to drink tea made of Dok Kumphoi because it could be harmful to their pregnancy.

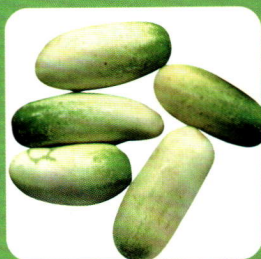
The last group of Herbal Tea is the drink aimed for medicative action such as the laxatives Chumhedted and Makhamkaek. Tea in this group should be taken as advised, and prolonged consumption is more harmful than good. Both of them urge the intestine to work, so a prolonged consumption could interfere or even stop a normal cycle of our body.

Herbal Tea is therefore a jewel of ancient medical knowledge that the Eastern culture spreads worldwide. It is also a healthy beverage comparing to carbonated soft drinks that contains only sugar, caffeine and artificial flavour.



Infusions and Herb Teas

The ingredients used in herb teas are usually cut into fine strips and then air-dried. Occasionally, the ingredients may be roasted to give an agreeable aroma. One part of the drug mixture is placed in a container with a lid, into which ten parts of boiling water are added. This is then put aside to brew for 15-20 minutes.



THAI HERBS AND HERBAL PRODUCTS



CHAPTER SEVEN

Cosmetic Products for Community Economy

Translated by *Chanthana Chaichit*



Basic Knowledge about Natural Substance from Vegetables and Herbs as Ingredients in Making Cosmetics

A list of Thai herbs along with their qualities is gathered from documented medicinal texts and local folk medicinal texts, as well as from the spoken words about experiences of the folk people. So far no scientific experiments have ever been performed to confirm clearly those herbs' qualities. However, many communities have already developed various kinds of herbs, by applying them as cosmetics for skin and hair treatment. Such cosmetics are mostly accepted. A problem found in the process of cosmetic producing is that there is not any certain formula about the concentration of each herb as an additive.

The local technique of record is a guideline for the development, in that the old way of cosmetic producing can be imitated and its result will be used. If the qualities needed are found, the concentration of each kind of herb will be calculated and developed into a ready-made cosmetic. Some herbs without the certain knowledge of usage must be studied for the result of extraction. There is, of course, a great variety of local herbs that are currently used but there is still no collective document. The community with its local wisdom of cosmetics should collect all informative datas and develop them for the sake of the community itself. It is not necessary to imitate the commercial cosmetics. To develop local herbs into cosmetics is a way to create an identity of community.

It should always be remembered that to develop any cosmetic to reach high quality does not need only 1-2 days or 1-2 weeks but a long period of months or years. It also needs great patience. The result of effort and patience is more worthwhile than that of imitation.

This collection of Thai herbs is only the beginning of the research on Thai local wisdom. It is a proper time for the people of any community to gather and develop herbal cosmetics which are their regional identity, this is to help our country survive any critical events.

Herbs	Part(s) of Usage	Qualities	Usage
Krabaw (a kind of middle-sized tree)	Seeds	Hair-falling Treatment	Extract oil from seeds and apply on hair.
Kluai Namwa (Banana)	Fully ripe fruit	Cleansed and refresh facial skin.	Peel and grind the banana meat, apply on facial skin and cleanse off.
Khamin (Turmeric)	Fresh roots	Cure rashes.	Grind the roots and mix with water to beautify skin.
Khaaw Niew (Glutinous rice)	Rice - washed water before cooking	Get rid of the mouth's displeasing odor.	Keep in the mouth for 2-3 minutes, the water taken from fermented glutinous rice mixed with powdered salt.
Khing (Ginger)	Roots	Help hair growth.	Burn ginger roots and pound them lightly. Mix the burned and pounded roots with walai and rub the mixture all over the head.
Khii Non (a kind of middle-sized tree)	Bark	Shampoo. Cure skin disease on head, and get rid of dandruff.	Boil the bark, which is coarsely cut into pieces. Use the boiled water to wash hair.
Khii Lhek (a kind of middle to large sized tree)	Fresh Leaves	Cleanse, and make hair soft and glossy, without dandruff.	Use boiled water with the khiilhek fresh leaves as a shampoo.



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(Above) Bua-bok, (Below) Tomato





(Above) Carrot, (Below) Cucumber





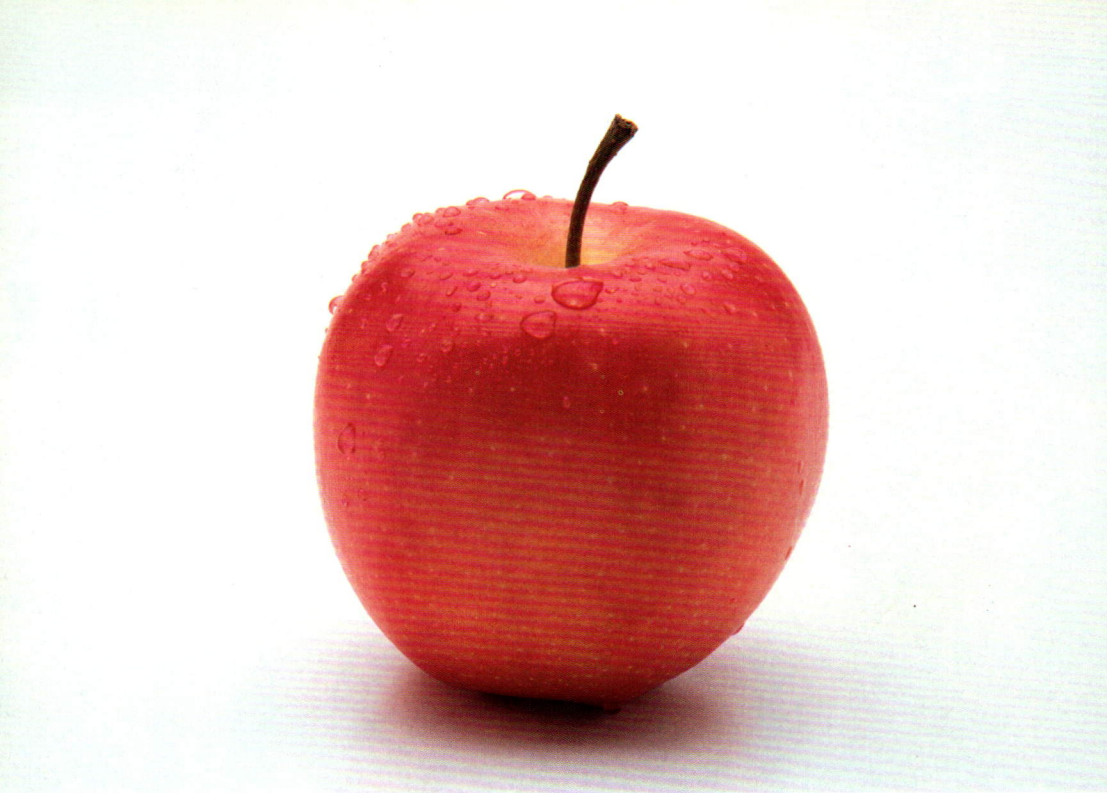
(Above) Plai, (Below) Alovera





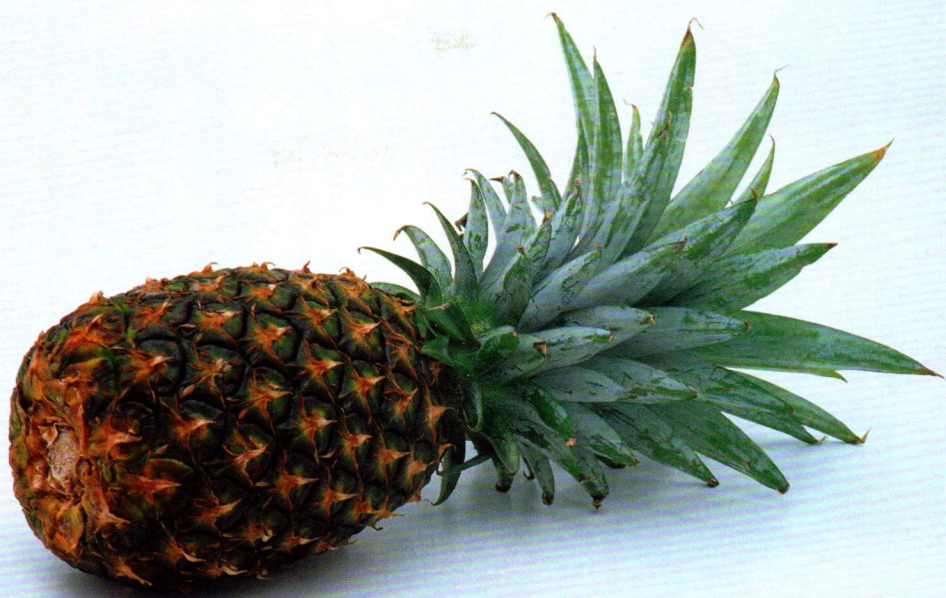
(Above) Ginger, (Below) Ma krood





(Above) Apple, (Below) Guava





(Above) Pineapple, (Below) Mangosteen





(Above) Anchan, (Below) Chan thed



Herbs	Part(s) of Usage	Qualities	Usage
Eggs	Yolk	Soften hair. Help hair growth.	Put the yolk all over the head. Rinse off with clean water.
Eggs	Yolk	Nourish skin.	Mix well the yolk with one cup of olive oil and 2 tablespoons of lime juice. Apply on skin as a nourishing skin-cream.
Carrot	Roots	Nourish skin with its quality to absorb UV light and tighten skin pores.	No information.
Sesame	Oil	Soften skin.	Apply on skin.
Chakram (a kind of small-sized bush)	The whole plant	Treat hair-roots, and prevent hair from falling.	No information.
Song Maew (a kind of short-sized bush)	Leaves	Get rid of dandruff.	Use water boiled with Song Maew leaves to wash hair.
Takhrail (Lemon Grass)	Stalk	Treat the broken hair's tips. Get rid of dandruff and help the hair grow abundantly.	Massage hair with the juice squeezed from 3-4 stalks of lemon grass. Rinse off.
Talingpling (a kind of tree with sour fruits)	Leaves	Treat facial pimples.	Apply water, boiled with talingpling leaves, on the pimply area.
Tamlyng (a kind of creeping plant)	Leaves	Deodorize the offensive odor of body.	Pound fresh Tamlyng leaves (or Tamlyng stems and mix with Poon Dang (the red lime). Apply this mixed ingredient on the armpit area.

Herbs	Part(s) of Usage	Qualities	Usage
Cucumber	Fresh Fruit	Treat freckled faces.	Put on the thinly sliced cucumber all over the face, before taking daily shower.
		Digest protein imbedded in the coarse, sunburnt outer part of the skin. Moisten the skin. Use as facial mask.	Put on the face, for a while, the cucumber meat mixed with honey and glycerine. Rinse off.
Thong Paan Chang (a kind of bush with white flowers)	Roots	Get rid of gray hair.	No information.
Thien Glaeb (the name of the dried fruit of a plant with short circle of life of the Foeniculum vulgare Mill. family.)	Fuits	Nourish skin; prevent skin from being dry and coarse.	No information.
Thien Ging (a kind of middle - sized bush with white or red flowers)	Leaves	Dye hair	Dye hair with water, boiled and mixed with dried-grounded Thien Ging leaves, and lime juice.
		Get rid of dandruff (a fungus-killer substance is found in Thien Ging leaves)	No information.
Nam Poon Sai (Thin Red Lime)	Liquid	Protect skin.	Relieve inflammation. Get rid of bacteria, and help deodorize body's bad odor.

Herbs	Part(s) of Usage	Qualities	Usage
Vinegar	Liquid	Get rid of dandruff and the head - itch condition.	Use a piece of cloth dipped into vinegar to rub all over the head.
		Soften hair.	Rinse the hair with water mixed with 1 spoon of vinegar.
Vinegar	Liquid	Get rid of pimples and freckles.	Mix one teaspoon of vinegar with one glass of cool water and with or without a little amount of sugar / honey. Drink this mixture for 1 week.
Buab Khom (Bitter Spong Gourd)	Young fruit	Get rid of dandruff, relieve itchy condition.	Rub the peeled, sliced gourd all over the head. Rinse with clean water after a while.
Boraped (a kind of creeping plant with bitter taste stem)	Stems	Decrease hair-falling and grey. hair condition.	Put all over the head the Boraped stems ground with Thaowan Hua Duan (a kind of creeping plant) in an equal amount.
Bua Bok (a kind of creeping plant)	Leaves	Heal wounds, scars, increase the growth of skin cells and relieve rashes and itch allergy condition.	No information.
		Reduce the oily face condition.	Wash face with water mixed with crushed fresh Bua Bok leaves.
Mangosteen's peels	Peels	Relieve inflammation caused by pus, and infection. Get rid of facial dark stains.	Apply the affected area with water boiled with the peels of mangosteens.

Herbs	Part(s) of Usage	Qualities	Usage
Hua Phaak Gaad (white Turnip) or Chai Taaw	Roots	Get rid of freckles on face.	Rub, 2 times a day / morning and evening, the freckled area with thinly sliced Clai Taaw Roots.
Phaak Bung (an aquatic morning glory)	Leaves and Stems	Decrease hair-falling condition. Soften hair.	After shampooing, soak the hair, for a while, with water boiled with Phaak Bung leaves and stems. Rinse off.
Phaak Plung (a kind of creeping plant)	Roots	Get rid of dandruff. Cure hands and feet's mottled skin.	No information.
Farang (Guava)	Leaves	Deodorize mouth's displeasing odor.	Gargle the throat with water boiled down with 2-3 Guava leaves. Chew fresh Guava leaves.
Faa Talai Jone	The whole plant	Get rid of hair falling condition.	After shampooing, soak the hair, for a while, with water boiled with Faa Talai Jone leaves and stems. Rinse off, afterwards.
Ma krood (Kaffir Limes)	Fruit	Get rid of dandruff.	Rub all over the head with the juice squeezed from burnt Magrood. Rinse off with clean water after 2-3 minutes.
		Increase hair growth.	Rub all over the head with the Magrood's juice mixed with the condensed coconut milk. Cover the head with a piece of cloth steamed with hot water. Rinse off with clean water. Do daily for 7 days, consecutively.

Herbs	Part(s) of Usage	Qualities	Usage
Makaam (Tamarind)	Meat	Cleanse and nourish skin.	Rub the skin with Tamarind paste and apply the turmeric on.
Tomato	Fruit	Refresh facial skin and heal wounds.	Scrub the facial area or any part of skin with tomato juice. Rinse off.
Makam Dii Kuai (Sapindus emarqinatas Vahl) a kind of tree with herbal fruits	Fruit	Use as a shampoo. Cure skin disease on head. Get rid of dandruff.	Break 1-2 Makam Dii Kuai fruits and boil them. Wash hair with Makam Dii Kuai boiled water.
Masaak (Sapindus rarak DC.) or Makam Dii Kuai	Fruit	Use as a shampoo. Cure skin disease on head. Get rid of dandruff.	Boil broken Masaak fruit. Wash hair with this boiled water.
Manaaw (Lime)	Fruit	Treat pimply faces.	Rub the pimply area with fresh lime, cut in halves. Rinse off with warm water. Within 7 days the pimples' head will disappear.
		Cleanse facial skin.	Wash the face with one glass of water mixed with 5-6 drops of lime juice.
Mapraw (Coconut)	Oil squeezed from the coconut meat.	Soften hair. Treat dry hair with broken tips.	Massage the hair for fifteen minutes, with coconut oil (received from squeezing coconut meat into coconut milk which is boiled down later). Rinse off.
Mafeung (Star-fruit or carambola)	Fruit	Nourish hair. Get rid of dandruff.	Wash the hair with juice squeezed from the Mafyang fruit.
	Leaves	Cure swelling bumps. Relieve skin itches.	Wash the whole body with water boiled with the leaves of Mafeung.

Herbs	Part(s) of Usage	Qualities	Usage
Mara (Bitter Melon)	Fully-ripe fruit	Cure pimples.	Rub the face with the Mara juice.
Look Tai Bai	The whole plant	Relieve skin itches.	Apply on the itchy area with the pounded leaves mixed with salt.
		Cure a kind of skin disease with blisters and itchy condition.	Pound 5 fruits of Look Tai Bai mixed with liquor. Squeeze the pounded materials for juice. Put a piece of cotton-wool dipped in the mixed juice.
Waan Haang Jorakae (a kind of short cycle-life plant)	Gelatin from Leaves	Digest dead and coarse cells of outer skin part. Moisten the skin. Build new cells replacing the dead ones.	Soak the old leaves for 10 minutes, until their yellow sap have been dissolved. Cleanse all those leaves and peel out all green parts. Cleanse the gelation received from the clean leaves and stir/churn into thin liquid. Strain the liquid through a white, thin cloth. Use the getalin.
Som Poi (a kind of oranges)	Pods	Treat hair. Cure the skin disease on head. Get rid of dandruff.	Wash the body with water boiled with smashed Som Poi pods.
	Leaves	Cleanse hair, and make it glossy without dandruff.	Shampoo with water boiled with Som Poi leaves.
Sabparod (Pine-apple)	Fruit	Cleanse facial skin.	Rub the facial skin with pineapple juice and rinse off.

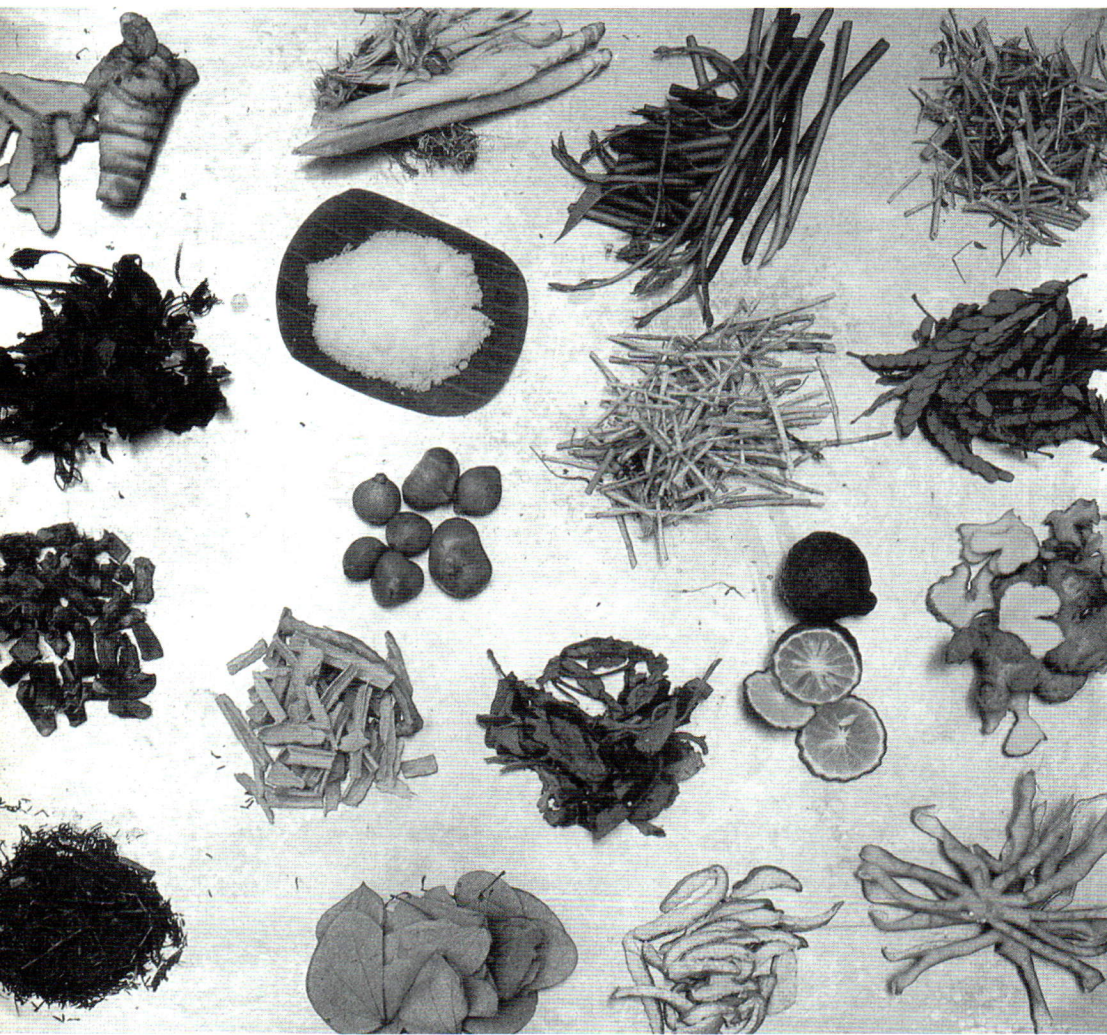
Herbs	Part(s) of Usage	Qualities	Usage
Salaed Pangpon Tua Meia (a kind of small-sized bush with red thorns and yellow blossoms)	Leaves	Get rid of rashes and skin itches.	Rub the affected area with liquor mixed with crunched leaves of this herb.
Nham Thaeng	Fruit	Cleanse hair.	Shampoo the hair with water boiled with the fruit of Nham Thaeng.
Mii Maen (a kind of tree of the Lauraceae family)	Dried Leaves	Soften the hair.	After shampooing, soak the hair with water boiled with Mii Maen leaves, for a while. Rinse off.
Anchan (a kind of creeping plant with its indigo, or white or light purple color)	Fresh Flowers	Thicken hair.	After shampooing, soak the hair, for a while, with water boiled with the Anchan fresh flowers. Rinse off.



Thai-style Hot Vapour Bath

A form of sauna employing steam saturated with aromatic oils from various medicinal plants has been practised in Thailand for centuries. The practice was recommended in traditional Thai medicine as a mean of cleansing the body, particularly for women after childbirth. It was also used as a cure for certain ailments such as aches and pains as well as certain skin conditions such as rashes and itching. More recently, Thai-style sauna has been employed for cosmetic purposes which include the improvement of skin conditions and weight reduction.

Medicinal plants used in Thai-style sauna can be divided into four main groups.



Group 1 consists of volatile oil-containing plants such as turmeric rhizomes, the leaves of lime (*Citrus aurantifolia* Swing.), the fruits of leech lime and citronella (*Cymbopogon nardus* Rendle).

Group 2 consists of acid-containing plants, including tamarind leaves, the leaves and pods of 'som-poi' (*Acacia rugata* Merr.) and the fruits of leech lime cut into halves.

Group 3 consists of sublimable substances such as camphor and Borneo-camphor.

Group 4 constitutes medicinal plants for specific ailments, for instance 'phak-bung-ruam' (*Enydra fluctuans* Lour.) as an anti-inflammatory, shallots and sweet flag (*Acorus calamus* Linn.) for colds and garden quinine (*Clerodendrum inerme* Gaertn.) and sea holly (*Acanthus ebracteatus* Vahi or *A. ilicifolius* Linn.) for skin rashes.

Steps involved in the preparation of Thai-style sauna are as follows:

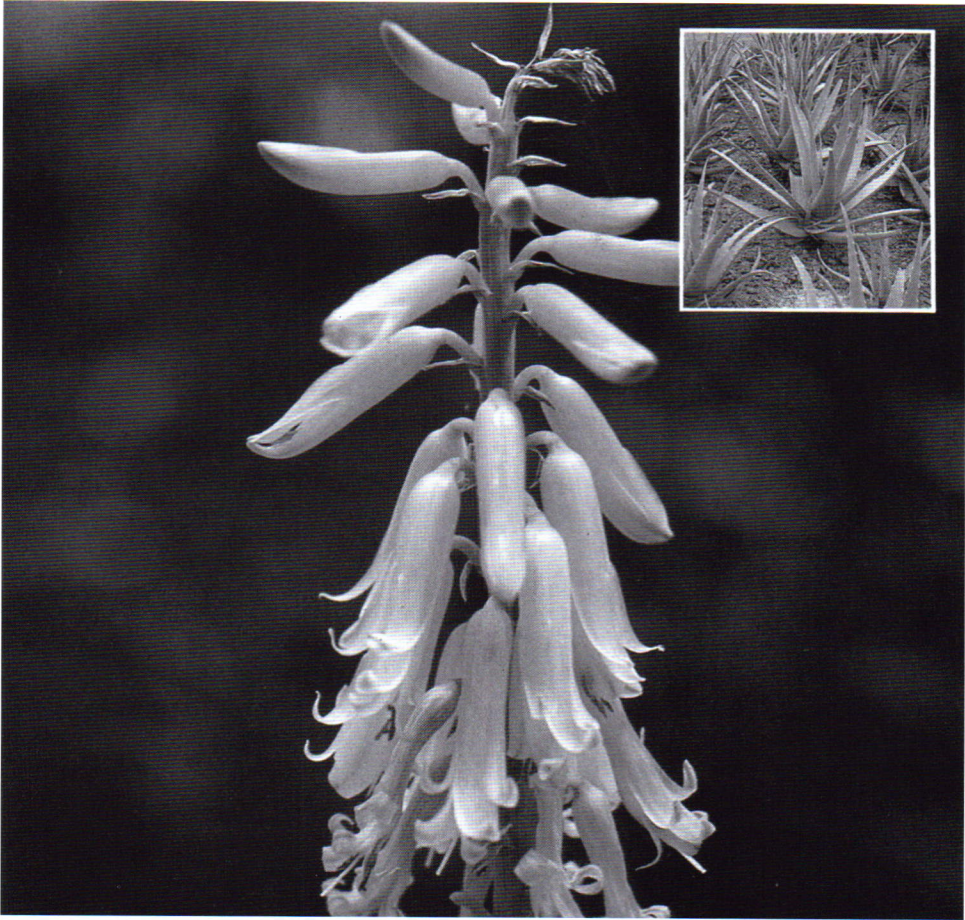
- Fresh herbs are placed in a large, closed container and plenty of water is added.
- The mixture is heated to boiling.
- The resulting steam is then routed into a small enclosure ready for use.

Several health clubs and beauty salons in Bangkok offer Thai-style sauna as part of their health or beauty programmes.

Plai



Alovera

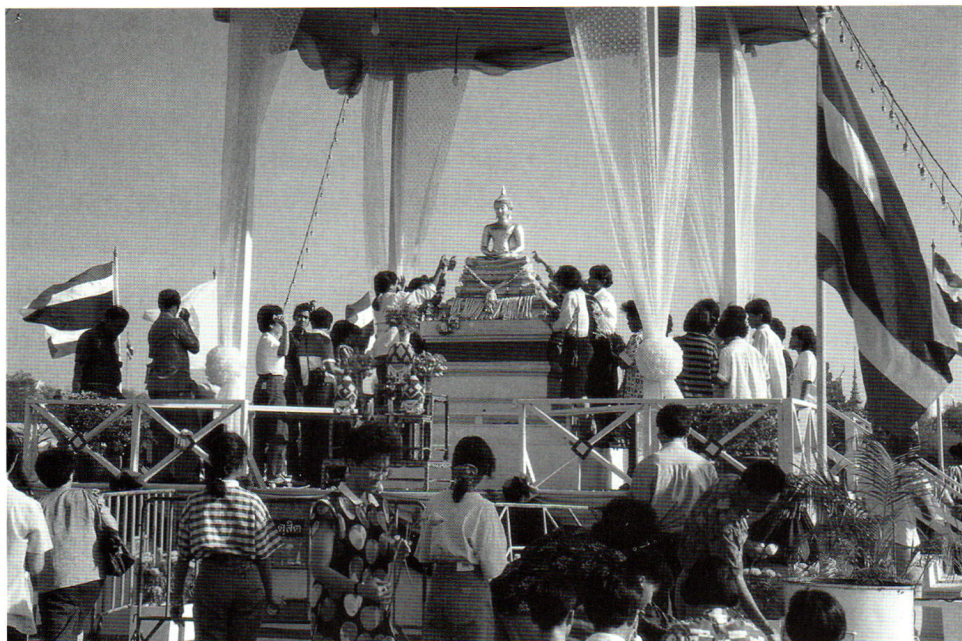




Thai-style Fragrant Water

This very popular form of fragrant water is made from freshly gathered flowers and contains no alcohol. The flowers used are selected for their sweet and lingering fragrance, some of the more common ingredients being the flowers of damask rose (*Rosa damascena* Mill.), jasmine, "lam-chiak" (*Pandanus tectorius* Bl.), "kradang-ngaa-thai" (*Cananga odorata* Hook.f. & Th.), orange champaka (*Michelia champaca* Linn.), "chammanaad" (*Vallaris glabra* Ktze.), bullet wood, "lamduan" (*Melodorum fruticosum* Lour.) and "chan-ka-pho" (*Vatica diospyroides* Syming.). Other ingredients used include the leaves of fragrant screw pine, the inner bark of "chaluut" (*Alyxia reinwardtii* Bl. var. *lucida* Markgr.), sandalwood, Siam benzoin, jasmine and hyacinth (*Hyacinthus orientalis* Linn.) oils.

Thai-style fragrant water is applied liberally onto the face, chest and arms during the hot climate. It is also recommended for use in cases of fainting. A thick paste made by mixing scented marl with fragrant water is used as an anointment in various ceremonies.



Thai people used perfumeries in many religious ceremonies, such as Nam-Ob Thai, in the picture, is applicated to bathe the Buddha's image in Songkran's festival.

THAI HERBS AND HERBAL PRODUCTS



CHAPTER EIGHT

Thai Perfumeries





hai Perfumeries are
comprised of several

kinds of fragrant cosmetics. In the old days, ladies would wear perfume everyday while men would do in some special occasions. Thai Perfumeries could be described into four categories as follows:

1. Water-based perfumeries : Nam-Ob Thai (eau de toilette) and Nam-Proong (eau de cologne);
2. Oil-based perfumeries : Fragrant oils, Tani oil (thick body oil), and fragrant lip balm;
3. Powdered perfumeries: Fragrant talc, Sarapee talc (siamensis Kosterm), Pong talc, Kra-jae talc, powdered nutmeg, powdered Kamin (*Curcuma domestica* Valetton), and Juang;
4. Scent chewing herbs : Mak-Hom, Niam leaves, Ganploo (*Syzygium aromaticum*), and nutmeg.

These perfumeries may be applied together with each other, such as Kra-Jae talc is mixed with Nam-Ob Thai, or individually used such as scent talc for powdering.

Pang-Ram (Scented talc)

Pang-Ram is made of naturally white talcum powder. It is ground into fine particles and mixed with other fragrant herbs or perfumeries, i.e., kameyan, Magrood (lime)'s peel (*Citrus hystrix*), Chamod Ched (*Viverricula malaccensis*), saffron, alum and red cane sugar.

Ladies would directly powder their skin with dry Pang-ram, or melt it with Nam-Ob Thai before applying it. The Pang-ram could reduce skin irritation caused by heat or pollens. Thai people use Pang-ram after taking bath.





Din-sor-pong (Natural talc)

Din-sor-pong is one of natural soil substances, which could be found abundant in Lopburi province. Locals will dig this white soil up and clean it, before refining it. The fine powder will be diluted with pure water to make a thick mixture. Then the mixture will be dropped into various sizes. The Din-sorpong makers may colour or add fragrance into this mixture.

In the past, people called Din-sor-pong as "Pang-Yen", which means cooling talc. It was used in special occasions, by melting with Chan Oil or Nam-Ob Thai, such as ceremony in paying gratitude to teachers, blessing a wedding couple, or blessing a new home, even a new car.

Din-sor-pong also provides a comfortable touch. Thai people, old or young, like to melt it with water and apply it on their bodies to reduce rashes. When there is a new-born baby, the Din-sor-Pong will be burnt and ground to apply around navel's cut. While the new mother will apply a different mixture, made by Din-sor-pong and Kamin powder.

Moreover, Din-sor-pong can also be used as analgesic. The swollen part will be gently rubbed before applying a thick mixture of Din-sor-pong and lime juice on it. The inflamed part will be cured rapidly as the purple skin will return to normal the following day.

In the past, Din-sor-pong was used as a popular cosmetic because it was believed to possess a quality to soften the skin, curing acne and freckles. Consistently usage of fine Din-sor-pong is claimed to be suitable for face powdering than other kinds of talc. To reduce acne, Din-sor-pong must be put into glass or porcelain container and mixed with lemon juice. The mixture would be pasted on the face for a while, then rinse out. This traditional face masking is believed to reduce oil, but excessive application would turn the face dry.











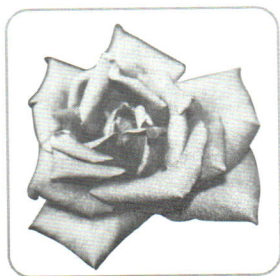
Khi-phung See-park (lip balm, made of bee wax)

Thai ladies in the central area applied fragrant bee wax for beauty and care.

Perfumeries

In the past, Thai people used perfumeries in many religious ceremonies such as house warming, wedding, blessing for the elderly persons, and in daily household. Those who had a habit of chewing betel nuts would put some fragrant balm on their lips to moisture them. Many would use skin cosmetics such as Nam-ob Thai, Pang Rum, Pang Puang. Others would use perfumeries like the fragrant candle to add sweet odor to food and clothes. The use of perfumeries in Thai culture could be traced back to the Sukhothai period. The Thai might have learnt the art of perfumeries from the Chinese and Indian, the most familiar neighbours in the kingdom.

The most ancient literature containing a story of perfumeries in Thailand was found in a piece of inscribed stone At Bang Sanook Temple, B.E.1882, during the Sukhothai period. A part of the inscription said "Noblemen and ordinary people printed 11,108 Buddha's images with papers and soil. One Phra That, two ..., two ivory Buddha's images, Silver and Gold Khan Mak, circled with colourful flags and musical instruments and drums. People were holding a bowl of Khao Tok (grilled rice), flowers, torches, candles, Chan incenses, fragrant oils, and paying tribute to the Buddha, His Sayings and Buddhist monks." This is an evidence of how the Thais used perfumeries in their religious ceremonies. This ritual was spreading to the next kingdom of the Thai people, Ayutthaya.





There is also an inscription written by Khun Luang Wad Pradu Song Tham saying that "a community near Prao temple settled Bhraman and Thais, who are making fragrant talc and oils, Krajae, Nam-ob Thai, Krajae incense, and paper incense and skin cosmetics."

Thai perfumeries, such as fragrant lip balm, skin cosmetics, Chamod Ched, Din-sor-pong, Nam-Ob Thai, Pang Rum and Pang Puang, include both those man-made or natural fragrance.





Materials of Perfumeries

- 1 . **Plants:** Fragrance may be found from flowers, such as rose, jasmine, Kra-Dung nga Thai, Kaew, or seeds such as Chan Thes, Chan fruit, or in the barks such as Chan wood, Ob-Cheuy and Chalood.
2. **Animals:** Fragrance found in animals is rare. Thai perfumeries maker mostly use only Chamodched, a kind of Viverridae.
3. **Synthetic:** Artificial fragrance is made of a mixture of chemicals to create a nature-like aroma such as rose and jasmine.





Thai Perfumeries: The Art of Making

The art of making Thai perfumeries is a reflection of Thai wisdom of how the fragrance is brewed, and how to apply each kind of perfumery. Skills and experience are important to a quality of fragrance. Generally, there are three methods to make Thai perfumeries.

1. **Vapouring (Ob):** a process of adding fragrance into a subject by storing it in a sealed container, together with fragrant candle or flowers.

Vapouring with flowers could be done in two ways: water vapouring and dry vapouring. Water vapouring is oftenly used with food, syrup, bathing water, or as part of a making of Nam Ob Thai. Dry vapouring is simple. By placing flower blossoms on the subject or place them together in a covered container, and removing them, after a while.

2. **Deep vapouring (Rum):** a process that uses more than one source of fragrance, to generate a mixture of wood oil, wood incense, and flowers. The "Rum" process is usually found in making a casket perfumed. Sources of fragrance used in this process are called "Krueng Rum" (deep vapouring ingredients), including Kameyan, Chalood, Chanted, perfumed incense, natural bee wax, red cane sugar, Pimsen, Chan oil, and Lamjiag oil.
3. **Cooking (Proong):** A mix of fragrances, based on talc, Pimsen, eau de perfume and Chamodched. This mixture is ground and melt in Nam-ob Thai. Other fragrance could be added. The producing of Nam-ob Thai involves all three processes, Ob, Rum and Proong.

Aroma, Beautification, and Fragrance

Thai aromatics (Krueng Pratin) include many fragrances, which are mostly applied by women rather than men. Krueng Pratin may appear in water-based such as Nam-Ob Thai and Nam Proong, or oil-based such as lip wax and perfumed oil.



Nam-Ob Thai

Nam-Ob Thai is one of Krueng Pratin, featuring clear, perfumed water in light yellow colour. Its name derives from a major process of making "Ob" (vapouring). The Nam-Ob Thai could be made with or without fresh flowers.

Applications of the Nam-Ob Thai

1. Directly apply on face and body to relieve skin from hot temperature and reduce sweat odour.
2. Mix with Pang-Rum before applying on face or body for beauty and reduce skin irritation.

3. Sprinkle on clothes.
4. Mix with powdered Kamin and rub on body skin before taking a bath. It is a traditional, beautifying therapy for Thai women in the past.
5. Mix with powdered rice grain. This could reduce skin irritation and rashes caused by dust allergies.
6. Mix with Pang Krajae to remark objects in blessing ceremonies.
7. Being an offering in some rituals such as the Rice Goddess's ceremony.
8. Bathe the Buddha's image, monks or the elderly in special festivals such as Songkran's festival.
9. Mix with fresh or dry potpourri.
10. Bathe the pass-away's body in general bathe people's funeral. The King may allow a royal Nam-Ob Thai bathe for high-ranking's funerals.

Beautification

Thai perfumeries for beauty: Din-sor-pong

Din-sor-pong is natural white soil substance found on the shallow layer of the ground. Some would call it Din-Soog (baked soil). The Din-sor-pong is found abundantly in Lopburi province. People would dig it up, stir for fine soils and dissolve with water before drying it into desirable shapes and sizes. Perfume and colouring may be added to the mixture.

The Din-sor-pong is sometimes called "Pang-Yen", which means cooling talc. This name brings Dinsor-pong about a relation with blessing occasions because the coolness is pleasurable in a tropical climate. Therefore, the Pang-Yen or Din-sor-pong has been a part of many traditional ceremonies such as house warming, wedding, a tribute to teachers, by being dissolved in Chan oil or Nam-Ob Thai.

In the Book of Dhatvipankha, Din-sor-pong is one of ingredients of a medication for oversweating. It is mixed with other ingredients,

powdered and shaped before being melt in flower scented water. This medication is taken by both swallowing and body pasting.

Din-sor-pong could also be used in a simple form to help reduce body rashes, or mixed with powdered Kamin, a special medication for a new mother after giving birth.

How to make the Din-sor-pong: Ingredients and Tools: the Din-sor-pong, tin or brass cones, fine cotton cloths, some wide plates, scented candles, and alum.

1. Dissolve the raw Din-sor-pong with water in big tubs, stir well, and sieve.
2. Sieve the wet Din-sor-pong with fine cotton cloths for 2-3 times.
3. Rinse out dusty water on the top and stir well until the Din-sor-pong becomes sticky.
4. The heavier and sticky part will rest down the tubs' bed. This part is usually shaped into a big round size and left to dry. The heavy Din-sor-pong is normally used in crafts such as wood carving, mirror polishing, or Khon masking.
5. The light Din-sor-pong, which would surface up from the whole mixture, is used for body cosmetics. It needs to be sieved again and whiten by mixing with mild alum. Then it will be left to dry by dropping a tiny lump on plates laid by fine cotton cloths. After that, it will be perfumed by Kameyan and scented candle.

Usage:

- Reduce body rashes by dissolving with the Nam-Ob Thai.
- Relieve burnt pain by dissolving with water.
- Relieve sore/swollen skin by dissolving with lemon juice.
- Clean underground vegetable by dissolving with water.
- Fill up cracked wood surface, polish mirror and mask the Khon's texture.





Pang-puang

Pang-puang is a definition for drops of fragrant talc that are tapped on a cotton thread. Each tread would be around 1 hand (4-5 inches) long. Then many treads would be tied up at one end and knotted with a hairpin as hair decoration.

Pang-puang could be made with several scented talc, such as Pang-rum, Pang Sarapee, and coloured by natural flowers such as Anchan (blue), Saffron (yellow), and Manglug.

Ingredients: Light Din-sor-pong, natural colouring, the Nam-ob Thai, eau de perfume, scented flowers and scented candles.

Pang-rum

Pang-rum is a light Din-sor-pong that has been deep-vapouring to be perfumed. It is used for face powdering by directly applying or melting with the Nam-ob Thai or Nam Proong. Some would apply it all over the body to relieve skin irritation.

Tools: Porcelain jugs, Grinder, Hanger, Candle plate, Clipper, Oven, Banana leaves, knives and small bamboo sticks.

Ingredients: fine Din-sor-pong, Nam-ob Thai, fresh flower-scented water, baked Chamodched, Pimsen, Kameyan, Lime's peels, sugar and red cane sugar, eau de perfume, Hiyazinth, and natural colourings (Anchan for purple blue, Krung for red, and Tuey leave for green).

Usage: The Pang-rum is used for face and body powdering, to bless people and sacred objects in special occasions. In the past, there was a set of small porcelain or ceramic bowls, containing various beauty cosmetics, on a dressing couch. One of the bowls usually contains the Pang-rum. When it is to be used as blessing article, it would be dissolved in the Nam-ob Thai, thicker than the daily usage.



Fragrance

Perfume cabinet

Perfume cabinet is actually a wood box that is used as a container to vapour objects inside such as clothes. It is the same way as we are leaving a bottle of perfume unlit in the cabinet. But in the old day, Thai people used a wood box, made by soft wood such as Chamcha, cast with aluminum or zinc to prevent leakage of fragrance and scented candles.

Usage: The perfume cabinet is used for vapouring a large number of small souvenirs/mementos, such as potpourri, handkerchiefs, clothes, blankets for special occasions like birthday celebrations and house warming.

Lip wax

Lip wax is one of "Krueng Pratin", or beauty cosmetics. Thai women in the central part of Thailand traditionally used it to keep their lips moist in the hot weather and to prevent irritation from chewing scented Mak (Palmae). A process of making lip wax is called "Hoong" (cooking). In the past, every household would make its own lip wax. Today, this home-made lip wax is rare. Traditional lip wax could be separated into two types, depending on a selection of solvent, that are coconut lip wax and oil lip wax.

Scented candles

A scented candle is made of wax and fragrance. Its perfume would be active with light smoke when it is burnt, so its tread has to be bigger than that of an ordinary candle. The scented smoke is used in adding fragrance to food and clothes.

Seven coloured incense

Incense is a perfumery made of powdered, scented wood and other ingredients, pasted on a small wood stick. When lit, the incense would provide both light smoke and fragrance. It is also part of the 4 offerings in rituals; others are candles, popped rice and flowers.

In general, there are two types of incense: Thai and Chinese. The Thai incense is unique because of its fragrance. Sometimes the Thai incense is called "Thoop Hom" (perfumed incense). In the market, we would find three kinds of this Thoop Hom:

Long incense—about 30 centimeter long, mildly fragrant.

Short incense—about 20 centimeter long, highly fragrant. It is also called "Thoop Chan" (Chan incense) or "Thoop Kra-jae".

Small incense—about 15 centimeter long, extremely fragrant.

This incense could be made into seven different colours, according to the number of days in a week. Red for Sunday, pale yellow or white



for Monday, pink for Tuesday, green for Wednesday, purple, brown or dark yellow for Thursday, blue for Friday, and dark brown for Saturday.

Potpourri (Bu-nga)

Potpourri is a perfumery made of scented fresh or dry flowers, mixed with eau de perfume or the Nam-ob Thai, and put into small fine bags. Traditionally, the Thais in the central part would make a potpourri as an accessory for some ceremonies, or as a souvenir in blessing occasions such as house warmings and weddings. No potpourri is made for religious ceremonies such as monk-hood celebration or funerals.

The Thai knew potpourri from the Java, which called it "Bu-nga rum pai". Prince Damrong Rachanuparp and Prince Narisaranuwatiwongse described the origin of Bu-nga rum pai in the **Sarn Somdej** book, that "Bu-nga" means flowers, while "rum pai" means "rum" or deep vapouring. Thais might have known potpourri since the latter period of



Ayutthaya era because it was a time when a lot of Malayan people settled in the country.

Thai potpourri could be found in three categories: fresh, dry and Chan Hom (fragrant Chan). Cloth bags that are made to fill potpourri need to be fine and thin in order to avoid leakage of flowers. Fragrant flora in Thai perfumeries are as the followings:

Kularb Mon

Science Name: *Rosa damascena* Mill

Family: ROSACEAE

General Names: Kularb On, Yee Soon, Sommer Damask Rose.

Usage: All year flowering, petals could be used to decorate food and to make perfumeries.

Kradung Nga Thai

Science Name: *Canaga odorata* (Lamk) Hokker F et Thoms

Family: ANNONACEAE

General Names: Kradung Nga, Kradung Nga bai yai, Saman nga, Sabun nga ton, Ilang-ilang, Yalang-ylang

Usage: Flowering plants, ingredients are used for Thai perfumeries.

Kannikar

Science Name: *Nyctanthes abor-tristis* L.

Family: VERBENACEAE

General Names: Kanikar, Kornnikar, Coral jasmine, Night jasmine

Usage: Flowering bush plants, ingredient are for Thai perfumeries.

Kajorn

Science Name: *Telosma minor* (Andr.) Craib

Family: ASCLEPIADACEAE

General Names: Salid (central Thai), Milkweed Family

Usage: Flowering crawling plants, long life, ingredients are for Thai perfumeries.

Chan Krapor

Science Name: *Vatica diospyroides* Syming

Family: DIPTEROCARPACEAE

General Names: Kheaw NguKhao (Pang-nga), Chan Por (south.)

Usage: Flowering plants, strong scent, ingredients are for Thai perfumeries.

Chan Ted

Science Name: *Myristica fragrans* Hoult

Family: MYRISTICACEAE

General Names: Chan Ban (Chan, north.). Chan Nited (central.), Mace, Nutmeg

Usage: Seeds and flowers are ingredients for Thai perfumeries.

Champa

Science Name: *Michelia champaca* L.

Family: MAGNOLIACEAE

General Names: Champa Khao (Trang.). Champa Thong (Nakhon Sri Thammarat.), Champa Pa (Surat Thani), Champa Gor, Champaca, Orange Chempaka, Champak, Sonchampa

Usage: Flowering plants, with flowers as ingredients for Thai perfumeries, specially in hair conditioner, Nam-Ob Thai and Nam Proong.

Chalood

Science Name: *Atyzia nitens* Kerr.

Family: APOCYNACEAE

General Names: Lood (Pattani.), Chanood (Surat Thani.), Lood (south.)

Usage: Flowering crawling plants used as ingredients for Thai perfumeries.

Chammanard

Science Name: *Vallaris glabra* Ktze

Family: APOCYNACEAE

General Names: Chomnad, Chammanard (central.), Chammanard Farang, Dok Khao Mai (Bangkok.), Somsai (north.). Bread Flower

Usage: Flowering crawling plants with thick leaves and flowers as ingredients for Thai perfumeries.

Mali

Science Name: *Jasminum sambac* (L.) Ait.

Family: OLEACEAE

General Names: Khao Tak (Mae Hong Sorn.), Mali Khi Gai (Chiangmai.), Mali Pom (north.), Tia Moon, Mali Son, Mali La, Mali Luang, Arabian Jasmine, Jasmine

Usage: Flowering plants with flowers as ingredients for Thai perfumeries.



Kaew

Science Name: *Murraya paniculata* (L.) Jack

Family: RUTACEAE

General Names: Kaew Khao (central.), Kaew Khi Gai (Yala.), Kaew Prig, Talai Kaew (north.), Kaew Lai (Saraburi.), Ja Prig (Lampang.), Gamuning, Andaman satiwood, China box tree, Orange Jessamine, Satin-wood, Cosmetic Bark Tree

Usage: Flowering bush plants of which flowers as ingredients for Thai perfumeries.





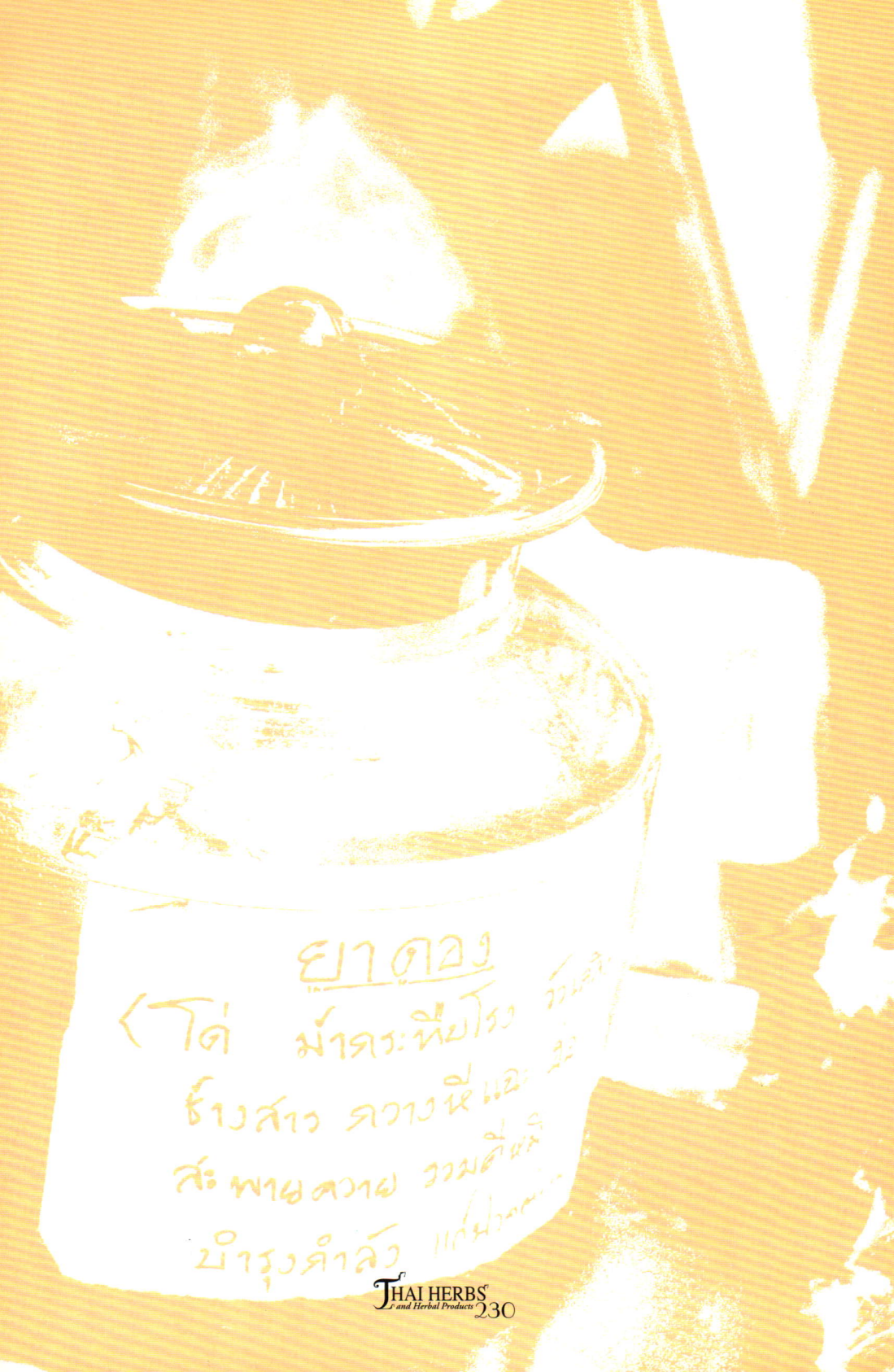
Thai-style Sachets

Many Thai flowers are delicately scented and lend themselves well as ingredients in sachetmaking. Thai ladies, since the old days, have perfected the arts of making fragrant sachets from these dried flowers. The flowers used for this purpose are usually small in size and possess long lasting fragrance. Flowers from bullet wood, rose petals, jasmine, henna flowers, bread flowers (*Vallaris glabra* Ktze. and *Coffea bengalensis* Roxb.) are commonly used. In addition, the leaves of fragrant screw pine





and bachelor's button (*Gomphrena globosa* Linn.) are usually included in the pot-pourri. In making the sachets, petals from selected flowers are air-dried while the leaves of fragrant screw pine are finely shredded and air-dried. The dried ingredients are then mixed together and placed in a tightly closed container. The mixture of flowers is sprinkled with the concentrated Thai-style fragrant water and the container sealed for 1-2 days. After the impregnation process, the flower mixture can be packed into suitable containers such as small bags of various shapes made of finely netted material, small porcelain or clay pots. These sachets are usually used as souvenirs on special occasions such as wedding and birthday celebrations.



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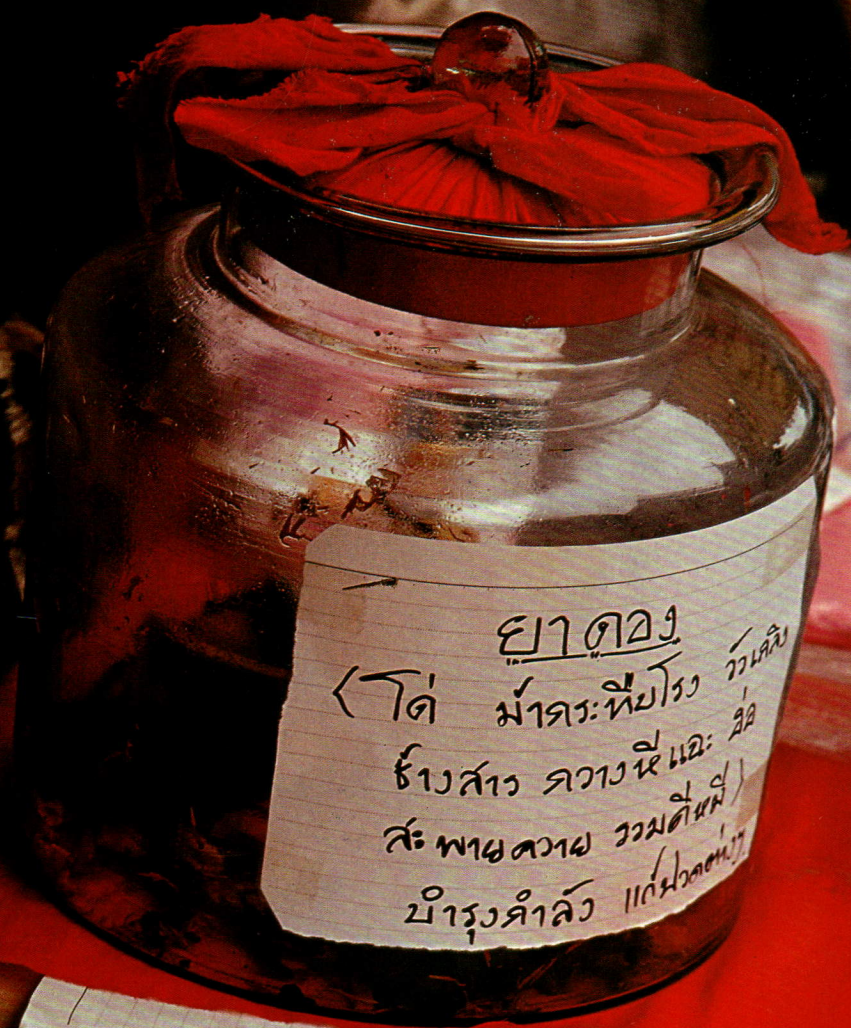
THAI HERBS AND HERBAL PRODUCTS



CHAPTER NINE

Yaa Dong Lao (Fermented Liquor): A Product of Thai Local Wisdom

Translated by *Chanthana Chaichit*



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*L*iquor or intoxicating beverage is

related to herbal medicine. The liquor is alcohol which is used to extract medicine. An efficient result is not only the medicine extracted, but also the raw materials that could be saved for a long period. Thai fermented liquor reveals Thai local wisdom in a scientific way.

The basic principle in producing Thai fermented liquor in an ancient way is to compound various kinds of medical components; in another method, only a single kind of herb was preserved, or soaked with the extracting constituent. This method of compounding is used with the medicinal elements hardly dissolved in natural water (either by boiling or infusing). The period of fermentation is 7 days up so that the medicine would come out very well.

Yaa Darg Lao, Thai Fermented Liquor, has a very hot, spicy flavor which helps cure sickness and symptoms caused by the problem of the wind element. It is a medicine to relieve chest discomfort, back-pain, flatulence, as well as to cure the wind movement inside and outside colons. The ancient Thai liquor is also used to nourish body's health and sexual potency. It is an elixir, a substance held capacity of prolonging life indefinitely.



Methods and Preparation for Making Thai Fermented Liquor

1. Dry or bake clean herbal vegetables (which were cut into small pieces). Put all herbs into glass jars or earthen crocks. Deeply soak the herbs with liquor. Stir the ingredients once a day. Take it after 1 month.
2. Preservation with Heat has its period of making for 1-2 weeks. The process of preservation is as the following:

Pour liquor to soak herbs in jars or bottles. Put jars



and bottles in pots full with water. Boil water. Take the jars / bottles containing herbs from the boiling water. Tighten the lids and leave them for 1-2 weeks.

3. Another method is to use liquor as an additive. The process is:
Pound herbal vegetables and mix with liquor. Put pounded herbs on the organs needed to be cured.

In general, fermented liquor is dangerous to the people with high blood pressure, with heart disease, liquor - allergy and pregnant women.



How to Take Thai Fermented Liquor :

For the internal usage:

According to the ancient style of medical treatment, before meal, take this medicinal liquor about 1 Tuaitaalai (a kind of small cup containing of about 15 cc.).



For the external usage:

This liquor is applied with the skin disease such as ringworm, chloasma, and rashes caused by animals' hairy substance and vegetables allergies, or by insect bites. Apply a piece of cotton wool, dipped with the medicinal liquor, on the symptomatic area. Or put the drugs of the herbs on the affected skin.

It is forbidden to:

1. Pregnant women
2. High-Blood Pressure Patients
3. Diabetic Patients
4. Heart-Disease Patients
5. High-Fever Patients
6. Alcoholic allergic people

Yaa Dang: Por Mor Chandi Khemchalerm's Formula (Thai Fermented Liquor: Medicine Man Chandi Khemchalerm's Formula)

The First Formula of Nourishment:

This Thai medicinal liquor is used to nourish the body's chemical elements, improve blood circulation, stimulate appetite, as well as a medicine to cure males' disease: thinness, weakness, stomach disease, body's pain, insomnia, and urinary problem. The liquor is also good to cure females' toxic menstruation, facial freckles, thinness and weakness, including after birth delivery problem and beriberi.

Before taking this liquor, for 3 days in advance, take a laxative. Before going to bed, take the liquor half a teacup. The liquor helps clean and drive away all filthy substance from the intestines, as well as nourishes the body's health. To have a good appetite, take $\frac{1}{2}$ - 1 teacup everyday.

The Second Formula of Nourishment:

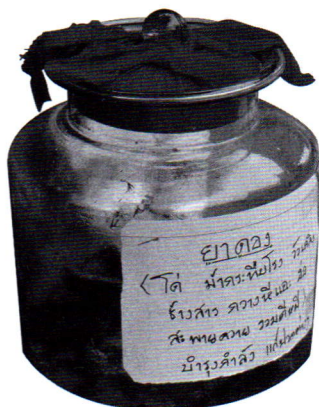
Males or females of every age could have this medicinal liquor. But it is forbidden to pregnant women and anybody who has fever. After birth delivery, the mother takes this Yaa Dong in place of *yoo fai* (to be sleeping / lying near fire so that the uterus is warm after giving birth). Take with hot water $\frac{1}{2}$ - 1 teaspoon. This Thai fermented liquor has its qualities as to cure the sickness that causes thinness and weakness, pain in the back, waist, and also to relieve chest discomfort, improve blood circulation, stimulate appetite, cure stomachache and as a medicine for anemia.

The formula for Woman's Blood Cleansing:

Take 1 Tuaitaalai everyday before meals, 3 times a day.

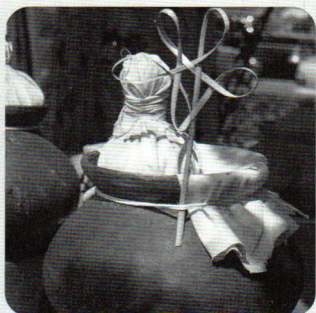
The formula for Breast Milk Nourishing:

Take 1 Tualtaalai before breakfast and dinner.



Alcoholic Macerates

In most cases, air-dried ingredients are roughly pounded and wrapped in a piece of muslin before being placed in a glass jar containing rice whiskey for a period of 7-10 days. The resultant macerate is then decanted and taken as directed.



Acknowledgements

Some pictures in this book have come from many sources that should be acknowledged with a special thanks as follows :

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