BANANA CULTIVAR NAMES AND SYNONYMS IN SOUTHEAST ASIA

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Introduction

Banana classification and nomenclature have long been a complicated issue. The problem emanated from the simplistic description of plantain, *Musa paradisiaca* Linn. and dessert banana, *Musa sapientum* Linn. by Karl Linnaeus, the father of modern botanical nomenclature. This was attributed to the very limited specimens available to him in Europe where the original names were given. Hence, while the differentiation between banana and plantain, a special type of cooking banana, is readily applicable in Africa and Latin America, adoption in Southeast Asia has led to confusion. In Asia, the center of *Musa* diversity, many local cultivars possess characteristics that transcend the diagnostic characters used elsewhere to differentiate bananas from plantains.

Another common problem confronting banana taxonomists and horticulturists in Southeast Asia is the presence of numerous cultivar names and synonyms in different languages and dialects of the region. In most cases, the same cultivars are known by different names in different countries. Occasionally, the same name is applied to distinct cultivars. Phonetic variations associated with tonal languages in Asia often result to differences in spelling.

Wasteful duplication in the conduct of basic studies could have been avoided had researchers in Southeast Asia known that the banana cultivars they studied separately were actually one and the same clone. Knowledge of synonyms can promote regional understanding and communication as well as banana trade and commerce. Solutions to these problems were the subject of a regional workshop held at the Southeast Asian Banana Germplasm Resources Center in Davao, Philippines on September 1–4, 1999. The workshop was co-sponsored by International Network for the Improvement of Banana and Plantain (INIBAP-ASPNET) and (Bureau of Plant Industry/Davao National Crop Research and Development Center (BPI/DNCRDC) of the Department of Agriculture.

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Status of Banana Classification and Nomenclature in Southeast Asia

The first scientific term given to banana is *Musa paradisiaca* Linn. published in 1753 by Linnaeus in his book Species Plantarum, the origin of modern botanical nomenclature. His simple description was based on a plantain cultivar bearing long and slender fruits that remain starchy even when fully ripe. The fruits are cooked before they become palatable and consumed. The male flowers and bracts of plantains are usually persistent and remain as dried relics on the male bud rachis. Later, Linneaus published *Musa sapientum* Linn. in Systema Naturae in 1759 to describe a dessert banana which bear sweet fruits that are eaten fresh upon ripening. The male flowers and bracts of the second species are dehiscent, exposing a clean rachis. The common cultivars of banana and plantain in Latin America and West Africa closely fit the Linnean descriptions, and the two scientific names remained in wide usage for almost two centuries. However, their adoption in Southeast Asia generated confusions from early on.

In the center of diversity for bananas, many cultivars are classified as dual purpose, wherein the fruits are consumed either fresh or cooked. There are also many starchy, cooking cultivars with short, stout and angular fruits with dehiscent male flowers and bracts. These culinary bananas are distinct from the plantains and cannot be classified under *Musa paradisiaca*. Furthermore, the great diversity of dessert bananas in terms of plant stature, fruit size and color (yellow, green, red, and orange) far exceed the rather limited description of the original *Musa sapientum*. To cope with the wealth in germplasm diversity in its center of origin, subsequent banana taxonomists applied such descriptive names as *Musa nana* Lour. for the Dwarf Cavendish, *Musa rubra* Firming. von Wall. for the Red banana, *Musa corniculata* Lour. for the horn plantain, and many others. The proliferation of scientific names added more confusion to banana nomenclature. The situation would have aggravated if it were not for Cheesman (1948) and Simmonds and Shepherd (1955) who explained the origin of edible bananas and proposed a new classification scheme.

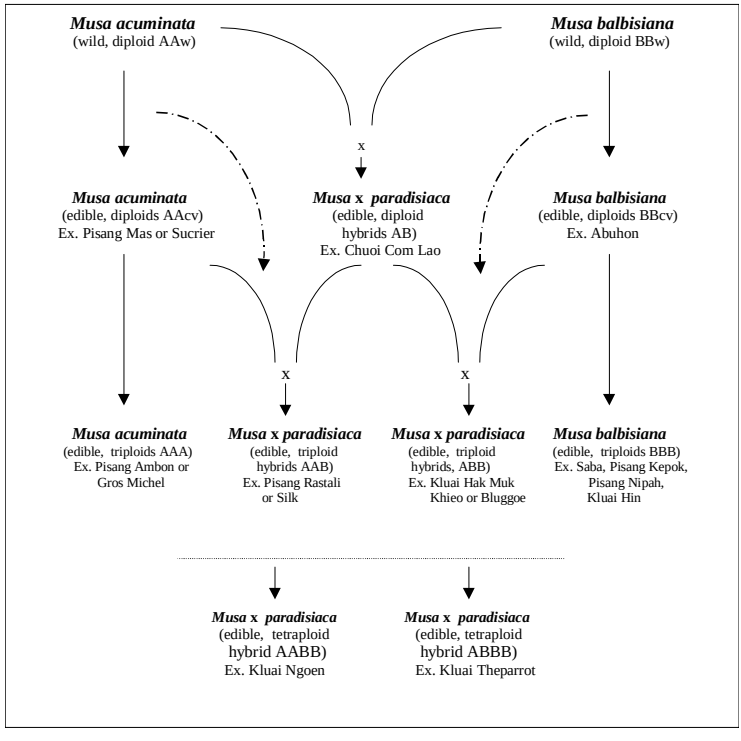
Drawing upon their expertise in genetics and their vast experience in cytotaxonomy, Simmonds and Shepherd concluded that the Linnean scientific names *Musa paradisiaca* and *Musa sapientum* were based on hybrid cultivars and hence, recommended their abolition. They likewise concluded that the edible bananas originated from two wild and seedy species, *Musa acuminata* Colla and *Musa balbisiana* Colla which are endemic to Southeast Asia.

Cheesman recognized three groups of morphologically distinct cultivars. The first group shows predominantly the botanical characters of *Musa acuminata* while the second group of cultivars primarily exhibit the morphological features of *Musa balbisiana*. The third group possesses characteristics that combine the morphological characters of the two wild species and are considered as their natural hybrids. The primitive edible bananas are diploids that evolved through the development of sterility and parthenocarpy in *Musa acuminata*. Through human selection, various clones were brought under cultivation in the rainy parts of Southeast Asia, particularly in Malaysia. Later, through chromosome restitution, seedless triploid cultivars developed. Since triploids proved to be more vigorous and productive, they gained greater popularity. Cheesman argued that the seedless, edible diploid cultivars of *Musa acuminata* must be classified in the same species as their wild parents as they retained the morphological characteristics of their wild ancestors. Likewise, the seedless and edible triploid cultivars that developed through chromosome restitution must also be recognized as the same species as their parents because the addition of one set of chromosomes through autopolyploidy did not introduce anything new to the genetic constitution of the clone.

In the drier areas of Asia where the wild and seedy *Musa balbisiana* predominates, a parallel evolutionary development occurred which led to the appearance of pure diploid and triploid *balbisiana* cultivars first recognized in the Philippines (Valmayor, et al., 1991). Since the development of sterility and parthenocarpy did not significantly alter the morphological characteristics of the resultant clones, the scientific name *Musa balbisiana* should also be applied to the edible diploid and triploid cultivars derived from the wild *balbisiana* parents. In the center of origin of bananas, the natural distribution of wild *Musa acuminata* and *Musa balbisiana* overlap, and since the two species are cross compatible, hybridization occurred. The hybrids that evolved from the two natural species include diploids, triploids and a few tetraploids in various genome combinations. Figure 1 shows the various pathways leading to the development of edible bananas. A major concern about the original terms *Musa paradisiaca* and *Musa sapientum* is their hybrid nature. However, according to rules of the International Code of Nomenclature for Cultivated Plants (ICNCP), hybrids can also be given a scientific name. However, the epithet must carry the prefix **x** to indicate the hybrid nature of the species. In the case of hybrid banana cultivars, *Musa* **x** *paradisiaca* Linn. should be adopted as this binomial was published ahead of *Musa sapientum* and is in fact recognized as the type species for the banana. *Musa* **x** *paradisiaca* Linn. is applicable to all hybrids of *Musa acuminata* and *Musa balbisiana* notwithstanding their genome composition (Greuter, 1995; Karamura, 1998).

Modern taxonomy using isozymes (Espino and Pimentel, 1990) and molecular markers (Jarret, 1990)confirmed the multi-specific origin of edible bananas. The application of molecular taxonomy is particularly useful in banana classification because recent studies have shown that chloroplastic DNA is inherited from the female parent while mitochondrial DNA is inherited from the male parent. The use of nuclear or cytoplasmic RFLP probes now enable researchers to precisely determine the maternal and paternal origins of banana cultivars (Lanaud, 1999). Leading research institutions in Southeast Asia are now developing probes based on original and authentic germplasm.

Figure 1. Diagram showing the various pathways leading to the development of edible bananas.



The diagram illustrated in Figure 1 highlights the role of *Musa acuminata* and *Musa balbisiana* in the evolution of edible bananas. It also shows that the two species comprise both wild and cultivated forms. The chart also projects the important role of interspecific hybridization in the proliferation of edible clones. The parents of hybrid triploids are not limited to the edible diploids as shown in the simplified chart. It can also be traced back to the wild species. Figure 1 no longer show the term *Musa sapientum*, the popular term for dessert bananas. The tetraploids could evolve through various possible combinations.

Current Regional Banana Classification Scheme in Southeast Asia

Two natural species and a hybrid complex make up the edible bananas of today. This situation has rendered the identification of cultivars difficult. To cope with the problem, the authors agreed to adopt the three tiers system namely – species, genome group, and cultivar, in classifying bananas and identifying cultivar names and synonyms of the region. The taxonomic scorecard suggested by Silayoi and Chomchalow (1987), a modified version of the original designed by Simmonds and Shepherd, was found very useful in segregating the numerous banana varieties into six genome groups. Table 1 presents the 15 diagnostic characters used to differentiate *Musa acuminata* clones from *Musa balbisiana* cultivars and their hybrids. The cultivars are classified by inspecting the expression of each of the 15 characters shown in Figure 2 and assigning a score of 1 for each character that adheres closely with wild *acuminata* and 5 for characters with extreme *balbisiana* expression. This scoring technique provides for a range of 15 (15 x 1) for wild *acuminata* and 75 (15 x 5) for wild *balbisiana* species. Intermediate expressions of the characters are assigned scores ranging from 2, 3, or 4 depending on intensity. The hybrid cultivars, therefore, should have total scores between 15 and 75. In actual practice, slight deviations are allowed. Table 2 shows the six genome groups and the expected range of scores the cultivars under study will generate. Pure *acuminata* varieties should have scores between 15 to 25 while pure *balbisiana* cultivars should range between 70 to 75. The hybrids are expected to score between 26 to 69 points.

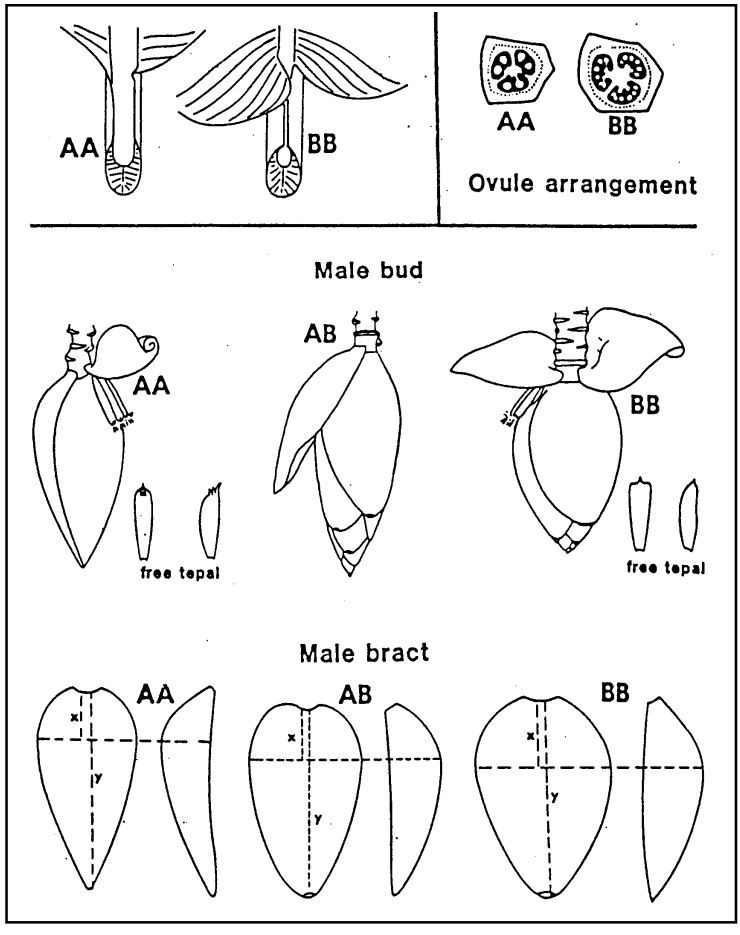
After identifying the species and genome group, the individual cultivars are classified following the latest version of Descriptors for Banana (*Musa* spp.) and *Musa* Germplasm Information System (MGIS) published by INIBAP/IPGRI and CIRAD. The highly discriminating descriptors on plant stature, pseudostem and leaf characteristics, bunch and fruit characters, male bud and male flower characters are recorded. Horticultural performance such as data from planting to flowering, from flowering to harvest, harvest to first ratoon, number of suckers at first harvest, bunch weight, number of hands and fingers, fruit size and quality are observed. With the aid of botanical illustrations, photographs and actual field study and observation at the regional banana variety collection of BPI in Davao, an inventory of cultivar names and synonyms was prepared by the curators of national banana variety collections of Southeast Asia. Table 3 presents the list of banana cultivar names and synonyms of Southeast Asia while Table 4 presents the list of cultivars unique to each country of the region. Table 5 summarizes the number of cultivars under the two natural and one hybrid species. Data shows that *Musa acuminata* clones far exceed the number of *Musa balbisiana* varieties. The figures also show that AAB hybrids are more

Table 1. Characters used in the classification of bananas through a taxonomic scorecard.

Character	*Musa acuminata*	*Musa balbisiana*
Pseudostem color	More or less heavily marked with brown or black blotches	Blotches slight or absent
Petiolar canal	Margin erect or spreading, with scarious wings below, not clasping pseudostem	Margin inclosed, not winged below, clasping pseudostem
Peduncle	Usually downy or hairy	Glabrous
Pedicels	Short	Long
Ovules	Two regular rows in each loculus	Four irregular rows in each loculus
Bract shoulder	Usually high (ratio < 0.28)	Usually low (ratio > 0.30)
Bract curling*	Bract reflex and roll back	Bracts lift but do not roll
	after opening	
Bract shape	Lanceolate or narrowly ovate, tapering sharply from the shoulder	Broadly ovate, not tapering sharply
Bract apex	Acute	Obtuse
Bract color	Red, dull purple or yellow outside; pink, dull purple or	Distinctive brownish-purple outside; bright crimson inside
	yellow inside	
Color fading	Inside bract color fades to yellow towards the base	Inside bract color continuous to base
Bract scars	Prominent	Scarcely prominent
Free tepal of male flower	Variably corrugated below tip	Rarely corrugated
Male flower color	Creamy white	Variably flushed with pink
Stigma color	Orange or rich yellow	Cream, pale yellow or pale pink

* In varieties with persistent male bracts, curling is weak or absent, regardless of genotype (Source: Simmonds and Shepherd, 1955).

Figure 2. Important characters used in determining species and genome groups of edible banana.



(Source: IBPGR Revised Banana Descriptors, 1984)

Table 2. Genome groups and their respective score ranges.

Genome Group	Score
AA/AAA	15-25
AAB	26-46
AB/AABB	47-49
ABB	59-63
ABBB	67-69
BB/BBB	70-75

(Source: Silayoi and Chomchalow, 1987)

Table 3. Banana cultivar names and synonyms in Southeast Asia.

Species,Genome	Philippines	Malaysia	Indonesia	Thailand	Vietnam	International
Musa acuminata **Diploid AA (dessert)**	Amas	Pisang Mas	Pisang Mas	Kluai Khai	Chuoi Trung	Sucrier
	Kinamay Dalaga	Pisang Pinang	Pisang Pinang	Kluai Lep Mu Nang		
	Veinte Cohol	Pisang Masam	Pisang Masam	Kluai Hom Thong Son		
	Tudlo Datu	Pisang Jari Buaya	Pisang Jari Buaya		Chuoi Tieu	Jari Buaya
	Tudlo Tumbaga		Pisang Kole		Chuoi Tay But	
	Pamoti-on				Chuoi Cau Trang	
	Morong Princesa		Pisang Gadis	Kluai Thong Ruang	Chuoi Ngu Thoc	
	Lonsing		Pisang Lidi			
	Bata-Bata			Kluai Sa	Chuoi Ngu Tien	
	Manang			Kluai Hom Jan		
	Rawari		Pisang Perecet			
	Inarnibal	Pisang Empat Puluh Hari	Pisang Lampung			
	Mama-on	Pisang Lemak Manis Terenganu	Pisang Lemak Manis			
		Pisang Lemak Manis Kelantan	Pisang Muli			
		Pisang Lilin	Pisang Lilin			
		Pisang Mas Sagura		Kluai Thong Ki Maew		
		Pisang Ekor Kuda		Kluai Thong Kap Dam		
Diploid AA (dual purpose, consumed either fresh or cooked)	Pogpogon				Chuoi Tien	
	Alaswe	Pisang Kapas	Pisang Kapas			
Diploid/triploid AA/AAA (dessert)	Lakatan[1]	Pisang Berangan Kuning	Pisang Barangan Kuning	Kluai Hom Maew		Lakatan
	Lakatan[1]	Pisang Berangan Merah	Pisang Barangan Merah	Kluai Ngang Phaya		Lakatan

Musa acuminata **Triploid AAA (dessert), (Cavendish)**	Sulay Baguio	Pisang Serendah	Pisang Badak	Kluai Hom Khieo Khom	Chuoi Tieu Lun	Dwarf Cavendish, Enano
	Tumok	Pisang Cina	Pisang Ambon Hijau	Kluai Khlong Chang	Chuoi Tieu Nho	Giant Cavendish, Gran Enano
	Tudok	Pisang Buai	Pisang Ambon Putih		Chuoi Tieu Xanh	Robusta
	Buñgulan	Pisang Masak Hijau	Pisang Ambon Lumut	Kluai Hom Khieo	Chuoi Tieu Cao #1	Tall Cavendish, Lacatan
	Grande Naine		Pisang Ambon Jepang		Chuoi Va Huong	Grande Naine
	Pastilan		Pisang Ambon Filippina/ P. Lasse			
(non-Cavendish)	Ambon	Pisang Embun	Pisang Ambon Kuning	Kluai Hom Thong	Chuoi Tieu Cao #2	Gros Michel
	Bangan		Pisang Angleng	Kluai Dok Mai	Chuoi Tieu Vua	
		Pisang Susu	Pisang Susu	Kluai Nam Nom		
	Morado	Pisang Raja Udang Merah[2]	Pisang Udang	Kluai Nak	Chuoi Com Lua	Red, Rojo, Morado
	Moradong Puti	Pisang Raja Udang Hijau[2]	Pisang Telor	Kluai Kung Khieo		Green Red, Rojo Verde, Morado Verde
	Oma	Pisang Amping	Pisang Ampyang			
			Pisang Potho Wangi	Kluai Khai Bong	Chuoi Bom	
		Pisang Pelimbing	Pisang Palembang			
Musa x paradisiaca **Triploid AAB (dessert)**	Latundan[2]	Pisang Rastali	Pisang Raja Sereh	Kluai Nam	Chuoi Goong	Silk, Manzana
	Inangel	Pisang Keling[3]	Pisang Keling	Kluai Lanka	Chuoi Com Chua	Mysore
	Galamay Señora	Pisang Kelat Air	Pisang Longong	Kluai Nam Phat	Chuoi Muop	King
	Daliri Dalaga		Pisang Triolin			
	Radja	Pisang Raja[3]	Pisang Raja	Kluai Khai Boran #2		Raja
	Ternate	Pisang Bakaran	Pisang Bakar			
		Pisang Seribu	Pisang Seribu	Kluai Roi Wi	Chuoi Tram Nai	Seribu

Triploid AAB (cooking) (plantain)	Tindok	Pisang Tanduk	Pisang Byar	Kluai Klai		Horn, Cuerno, Macho
	Patag		Pisang Agung			
	Daluyao	Pisang Lang	Pisang Tanduk	Kluai Nga Chang	Chuoi Sung Bo	
	Bungaoisan		Pisang Candi			Nendran
	Laknau	Pisang Nangka	Pisang Nangka	Kluai Niu Charakne		Laknau
		Pisang Gading	Pisang Gading			
	Maia Maole		Pisang Maole			Maole
(non-plantain)	Duhoy		Pisang Uli		Chuoi Voi	
Musa x paradisiaca **Triploid ABB (dual purpose)**	Katali	Pisang Awak[3]	Pisang Awak[3]	Kluai Namwa Luang		Awak
	Siusok		Pisang Siem[3]	Kluai Namwa Daeng	Chuoi Tay	
		Pisang Rasa			Chuoi Mat Boket	
Musa x paradisiaca **Triploid ABB (cooking)**	Matavia	Pisang Abu Keling	Pisang Kosta	Kluai Hak Muk Khieo	Chuoi Ngop Lun	Bluggoe, Chato
	Katsila	Pisang Abu Perak	Pisang Kosta Putih	Kluai Hak Muk Khao		Silver Bluggoe, Cenizo
	Maduranga	Pisang Abu Bujal		Kluai Nom Mi	Chuoi Ngop Cau	Monthan
	Pelipia				Chuoi Ngop Cao	Pelipita
		Pisang Kari		Kluai Tip		
Musa x paradisiaca **Tetraploid ABBB**	Tiparot	Pisang Abu Siam		Kluai Thepparot	Chuoi Gao	Tiparot, Tiparod
Musa balbisiana **Triploid BBB (cooking)**	Saba	Pisang Nipah	Pisang Kepok	Kluai Hin		Saba
	Cardaba	Pisang Chematu	Pisang Kepok Besar		Chuoi Mat	Cardaba
	Gubao			Kluai Phama Haek Kuk	Chuoi Ngu	
	Pa-a Dalaga				Chuoi Chua	
	Turangkog		Pisang Kepok Kuning		Chuoi Sap	
	Sabang Puti	Pisang Kapor	Pisang Kepok Putih			
	Pondol			Kluai Lep Chang Kut	Chuoi Ngop Dui Duc	Lep Chang Kut
	Kalimpos[4]		Pisang Sepatu Amora			
	Giant Saba		Pisang Lompo			

Table 4. Banana cultivars unique to each country in Southeast Asia.

Species, Genome	Philippines	Malaysia	Indonesia	Thailand	Vietnam
Musa acuminata **Diploid AA (dessert)**	Bu-oy Eda-an Ga-o Inabaca Katil Señorita Suyak Talipan	Pisang Serindek Pisang Jarum	Pisang Cici Kuning Pisang Cici Merah	Kluai Lai Kluai Nam Thai Kluai Thong Det	Chuoi Cau Man
Diploid AA (cooking)	Binaktong Golimpang Guyod Talip				
Musa acuminata **Triploid AAA (dessert)**	Baukas Binalatong Binawe Tanggung Umalag	Pisang Buloh[1] Pisang Tualang	Pisang Bilitung Pisang Byok		Chuoi La Rung Chuoi Cau Tay Chuoi Tieu Cao Hong
Musa x paradisiaca **Diploid AB (dessert)**					Chuoi Dong Chuoi La'ta Chuoi Nanh Heo Chuoi Com Lao Chuoi La Nang Tien Chuoi Mit Chuoi Thom
Diploid AB (cooking)	Sarocsoc				
Musa x paradisiaca **Triploid AAB (dessert)**	Hilao-Hinog Reynis		Pisang Sri Pisang Lampeneng	Kluai Khom Kluai Nom Sao	Chuoi Man
Triploid AAB (dual purpose)	Canara	Pisang Geraksa Pisang Raja Talong		Kluai Wan	Chuoi Tay Bot Chuoi Cha Chuoi Xiem Mat
Triploid AAB (cooking)	Muracho Popo'ulo		Pisang Kastroli		

[1] Sometimes eaten cooked.

Musa x paradisiaca **Triploid ABB (dual purpose)**	Pitogo			Kluai Namwa Dam Kluai Namwa Khao Kluai Namwa Khom	Chuoi Mo Giang Chuoi La Chuoi Tay Tia Chuoi Bot
Triploid ABB (cooking)	Moko		Pisang Usuk	Kluai Pluak Na	Chuoi Nam
Tetraploid AABB (cooking)				Kluai Ngoen	
Musa balbisiana **Diploid BB (cooking)**	Abuhon				
Diploid BB (seeded, multi-purpose)					Chuoi Hot Qua Lep[2]
Triploid BBB (cooking)	Bigihan Inabaniko Mundo Saba sa Hapon				
Musa fehi			Pisang Tongkat Langit Kuning Pisang Tongkat Langit Merah		
Unclassified	Inambak		Pisang Kates Pisang Rojo Uter		

[2] Many aborted seeds; leaves are used as wrapping material, male bud is cooked as vegetable or eaten fresh in various salad preparations, pseudostems are fed to animals, fruits with seeds eaten fresh.

numerous than ABB clones and that AB, AABB and ABBB hybrids are rare. Two varieties of Fe'i bananas, *Musa fehi* Bert. grown in the Maluku region of eastern Indonesia and two unclassified accessions bearing edible fruits are likewise included in Table 5. In Southeast Asia as in South Pacific, cultivar names consist of a generic head term meaning banana followed by secondary terms that generally designate the clone. The cultivar names presented in Tables 3 and 4 are the terms most commonly used in the different countries of Southeast Asia. However, synonyms also exist within each country and many publications may have utilized the synonyms instead of the principal cultivar names adopted in this bulletin. Table 6 enumerates 15 of the more popular cultivars in each country of the region along with their national synonyms. The workshop refrained from using the few internationally recognized sub-groups as the present list is limited and ill-defined except for the Cavendish and plantains, here applied in its broad sense and not in the strict and narrow meaning of the term. The authors also avoided from using the system of nomenclature proposed by Simmonds and Shepherd which replaced the species name with genome groups that could easily lead to errors and confusion. Instead, the simple but precise and stable method of Cheesman and the International Code of Nomenclature for Cultivated Plants was adopted.

Plantains are highly priced in Southeast Asia but not common except in Java, Indonesia. They are grown in backyards for home consumption and only a few farmers specialize in commercial production of plantains due to their susceptibility to pests, diseases and adverse weather conditions. The general term plantain is applied only to a specific subgroup of cooking bananas and does not include the numerous and divergent culinary cultivars that are very popular in Asia. On the other hand, the term banana is not limited to the dessert varieties but also covers all the cooking bananas, including the plantains. In other words, all plantains are also bananas but not all bananas are plantains! This is the reason why in Southeast Asian languages, there is no differentiation between the foreign terms banana and plantain. The common name **pisang** in Malaysia and Indonesia, **saging** in the Philippines, **kluai** in Thailand, **choui** in Vietnam, and **chiao** in China are applicable to all dessert and cooking bananas, including plantains.

Table 5. Number of cultivars under the different species and types of edible bananas.

Species	Genome	Type	Cultivars with Synonyms	Unique Cultivars	Total
Musa acuminata	AA	Dessert	17	16	33
		Dual purpose	2	-	2
		Cooking	-	4	4
	AA/AAA	Dessert	2	-	2
	AAA	Dessert	14	12	26
Musa x paradisiaca	AB	Dessert	-	7	7
		Cooking	-	1	1
	AAB	Dessert	7	7	14
		Dual purpose	-	7	7
		Cooking	8	3	11
	ABB	Dual purpose	3	8	11
		Cooking	5	4	9
	AABB	Cooking	-	1	1
	ABBB	Cooking	1	-	1
Musa balbisiana	BB	Cooking	-	2	2
	BBB	Cooking	9	4	13
		Total	68	76	144
Musa fehi			-	2	2
Unclassified			-	3	2
		Grand Total	68	81	149

Summary

The curators of national banana variety collections in Southeast Asia evaluated the existing banana classification schemes and agreed on a common and standardized format which is simple but precise and stable system of nomenclature to identify the species and cultivars of banana.

The three tier system using species, genome group and cultivar was adopted. Following Cheesman's recommendations, the edible diploid and triploid derivatives of *Musa acuminata* Colla and *Musa balbisiana* Colla will adopt the scientific name of their respective wild parents. The hybrids of the two species will be classified under *Musa* **x** *paradisiaca* Linn as recognized by the International Code of Nomenclature for Cultivated Plants (Trehane, 1995).

The banana taxonomists of the region identified 68 cultivars with synonyms in Southeast Asia and listed them in Table 3. Many other cultivars were found to be unique to the countries of the region and 81 varietal names are presented in Table 4.

Table 5 presents a total of 149 distinct banana cultivars of Southeast Asia under the three recognized species and nine genome groups. The data shows that diploid *acuminata* clones are the most numerous, followed by triploid *acuminata*

Table 6. The popular cultivars in Southeast Asia and their synonyms.

	Common Names	Synonyms
Philippines	Latundan	Tundan, Turdan, Suring
	Lakatan	Mapang
	Buñgulan	Buluñgan, Balañgon
	Sulay Baguio	Tampuhin, Po-ot
	Inarnibal	Señorita, Monkoy
	Tudlo Datu	Morong Datu
	Ternate	Gloria, Angao
	Katali	Lagkitan
	Laknau	Darayan, Maybay
	Matavia	Dacosta, Galañgan
	Katsila	Sabang Kastila
	Turangkog	Calibo, Sab-a
	Pelipia	Pinipita, Pelipita
	Tindok	Tondoc
	Saba	Dippig
Malaysia	Pisang Mas	P. Mas Besar, P. Mas Kampung
	P. Empat Puluh Hari	P. Boyan
	P. Rastali	P. Kelat Keling
	P. Embun	P. Bunga
	P. Masak Hijau	P. Jelai
	P. Awak	P. Kelat Siam
	P. Raja	P. Raja Talun
	P. Jari Buaya	P. Rotan
	P. Raja Udang Hijau	P. Mundam, P. Minyak Laut
	P. Keling	P. Ceylon
	P. Abu Keling	P. Kelat Abu
	P. Nipah	P. Abu Nipah
	P. Gading	P. Relong
	P. Abu Siam	P. Benggala Barat
	P. Serendah	P. Kapal
Indonesia	Pisang Ambon	P. Ambon Kuning
	P. Badak	P. Morosebo
	P. Uli	P. Jantan
	P. Mas	P. Emas, Amasan
	P. Raja	P. Raja Bulu
	P. Udang	P. Potho Merah, P. Kidang
	P. Telor	P. Potho Hijau
	P. Nangka	P. Lampeng
	P. Siem	P. Longok
	P. Kosta	P. Kepok Hijau
	P. Kosta Putih	P. Kepok Awu
	P. Kepok	P. Kepok Putih, P. Sabah
	P. Lampung	P. Berlin
	P. Jari Buaya	P. Rejang
	P. Pinang	P. Jambe

Thailand	Kluai Khai	K. Jek Bong, K. Kra
	K. Lep Mu Nang	K. Mak
	K. Thong Ruang	K. Khai Thong Ruang
	K. Hom Thong	K. Hom
	K. Hom Khieo	K. Khieo, K. Khrao
	K. Hom Khom	K. Hom Tia, K. Tia
	K. Nak	K. Khrang
	K. Lanka	K. Chin
	K. Nam Thai	K. Hom Lek
	K. Namwa	K. Tai
	K. Lep Chang Kut	K. Lep Chang, K. Ko
	K. Khai Bong	K. Khai Pra Ta Bong
	K. Hak Muk Khao	K. Hak Muk
	K. Hak Muk Khieo	K. Som
	K. Thepparot	K. Tiparot, K. Pli Hai
Vietnam	Chuoi Tay But	C. Cam
	C. Ngu Thoc	C. Ngu
	C. Tieu Lun	C. Gia Lun
	C. Tieu Vua	C. Gia Huong
	C. Tieu Cao #1	C. Gia
	C. Man	C. Man Com
	C. Tay	C. Su
	C. Ngop Lun	C. Ngop
	C. Mat	C. La Mat
	C. Mat Boket	C. La
	C. Trung	C. Tieu Den
	C. Tien	C. Tien Hue
	C. Tay Bot	C. Tay Tieu
	C. Nam	C. Gao

cultivars. The pure *acuminatas* clearly predominate in number over the *balbisiana* clones and their hybrids. Another interesting observation is that practically all the *acuminata* cultivars are dessert bananas, with the exception of two dual purpose clones and four cooking varieties, three of which have distinctive yellow bracts. On the other hand, all the pure *balbisianas* are culinary varieties. Bananas that are consumed either fresh or cooked are common among the hybrids. Some of the AAB hybrids are eaten fresh while none of the ABB cultivars are considered dessert bananas.

The great wealth of *Musa* germplasm in Southeast Asia includes some of the rarest and most unique cultivars of banana in the world. The Pisang Kates of Indonesia bear large, solitary fruits per ‘hand’ and the ‘fingers’ look like small papaya. Kates mean papaya. The Fe’i bananas of eastern Indonesia bears upright fruit bunches. The local name Pisang Tongkat Langit means banana that face the sky or reaching towards heaven. On the other hand, the Pisang Seribu of Malaysia bears long and extended fruit bunches that hang and continuously

grows and produces miniature fruits until almost touching the ground. Pisang Seribu means banana with a thousand fruits. The very rare Pisang Rojo Uter of Indonesia produces a continuous hand of fruits that spiral around the fruit stalk from base to tip of bunch. The Pitogo of the Philippines bears fruits that are almost spherical in shape, just like the betel nut, while the Binendito or Inabaniko cultivar is distinguished by the fused fingers of all the individual fruits in one hand. Abaniko means fan in Filipino. The Pastilan in southern Philippines produces two or more bunches of fruit per plant. Thailand is the origin of the notoriously unstable Kluai Tiparot. This tetraploid cultivar can produce fruit bunches either with or without a male bud. Bunches with no male buds are upright and normally produce two hands of large-size fruits. Normal bunches with male buds are pendant and produce five to seven hands of regular-size fruits. Sometimes the rachis of a normal fruit bunch will split and produce two or more male buds. Another unstable character is the red coloration of the cultivar Morado. Aside from variations in color intensity, the red color of the entire plant occasionally reverts back to green. The interesting "cultivar" of Vietnam is Chuoi Hot Qua Lep, a *balbisiana* clone with many soft, aborted seeds cultivated in backyards for multifarious household uses. The leaves are used as wrapping material, male bud is cooked as vegetable or eaten fresh in various salad preparations, and the pseudostems are fed to animals. Chuoi Hot Qua Lep is in transition from natural, wild *balbisiana* species to a horticultural *balbisiana* variety through human selection.

The curators of national banana variety collections of Southeast Asia are holders of the original and authentic accessions of Southeast Asian *Musa* germplasm. They offer assistance in the proper identification of banana cultivars that originated from the region. They also recommend the development and adoption of a referral system wherein banana taxonomists from the other regions of the world could get advice on the correct identity of banana varieties from the concerned national curator.

The banana taxonomists of Southeast Asia recommend the identification of synonyms that exist in the Indian subcontinent, Sri Lanka, Bangladesh, Myanmar and possibly China. Equal importance should be given to the problem of synonymy in the South Pacific. The participation of a national curator in Southeast Asia is suggested to facilitate the eventual integration of banana cultivar names and synonyms in Asia and the Pacific.

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Latundan

Lakatan

Saba

Morado

Inabaniko

Pitogo

Popular and Unique Cultivars of the Philippines.

Pisang Lilin

Pisang Jari Buaya

Pisang Serendah

Pisang Seribu

Source: Satuhu & Supriyadi

Pisang Mas

Pisang Masak Hijau

Popular and Unique Cultivars of Malaysia

Pisang Ambon

Pisang Raja

Pisang Tanduk

Pisang Lampung

Pisang Kates

Pisang Tongkat Langit

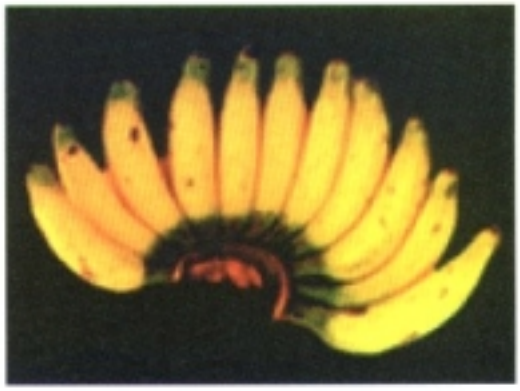
Source: Satuhu & Supriyadi

Popular and Unique Cultivars of Indonesia

Kluai Hom Thong

Kluai Hak Muk Khao

Kluai Nam Wa



Kluai Lep Mu Nang

Kluai Thepparot

Kluai Khai

Popular and Unique Cultivars of Thailand

Chuoi Cau Tay

Chuoi Tieu Cao Hong

Chuoi Tieu Vua

Chuoi Tay But

Chuoi Mat Bo Ket

Chuoi La Rung

Popular and Unique Cultivars of Vietnam