

## ミャンマー国におけるマメ類遺伝資源の共同調査収集

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## Collaborative Exploration for Collecting Legume Germplasm in Myanmar

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### Summary

A collaborative exploration between Japan and Myanmar for collecting legume germplasm was conducted in the Shan state and the Mandalay division of Myanmar from February 23 to March 16, 2002. Many kinds of legumes are cultivated in Myanmar. Especially, the Sagaing division and the east region of the Shan state are the main production areas for *Vigna* species, soybean and chickpea and these regions are rich in food legume germplasms. In this exploration, we collected 215 food legumes, including *Arachis hypogaea*, *Cajanus cajan*, *Cicer arietinum*, *Glycine max*, *Lablab purpurea*, *Lens esculenta*, *Pachyrhizus erosus*, *Phaseolus lunata*, *Phaseolus vulgaris*, *Pisum sativum*, *Psophocarpus tetragonolobus*, *Vicia faba*, *Vigna radiata*, *Vigna mungo*, *Vigna unguiculata* and *Vigna umbellata*. Some varieties of

major legumes such as *Vigna* species, soybean and chickpea were replaced by improved varieties. Landraces of legumes in Myanmar will be replaced by improved or introduced varieties soon. We could not collect any wild legumes because our exploration was conducted in dry season.

**KEY WORDS:** food legume, landraces, collection, exploration, Shan state, Mandalay division, Myanmar

## 1. 目的

ミャンマーは北緯 9° 58′ ~28° 31′ , 東経 92° 9′ ~101° 10′ に位置し, インド, 中国, ラオス, タイと国境を接する国で, 西部や北部, 東部地域は標高 915~2,134mの高地が広がっている. 気候分布は熱帯から亜熱帯で<sup>1)</sup>, 季節は雨季 (6~10月), 冬季 (11~2月), 夏季 (3~5月) に分けられている<sup>6)</sup>. 多民族国家であることから習慣や食文化も様々で, 栽培される食用マメ類の種類は多く, *Vigna* 属をはじめとする多種類のマメ類の遺伝的多様性が高い地域と考えられている<sup>2)</sup>. 一方, 商業活動が活発になるにつれ, タイやインド, 国際半乾燥熱帯地域作物研究センター (International Crop Research Institute for Semi-Arid Tropics : ICRISAT) などから改良品種が導入されつつあり, これまで維持されてきた食用マメ類の多様性崩壊が危惧されている. 他方, Yezin では JICA の協力のもとシードバンクプロジェクトが進められているが, ミャンマー独自の遺伝資源収集は少なく, また, 政情の不安定と外国人の入域制限のため, 海外との共同収集も進んでいない<sup>2)</sup>.

そこで本探索では食用マメ類の多様な遺伝資源の存在が期待できる Shan 州及び Mandalay 管区内における食用マメ類の在来種や野生種をミャンマー中央農業研究所シードバンクと共同で調査, 収集した.

## 2. 調査地選定と調査収集方法

ミャンマーには多くのダイズ発酵食品があり<sup>4)</sup>, タイと国境を接する Shan 州では納豆などに利用される小粒ダイズの栽培が盛んであることから, ダイズ (*Soybean, Glycine max* (L.) Merrill) の遺伝的多様性が期待できる. また, インドからミャンマーにかけての地域はリョクトウ (*Green gram, Vigna radiata* (L.) Wilczek) やケツルアズキ (*Black gram, Vigna mungo* (L.) Hepper) の原産地とも考えられており<sup>3)</sup>, これらマメ類の遺伝的多様性も高いと思われた. そこで, Shan 州及び Mandalay 管区内のうちミャンマー当局から入域を許可された地域について, 食用マメ類遺伝資源の調査, 収集を行った. 具体的には, 郡単位で配置されているミャンマー農業公社 (Myanmar Agriculture Service : MAS) のタウンシップ・オフィス (日本の農業改良普及セン

ターに相当する組織)を訪問し、タウンシップ・マネージャーから食用マメ類の栽培情報を収集し、スタッフの案内のもと栽培農家に出向き調査、収集を実施するのを基本とした。また、調査拠点周辺及び移動中に立ち寄ったマーケット(市場)などでも調査、収集を行った。聞き取り調査では作期や特性、栽培履歴などの情報を収集するように努めた。本調査収集は冬季後半から夏季前半にかけての季節であったことから、当地域の大部分のマメ類は作期ではなかった。そのため収集の大部分は農家の蔵などに保存してあったものである。また、ヒラマメ(Lentil, *Lens esculenta* Moench)やフジマメ(Lablab bean, *Lablab purpurea* (L.) Sweet)の一部については農家の圃場や軒下で成熟に達していたものを採種して収集した。なお、調査、収集のための移動手段はすべて車である。

### 3. 調査結果

探索収集ルートをFig. 1に、探索旅行の日程をTable 1に示した。本探索ではShan州の西部及びMandalay管区の比較的標高の高い(海拔1,000m前後)地域を中心に食用マメ類の遺伝資源を収集した。まず、Nyaungshwe市を拠点にしてインレー湖周辺の探索を行った。次いでTaunggyi市、Pindaya市、Kalaw市を拠点に探索したが、この間には予定していたHsi Hseng市、Lawksawk市、Indow市にはミャンマー当局の指示により入域することはできなかった。探索後半はMandalay管区に場所を移し、標高の低いMandalay市及び標高の高いPyin Oo Lwin市(海拔1,000m前後)を拠点に収集を行った。

本探索において合計215点の遺伝資源を収集した。その内訳はTable 2に示す16種の食用マメ類で、ダイズ(41点)が最も多く、次いでインゲンマメ(French bean / Kidney bean, *Phaseolus vulgaris* L.) (40点)、ライマメ(Lima bean, *Phaseolus lunata* L.) (25点)、ササゲ(Cowpea, *Vigna unguiculata* L.) (20点)、タケアズキ(Rice bean, *Vigna umbellata* Thunb.) (19点)、フジマメ(Lablab bean, *Lablab purpurea* L.) (17点)の順となった。野生種は乾季でもあったことから目にすることはできず、収集できなかった。

#### 1) ラッカセイ (Peanut, *Arachis hypogaea* L.)

ラッカセイの栽培面積は約45万haで、Mandalay, Magwe, Sagaing管区とShan州では雨季に、Ayeyarwadyデルタ地域では冬季に栽培される<sup>6)</sup>。ラッカセイは重要な油量作物で、油のほか料理やスナックに利用される。

#### 2) キマメ (Pigeon pea, *Cajanus cajan* L.)

キマメの栽培面積は約24万haで、ミャンマーにおいては3番目に重要なマメ科作物として位置づけられ

ている。栽培地域は主として中央乾燥地帯の Sagaing, Mandalay, Magwe 管区で雨季に栽培される<sup>6)</sup>。収集した14点のキマメのうち13点はShan州で収集したもので、それらの大部分は在来種であったが、なかには改良種もみられた。キマメの病害虫としては莢や葉を食害する害虫 (pod borer, leaf roller, leaf minor) やアブラムシによる被害がある。種皮色は白や褐の単色のもの、白または淡褐に褐色の斑点があるものがみられた。

### 3) ヒヨコマメ (Chick pea, *Cicer arietinum* L.)

ヒヨコマメの栽培面積は約11万haで、Sagaing, Mandalay, Magwe, Bago, Ayeyarwady 管区で主として栽培されている<sup>6)</sup>。収集した7点のヒヨコマメのうち、5点はShan州の農家及びマーケットで収集した。残り2点はICRISATから導入されたもので、Mandalay 管区のMAS オフィスで収集した。ヒヨコマメはきなことして、スープに入れるなどして利用されている。今回収集したShan州, Mandalay 管区では特に病害は問題になっていなかった。

### 4) ダイズ (Soybean, *Glycine max* L.)

ダイズのことを「Pe Poke (ペポ)」という。ダイズの栽培面積は約8万haで、全栽培面積の約46%は標高が約1,000mに位置するShan州で雨季に栽培される<sup>6)</sup>。また、Sagaing, Mandalay, Bago 管区とKachin州でもダイズが栽培されるが、これらの地域では冬季に栽培されている<sup>6)</sup>。本探索で収集した41点のうち16点はMAS オフィスから収集したもので、これらはICRISATから導入されたもので、導入のための試作試験を進めているようである。残りの25点は農家及びマーケットで収集したもので、このなかには改良種もみられる。ダイズは豆腐、納豆の原料であり、納豆は日本の納豆に似たものや強烈な臭いのするせんべい状乾燥納豆が売られていた。種皮色は黄白のものが多く、なかには淡緑、緑のものもみられた。また、粒大は極小粒から中粒のものまでであった。アブラムシが一部で発生するが、その他に子実食害害虫 (pod borer) が多くみられた。

### 5) フジマメ (Lablab bean, *Lablab purpurea* (L.) Sweet)

フジマメは農家の庭の片隅で家庭菜園的な感覚で栽培されているようである。収集したすべてが在来種で、そのほとんどは古くから栽培されているものであった。種皮色は黒、白、褐のものがみられた。成熟した子実、若莢を利用している。

### 6) ヒラマメ (Lentil, *Lens esculenta* Moench)

ヒラマメはマイナーなマメ類で、Sagaing 管区が栽培の中心である<sup>6)</sup>。本探索ではShan州インレー湖の西部地区で3点収集した。ヒラマメは煮物に入れられる。

#### 7) クズイモ (*Yam bean, Pachyrhizus erosus* (L.) Urban)

クズイモはマメ科作物のなかでは珍しくデンプンや糖に富んだ塊根を利用する熱帯地域の食用作物であり、中国や東南アジアでは野生化している<sup>5)</sup>とされている。本探索では1点収集するとともに、Mandalay市のマーケットで塊根が売られているのを目にすることができた。クズイモはミャンマーでは「Ice bean」と呼ばれていた。

#### 8) *Phaseolus* 属

*Phaseolus* 属マメ類として、ライマメ (*Lima bean, Phaseolus lunata* L.) 25点、インゲンマメ (*French bean / Kidney bean, Phaseolus vulgaris* L.) 40点を収集した。これらのマメ類はMandalay管区、Sagaing管区で比較的多く栽培されているが、ミャンマーで栽培される食用マメ類全体からみるとマイナーな作物である<sup>6)</sup>。インゲンマメはインレー湖では浮き草によってつくられた浮島で栽培され、また、ジャガイモとの間作もされているようである。これら *Phaseolus* 属マメ類は成熟した子実が利用されるが、インゲンマメでは若莢も利用されている。本探索で収集した *Phaseolus* 属マメ類は比較的古くから栽培されているものが多かった。

#### 9) エンドウ (*Garden pea, Pisum sativum* L.)

エンドウもマイナーなマメ類で、主な栽培地はMagwe, Sagaing管区となっている<sup>6)</sup>。エンドウは子実のほか若莢を利用している。本探索では9点のエンドウを収集した。一部改良種もみられたが、その多くは古くから栽培されている在来種であった。

#### 10) シカクマメ (*Winged bean, Psophocarpus tetragonolobus* (L.) DC.)

シカクマメはインドから東南アジアで広く栽培されている<sup>5)</sup>。本探索ではShan州のインレー湖東部からTaunggyi市にかけての地域で3点収集した。若莢と塊根を利用する。

#### 11) ソラマメ (*Broad bean, Vicia faba* L.)

Shan州インレー湖の北部にあるTaung Po Koe Lone村のマーケットで1点収集した。若莢及び子実を利用している。

#### 12) *Vigna* 属

リョクトウ (*Green gram, Vigna radiata* (L.) R. Wilczek) は約54万haの作付けがありYangon, Bago, Magwe, Mandalay, Sagaing管区が主な栽培地域で、ケツルアズキ (*Black gram, Vigna mungo* (L.) Hepper) は約48万haに作付けられ、Ayeyarwady, Yangon, Bago管区が主要産地となっている<sup>6)</sup>。また、ササゲ (*Cow pea, Vigna unguiculata* (L.) Walp.) は約8万haの作付けがあり、Magwe, Yangon, Bago, Mandalay, Ayeyarwady管区が主な栽培地となっている<sup>6)</sup>。リョクトウとケツルアズキがミャンマーにおける食用マメ類のなかで最も重

要な位置を占めるなど、*Vigna* 属食用マメ類の栽培がかなり多い。本探索ではケツルアズキ5点、リョクトウ5点、タケアズキ (Rice bean, *Vigna umbellata* (Thunb.) Ohwi et Ohashi) 19点、ササゲ20点を収集した。ケツルアズキやリョクトウは麺 (春雨) やもやし原料、タケアズキは食材のほか緑肥や家畜の飼料として利用される。またササゲは子実のほか若莢も利用される。これら *Vigna* 属マメ類は古くから栽培されている在来種が大部分であったが、リョクトウにおいては改良種や導入品種が多かった。

#### 4. 所感

探索は全般に順調に進み、ダイズ、*Vigna* 属など主要なマメ類のほか、クズイモなどわが国では馴染みの薄いマメ類についても収集することができた。これにはミャンマー当局、ミャンマー農業公社の協力の賜である。しかし、Hsi Hseng 市、Lawksawk 市、Indow 市周辺へは「安全保証」を理由に入城することができず、本探索がごく限られた地域の調査収集活動となってしまったことは残念であった。また、本探索は11月-12月の予定であったが、実際には2月-3月に実施した。そのため、今回訪れたShan州、Mandalay管区ではマメ科作物の大部分が作期ではなく、ほとんど立毛をみることはできなかった点は残念であるが、種子の収集という点からはむしろ好都合であった。

リョクトウなどの *Vigna* 属、ダイズ、ヒヨコマメなどミャンマーの主要食用マメ類とされているものについては、一部ではあるが改良品種導入が進んでいる。また、ICRISAT などからの導入も図られようとしており、ミャンマー農業公社ではこれら導入種の試作を行っていた。ダイズなどでは油料原料として生産拡大を図る向きもあるため、改良種の導入が進められ、将来在来種が消失していく可能性が大きいと思われる。ミャンマー国におけるマメ類育種事業や海外からの導入が本格化する前に、今回入城出来なかったShan州の東部 (タイとの国境周辺) 地域や *Vigna* 属マメ類の栽培が多いSagaing管区などにおけるマメ類収集を急ぐ必要があるだろう。

最近ミャンマーでは種子法が整備され、遺伝資源などの国外持ち出しにあたっては、その遺伝資源の取り扱いに関する同意書にサインすることが義務づけられた。また、植物防疫所とシードバンクの考え方に違いがあるためか、遺伝資源持ち出しの手続きに混乱が生じた。すなわち、本探索では当初、シードバンクの許可が下りれば遺伝資源の国外持ち出しができるということであったが、収集を終えシードバンクに戻った時点では、やはり植物防疫所の許可が必要ということになっていた。本探索ではこういったことから終盤やや混乱に陥り、十分な種子整理ができないままでの出国となった。今後はこういう状況にも注意しておく必要がある。

## 5. 謝辞

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Table 1 Itinerary of the exploration and collection

調査探索日程			
Date	Route	Note	
'02 2.23 (Sat)	Narita → Bangkok (Thailand) → Yangon (Myanmar)	Flight	
2.24 (Sun)	Yangon		
2.25 (Mon)	Yangon : visit to Embassy of Japan, Ministry of Agriculture & Irrigation, Myanmar Agriculture Service		
2.26 (Tue)	Yangon → Yezin	By car	
2.27 (Wed)	Yezin : Meeting		
2.28 (Thu)	Yezin → Nyaungshwe	By car	
3.1 (Fri)	Nyaungshwe → Hlay Seik Village → Nyaungshwe : Collection	By car	
3.2 (Sat)	Nyaungshwe → Hin Thaut Village → Me Thway Phote Village → Tat Kone Village → Ohn Hne Pin Village → Nyaungshwe → Taung Po Koe Lone Village → Nyaungshwe : Collection	By car	
3.3 (Sun)	Nyaungshwe → Shwe Nyaung Village → Taunggyi → Than Te Village → Taunggyi : Collection	By car	
3.4 (Mon)	Taunggyi → Hte Ham Swee Village → Hum Sie Village → Ban Yin Village → Taunggyi : Collection	By car	
3.5 (Tue)	Taunggyi → He Ho Village → Pindaya : Collection	By car	
3.6 (Wed)	Pindaya → Kyone Village → Pindaya : Collection	By car	
3.7 (Thu)	Pindaya → Kalaw → Mying Ma Htee Village → La Mine Village → Kalaw : Collection	By car	
3.8 (Fri)	Kalaw → Lat Pan Pin Village → Yua Ngan Town → Myo Gyi Village → Mandalay : Collection	By car	
3.9 (Sat)	Mandalay → Mo Gyo Pyit Village → Yin Nge Village → Pyin Oo Lwin : Collection	By car	
3.10 (Sun)	Pyin Oo Lwin → Thome Taung Village → Mandalay : Collection	By car	
3.11 (Mon)	Mandalay : Collection	By car	
3.12 (Tue)	Mandalay → Amarapura → Yezin : Collection & Seed cleaning	By car	
3.13 (Wed)	Yezin → Yangon : Seed cleaning	By car	
3.14 (Thu)	Yangon : Plant Protection Station		
3.15 (Fri)	Yangon → Bangkok	Flight	
3.16 (Sat)	Bangkok → Narita	Flight	



Table 2 Number of collected food legume from Shan State and Mandalay Division

## 収集した食用マメ類の点数

Plant Name	Genus & Species	Shan State	Mandalay Division	Total
Peanut	<i>Arachis hypogaea</i>	5		5
Pigeon pea	<i>Cajanus cajan</i>	11	3	14
Chick pea	<i>Cicer arietinum</i>	5	2	7
Soybean	<i>Glycine max</i>	36	5	41
Lablab bean	<i>Lablab purpurea</i>	12	5	17
Lentil	<i>Lens esculenta</i>	3		3
Yam bean	<i>Pachyrhizus erosus</i>	1		1
Lima bean	<i>Phaseolus lunata</i>	13	12	25
French bean/Kidney bean	<i>Phaseolus vulgaris</i>	33	7	40
Garden pea	<i>Pisum sativum</i>	6	3	9
Winged bean	<i>Psophocarpus tetragonolobus</i>	3		3
Broad bean	<i>Vicia faba</i>	1		1
Black gram	<i>Vigna mungo</i>	2	3	5
Green gram	<i>Vigna radiata</i>	2	3	5
Rice bean	<i>Vigna umbellata</i>	14	5	19
Cow pea	<i>Vigna unguiculata</i>	16	4	20

Table 3. List of Collected Materials (Collaborative exploration for collecting legume genetic resources in Myanmar, 2001)

No. 1

Collection No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
2	1 Mar.	<i>Cajanus cajan</i>	SHWE DIN GAR	Pigeon pea	landrace	HLAY SEIK VILLAGE				farm		May-Dec/Jan	Curry, Export	no		10 years
3	1 Mar.	<i>Glycine max</i>	PE POAT SEED	Soybean	landrace	HLAY SEIK VILLAGE				farm		May-Oct	Curry, like Natto, Miso, Tofu	no		50-60 years
4	1 Mar.	<i>Arachis hypogaea</i>	MAGWAY(10)	Peanut	landrace	HLAY SEIK VILLAGE				farm		May-Aug	Oil, Snack	no		15 years
5	1 Mar.	<i>Vigna unguiculata</i>	PE TAUNT SHAY	Cow pea	landrace	HLAY SEIK VILLAGE				farm		May-Aug	Curry	no		50-60 years
6	1 Mar.	<i>Phaseolus vulgaris</i>	BO SA PE	French bean	landrace	HLAY SEIK VILLAGE				farm		All	Curry	Aphid(little)		50-60 years
7	1 Mar.	<i>Phaseolus vulgaris</i>	PE PYIN	Kidney bean	landrace	HLAY SEIK VILLAGE				farm		All	Curry, Soup	no		50-60 years
8	1 Mar.	<i>Vigna unguiculata</i>	PE THUN	Cow pea	landrace	HLAY SEIK VILLAGE				farm		May-Aug	Curry	no		Intercropping with pigeon pea
9	1 Mar.	<i>Vigna unguiculata</i>	PE TAUNT SHAY	Cow pea	landrace	HLAY SEIK VILLAGE				farm		May-Aug	Curry	Aphid		50-60 years
10	1 Mar.	<i>Lablab purpurea</i>	PE GYI or SHWE YINMAR	Lablab bean	landrace	HLAY SEIK VILLAGE				farm		Sep-Jan	Curry, Snack	Aphid		old variety
11	2 Mar.	<i>Vigna unguiculata</i>	PE LONE or PE THIUN	Cow pea	landrace	HIN THAUT VILLAGE	N20.34.374	E96.56.695	888	market	U Aung Win		Curry			
12	2 Mar.	<i>Vigna umbellata</i>	PE YINE SEED	Rice bean	landrace	HIN THAUT VILLAGE	N20.34.374	E96.56.695	888	market	U Aung Win		Curry, Snack			
13	2 Mar.	<i>Vigna umbellata</i>	PE YINE	Rice bean	landrace	HIN THAUT VILLAGE	N20.34.374	E96.56.695	888	market	U Aung Win		Curry, Soupe			
14	2 Mar.	<i>Phaseolus lunata</i>	PE NI PYA(SUNTANI)	Lima bean	landrace	HIN THAUT VILLAGE	N20.34.374	E96.56.695	888	market	Daw Nwe		Curry, Snack			
15	2 Mar.	<i>Cicer arietinum</i>	KALA PE ANI	Chick pea	landrace	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	Sep-Jan	Curry, Snack	no		old variety
16	2 Mar.	<i>Lablab purpurea</i>	PE GYI	Lablab bean	landrace	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	Sep-Jan	Curry, Snack	Aphid(little)		old variety
17	2 Mar.	<i>Cajanus cajan</i>	PE SIN NAON(LATO)	Pigeon pea	landrace	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	May-Jan	Curry, Snack	no		15 years
18	2 Mar.	<i>Cicer arietinum</i>	KALA PE PHYU	Chick pea	landrace	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	Sep-Jan	Snack	no		15 years
19	2 Mar.	<i>Vigna unguiculata</i>	BO CAKE PE	Cow pea	landrace	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	May-Aug	Curry, Snack	no		10 years
20	2 Mar.	<i>Vigna radiata</i>	PE DE SAIN	Green gram	improved	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	Jan-Mar	Curry	no		2 years
21	2 Mar.	<i>Vigna unguiculata</i>	PE LONE	Cow pea	landrace	MIN THAUT VILLAGE	N20.34.375	E96.56.697	888	farm	Daw Hla Thin	May-Aug	Curry, Snack	no		old variety
22	2 Mar.	<i>Lablab purpurea</i>	PE GYI	Lablab bean	landrace	ME THWAY PHOTE VILLAGE	N20.34.375	E96.56.697	888	farm	U Chit Nyo	Sep-Feb	Curry, Snack	no		old variety
23	2 Mar.	<i>Cajanus cajan</i>	PE SINE NGON	Pigeon pea	improved	ME THWAY PHOTE VILLAGE	N20.34.375	E96.56.697	888	farm	U Phyu	Jul-Mar	Curry, Snack	Pod borer(little)		6 years
24	2 Mar.	<i>Cajanus cajan</i>	PE SINE NGONE(LA SHAY)	Pigeon pea	improved	ME THWAY PHOTE VILLAGE	N20.34.375	E96.56.697	888	farm	U Nyunt Shwe	May-Apr	Curry, Snack	Pod borer(little)		5 years
25	2 Mar.	<i>Vigna radiata</i>	PE DE SEIN	Green gram	improved	near ME THWAY PHOTE	N20.34.375	E96.56.697	888	farm	U Khin Maung Than	Jun-Aug /Sep-Nov	Curry	Aphid(little)		2 years

Table 3. List of Collected Materials (Collaborative exploration for collecting legume genetic resources in Myanmar, 2001)

No. 2

Collection No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
26	2 Mar.	<i>Vigna unguiculata</i>	THAUNG SAR PE	Cow pea	landrace	TAT KONE VILLAGE	N20.34.375	E96.56.697	888	farm	U Chit Swe	May-Jul	Curry(only young pod)	Aphid(little)		2 years
27	2 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE	French bean	landrace	TAT KONE VILLAGE	N20.34.375	E96.56.697	888	farm	U Chit Swe	May-Jul	Curry	Aphid		10 years
28	2 Mar.	<i>Lablab purpurea</i>	PE WET KHAUK	Lablab bean	landrace	TAT KONE VILLAGE	N20.34.375	E96.56.697	888	farm	U Chit Swe	May-Jan	Curry			8 years
29	2 Mar.	<i>Pisum sativum</i>	SHWE PE THEF	Garden pea	landrace	OHN HNE PIN VILLAGE	N20.38.533	E96.56.748	935	farm	U Chit Htun	Nov-Jan	Curry for vegetable	Aphid		15years
30	2 Mar.	<i>Lablab purpurea</i>	PE WET THE	Lablab bean	landrace	OHN HNE PIN VILLAGE	N20.38.533	E96.56.748	935	farm	U Chit Htun	Jul-Nov	Curry for vegetable	Aphid		old variety
31	2 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	near MAS				farm		May-Nov	Curry	no		old variety
32	2 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR(APHYU)	Lima bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	Jun-Nov	Curry, Snack	no		old variety
33	2 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR(AKYAR)	Lima bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	Jun-Nov	Curry, Snack	no		old variety
34	2 Mar.	<i>Cicer arietinum</i>	KA LA PE	Chick pea	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	Oct-Feb	Curry, Snack	no		old variety
35	2 Mar.	<i>Vigna umbellata</i>	PE YIN A WAR	Rice bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Oct	Curry, Green manure	no		10 years
36	2 Mar.	<i>Vigna umbellata</i>	PE YIN AKYAR	Rice bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Oct	Curry, Green manure			10 years
37	2 Mar.	<i>Cajanus cajan</i>	PE SINE NGOME	Pigeon pea	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Jan	Curry, Snack	Aphid		10 years
38	2 Mar.	<i>Vigna unguiculata</i>	PE LONE	Cow pea	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Nov	Curry, Snack	no		old variety
39	2 Mar.	<i>Vigna unguiculata</i>	TAIN THAUNG PE	Cow pea	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Jul /Sep-Nov	Curry	no		old variety
40	2 Mar.	<i>Psophocarpus tetragonolobus</i>	PE LAY DAUNT	Winged bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Oct	Curry & Snack for only younger pod and root	no		old variety
41	2 Mar.	<i>Phaseolus lunata</i>	PE NE	Lima bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Nov	Curry, Snack	no		old variety
42	2 Mar.	<i>Lablab purpurea</i>	PE PA ZUN	Lablab bean	landrace	TAUNG PO KOE LONE VILLAGE	N20.42.097	E96.56.828	935	farm	U Nyar	May-Nov	Curry for younger pod	no		old variety
43	3 Mar.	<i>Pisum sativum</i>	SA DAW PE	Garden pea	landrace	SHWE NYAUNG				market	Daw Tin Nya		Curry, Snack			
44	3 Mar.	<i>Pisum sativum</i>	SA DAW PE(INDIA)	Garden pea	improved	SHWE NYAUNG				market	Daw Tin Nya		Curry, Snack			
45	3 Mar.	<i>Glycine max</i>	PE POKE	Soybean	landrace	SHWE NYAUNG				market	Daw Phyu Phyu		Curry, Snack			

Table 3. List of Collected Materials (Collaborative exploration for collecting legume genetic resources in Myanmar, 2001)

No. 3

Collecti on No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitud e (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
46	3 Mar.	<i>Vigna mungo</i>	MAT PE	Black gram	landrace	SHWE NYAUNG				market	Daw Phyu Phyu		Curry			
47	3 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE	French bean	landrace	SHWE NYAUNG				market	U Ney Line					
48	3 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE(APHYU)	French bean	landrace	SHWE NYAUNG				market	U Ney Line					
49	3 Mar.	<i>Phaseolus vulgaris</i>	PE WET THAR AGYI	Kidney bean	landrace	SHWE NYAUNG				market	U Ney Line					
50	3 Mar.	<i>Lablab purpurea</i>	PE PA ZUN	Lablab bean	landrace	SHWE NYAUNG				market	U Ney Line					
51	3 Mar.	<i>Vicia faba</i>	PE TA YOKE	Broad bean	landrace	SHWE NYAUNG				market	U Ney Line		Curry for younger pod & seed			
52	3 Mar.	<i>Vigna unguiculata</i>	MAY MYO PE	Cow pea	landrace	SHWE NYAUNG				market	U Ney Line		Curry for younger pod		Bush type	
53	3 Mar.	<i>Pisum sativum</i>	SHWE PE THEE	Garden pea	landrace	SHWE NYAUNG				market	U Ney Line		Curry			
54	3 Mar.	<i>Pachyrhizus erosus</i>	PE SINE SAR U	Yam bean	landrace	SHWE NYAUNG				market	U Ney Line					Ice bean?
55	3 Mar.	<i>Phaseolus vulgaris</i>	PE PHYU	Kidney bean	landrace	SHWE NYAUNG				market	U Ney Line		Curry for seed			
56	3 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	SHWE NYAUNG				market	U Ney Line		Curry for seed			
57	3 Mar.	<i>Glycine max</i>	PE POKE(MANDALAY)	Soybean	landrace	SHWE NYAUNG				market	U Ney Line		Curry			
58	3 Mar.	<i>Glycine max</i>	PE POKE	Soybean	landrace	TAUNGGYI				market	Daw Hla Yin		Curry, Snack			
59	3 Mar.	<i>Phaseolus vulgaris</i>	PE PYIN	Kidney bean	landrace	TAUNGGYI				market	Daw Nyo Nyo		Curry			
60	3 Mar.	<i>Phaseolus lunata</i>	KYAT TO YAWE PE	Lima bean	landrace	TAUNGGYI				market	Daw Nyo Nyo					
61	3 Mar.	<i>Cicer arietinum</i>	KA LA PE	Chick pea	landrace	TAUNGGYI				market	Daw Nyo Nyo					
62	3 Mar.	<i>Vigna mungo</i>	MAT PE	Black gram	landrace	TAUNGGYI				market	Daw Nyo Nyo		Curry			
63	3 Mar.	<i>Phaseolus vulgaris</i>	PE PYIN(APHYU)	Kidney bean	landrace	TAUNGGYI				market	U Thaug pe		Curry			
64	3 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	TAUNGGYI				market	U Thaug pe					
65	3 Mar.	<i>Phaseolus vulgaris</i>	PE DA MA	Kidney bean	landrace	TAUNGGYI				market	U Thaug pe		Curry			
66	3 Mar.	<i>Vigna unguiculata</i>	PE TAUNT SHAY	Cow pea	landrace	TAUNGGYI				market	U Thaug pe					
67	3 Mar.	<i>Phaseolus vulgaris</i>	PE WET THAR	Kidney bean	landrace	TAUNGGYI				market	U Thaug pe		Curry			
68	3 Mar.	<i>Psophocarpus tetragonolobus</i>	PE LAY TAUNG	Winged bean	landrace	TAUNGGYI				market	U Thaug pe					
69	3 Mar.	<i>Glycine max</i>	LAY LA PE(4 MONTH)	Soybean	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	May-Sep	Curry, Smack			old variety
70	3 Mar.	<i>Glycine max</i>	KHYUK LA PE(6 MONTH)	Soybean	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	May-Nov	Curry, Smack			old variety
71	3 Mar.	<i>Glycine max</i>	PE POKE(3 MONTH)	Soybean	other	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	May-Aug	Curry, Smack			5-6 years

Table 3. List of Collected Materials (Collaborative exploration for collecting legume genetic resources in Myanmar, 2001)

No. 4

Collection No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
72	3 Mar.	<i>Arachis hypogaea</i>	MEY PE(4 MONTH)	Peanut	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	Mar-Jul	Curry, Snack			
73	3 Mar.	<i>Cajanus cajan</i>	SHWE DIN GAR	Pigeon pea	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	May-Jan	Curry			5-6 years
74	3 Mar.	<i>Phaseolus vulgaris</i>	PE KYET OO	Kidney bean	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	Sep-Dec	Curry			
75	3 Mar.	<i>Phaseolus vulgaris</i>	PE PYINE(PHYU KYAR)	Kidney bean	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	Sep-Dec	Curry, Snack			
76	3 Mar.	<i>Cicer arietinum</i>	SING KAHUNG	Chick pea	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	Oct-Mar	Curry, Snack			
77	3 Mar.	<i>Vigna umbellata</i>	PE YINE	Rice bean	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	Apr-Aug	only Curry			
78	3 Mar.	<i>Vigna unguiculata</i>	PE TAUNT SHAY(TAIN TAUNG)	Cow pea	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	May-Sep /Feb-Jun	Curry for young pod			
79	3 Mar.	<i>Vigna unguiculata</i>	TAING TAUNG PE	Cow pea	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	May-Sep /Feb-Jun	Curry for young pod			
80	3 Mar.	<i>Phaseolus lunata</i>	PE NI LONE	Lima bean	landrace	THAN TE VILLAGE	N20.48.434	E96.53.277	935	farm	U Maeung	Sep-Dec	Curry, Snack			
81	4 Msr.	<i>Glycine max</i>	THET LAT(3 MONTH)	Soybean	landrace	HTE HAM SWEE	N20.38.097	E97.04.843	1286	farm	U Aye	Jun-Sep	Curry			5 years
82	4 Msr.	<i>Phaseolus vulgaris</i>	PE DAIN NAN	Kidney bean	landrace	HTE HAM SWEE	N20.38.097	E97.04.843	1286	farm	U Aye	Jun-Sep	Curry, Snack			5 years
83	4 Msr.	<i>Phaseolus vulgaris</i>	PE PYIN	Kidney bean	landrace	HTE HAM SWEE	N20.38.097	E97.04.843	1286	farm	U Aye	May-Aug /Aug-Nov	Curry			old variety
84	4 Msr.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	HTE HAM SWEE	N20.38.097	E97.04.843	1286	farm	U Aye	May-Nov	Curry, Snack			old variety
85	4 Msr.	<i>Vigna unguiculata</i>	PE LONE	Cow pea	landrace	HUM SIE VILLAGE	N20.30.471	E97.05.490	1286	market		May-Aug	Curry, Snack			old variety
86	4 Msr.	<i>Glycine max</i>	PE POKE(3 MONTH)	Soybean	improved	HUM SIE VILLAGE	N20.30.471	E97.05.490	1286	farm	U Taw Naung	May-Aug	Curry			4 years
87	4 Msr.	<i>Vigna unguiculata</i>	PE THUN	Cow pea	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry, Snack			30-80 years
88	4 Msr.	<i>Glycine max</i>	PE POKE(AHEY)	Soybean	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry, Snack			old variety
89	4 Msr.	<i>Vigna umbellata</i>	PE YIN(PE KYAUN)	Rice bean	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry, Green manure			old variety
90	4 Msr.	<i>Cajanus cajan</i>	PE SINE NGON(APHYU)	Pigeon pea	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Jan	Curry	Pod borer, Leaf roller		5-6 years
91	4 Msr.	<i>Cajanus cajan</i>	PE SINE NGONE(AKYAR)	Pigeon pea	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry	Pod borer, Leaf roller/minor		
92	4 Msr.	<i>Cajanus cajan</i>	SHWE DIN GAR	Pigeon pea		BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry	Pod borer, Leaf minor/roller		5-6 years
93	4 Msr.	<i>Glycine max</i>	PE POKE AGYI	Soybean	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry, Snack			old variety
94	4 Msr.	<i>Glycine max</i>	PE POKE ALAT	Soybean	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry, Snack			old variety
95	4 Msr.	<i>Glycine max</i>	PE POKE ATHEY	Soybean	landrace	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	May-Aug	Curry, Snack		plant height: 45-60cm	old variety

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No. 5

Collection No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
96	4 Mar.	<i>Arachis hypogaea</i>	MYAY PE(APHYU)	Peanut	other	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	Sep-Dec	Curry, Snack, Oil			10 years
97	4 Mar.	<i>Arachis hypogaea</i>	MYAY PE(ANI)	Peanut	other	BAN YIN VILLAGE	N20.27.791	E97.14.119	1235	farm	U Ba Cho	Sep-Dec	Curry, Snack, Oil			10-15 years
98	5 Mar.	<i>Vigna umbellata</i>	PE YIN AME ATHEY	Rice bean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry			
99	5 Mar.	<i>Lens esculenta</i>	PE NI LAY	Lentil	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry			
100	5 Mar.	<i>Glycine max</i>	PE POKE ATHEY	Soybean		HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack			
101	5 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE GYI	Kidney bean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack		climbing type	
102	5 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE KYAR	Kidney bean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack		climbing type	
103	5 Mar.	<i>Vigna umbellata</i>	PE YIN AME GYI	Rice bean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack			
104	5 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE	Kidney bean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack		climbing type	
105	5 Mar.	<i>Lablab purpurea</i>	PEPA ZUN	Lablab bean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry		climbing type	
106	5 Mar.	<i>Vigna umbellata</i>	PE YIN GYI	Rice bean		HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack			
107	5 Mar.	<i>Glycine max</i>	PE POKE ASEINE	Soybean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack		climbing type	
108	5 Mar.	<i>Psophocarpus tetragonolobus</i>	PE SAUNG YAR	Winged bean		HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Snack			
109	5 Mar.	<i>Glycine max</i>	PE POKE AGYI	Soybean	landrace	HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si		Curry, Soymilk			
110	5 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE	Kidney bean		HE HO VILLAGE	N20.43.178	E96.49.797	1184	market	Daw Hla Hla Si				bush type	
111	6 Mar.	<i>Glycine max</i>	GREEN PE POKE	Soybean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	U Le	May-Sep	Curry, Snack			old variety
112	6 Mar.	<i>Pisum sativum</i>	SHWE PE THEE or PE NU	Garden pea	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	U Le	May-Jul	Curry			old variety
113	6 Mar.	<i>Phaseolus vulgaris</i>	PE KYAT OO or PE AIN	Kidney bean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	Daw Hnyi Si	Mar-Aug	Curry for seed			intercropping with potato, old variety
114	6 Mar.	<i>Vigna umbellata</i>	PE YIN KYAUNG	Rice bean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	Daw Pyo Ne	May-Aug	Animal feed			old variety
115	6 Mar.	<i>Vigna umbellata</i>	PE YIN WAR GYI	Rice bean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	Daw Tin Own	Jan-Nov	Curry, Snack			old variety
116	6 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE ANYO	Kidney bean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	U Shwe Thee	May-Aug	Curry		climbing type	intercropping with potato, old variety
117	6 Mar.	<i>Phaseolus vulgaris</i>	PE NGOAT TOTE	Kidney bean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	U Shwe Thee	May-Aug	Curry, Snack(only seed)		elect type	old variety
118	6 Mar.	<i>Vigna unguiculata</i>	PE LONE	Cow pea	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	Daw Pyone	May-Nov	Curry, Snack			old variety
119	6 Mar.	<i>Phaseolus vulgaris</i>	PE NGOAT TOTE(ANI)	Kidney bean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	U Than Nyute	May-Aug	Curry			10-15 years
120	6 Mar.	<i>Phaseolus vulgaris</i>	PE WET THER	Kidney bean		KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	U Than Nyute	May-Jul	Curry, Snack			10-15 years
121	6 Mar.	<i>Glycine max</i>	PE POKE ATHEY	Soybean	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	Daw Nyut Yi	May-Nov	Curry, Snack	Aphid		old variety

Table 3. List of Collected Materials (Collaborative exploration for collecting legume genetic resources in Myanmar, 2001)

No. 6

Collection No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
122	6 Mar.	<i>Lens esculenta</i>	PE YAR ZAR	Lentil	landrace	KYONE VILLAGE	N20.47.307	E96.39.077	1373	farm	Daw Nyut Yi	Oct-Feb	Curry			5 years
123	7 Mar.	<i>Pisum sativum</i>	SHWE PE THEE	Garden pea	landrace	MYING MA HTEE	N20.35.561	E96.36.709	1370	farm	U Paw Oo	Sep-Jan	Curry			old variety
124	7 Mar.	<i>Phaseolus vulgaris</i>	PE PYIN SEED	Kidney bean	landrace	MYING MA HTEE	N20.35.561	E96.36.709	1370	farm	U Paw Oo	Jun-Sep	Curry for seed		bush type	old variety
125	7 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE	Kidney bean	landrace	MYING MA HTEE	N20.35.561	E96.36.709	1370	farm	U Paw Oo	May/Jun-Sep	Curry for young pod		bush type	3-4 years
126	7 Mar.	<i>Lens esculenta</i>	PE NI LAY or PE YAR ZAR	Lentil	landrace	MYING MA HTEE	N20.35.561	E96.36.709	1370	farm	U Htun Tin	Sep-Jan	Curry			old variety
127	7 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Nyue	May-Jun	Curry, Snack		climbing type	old variety
128	7 Mar.	<i>Lablab purpurea</i>	PE GYI	Lablab bean	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Nyue	May-Jan	Curry		climbing type	old variety
129	7 Mar.	<i>Arachis hypogaea</i>	MYAY PE ANI	Peanut	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Ba Thein	May-Sep	Curry, Snack			old variety
130	7 Mar.	<i>Phaseolus vulgaris</i>	PE PYIN ANI	Kidney bean	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Ba Thein	May-Sep	Curry for seed		bush type	old variety
131	7 Mar.	<i>Phaseolus vulgaris</i>	PE PYINE APHYU	Kidney bean	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Ba Thein	May-Sep	Curry for seed		bush type	old variety
132	7 Mar.	<i>Phaseolus vulgaris</i>	BO SAR PE	Kidney bean	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Ba Thein	May-Sep	Curry for young pod		bush type	old variety
133	7 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	LA MINE VILLAGE	N20.33.721	E96.37.101	1398	farm	U Ba Thein	May-Aug	Curry for seed		climbing type	old variety
134	7 Mar.	<i>Glycine max</i>	SHAN SEIN	Soybean	landrace	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug	Curry, Snack			old variety
135	7 Mar.	<i>Glycine max</i>	CLARK	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office						from ICRISAT
136	7 Mar.	<i>Glycine max</i>	GC-3	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
137	7 Mar.	<i>Glycine max</i>	GC-2	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
138	7 Mar.	<i>Glycine max</i>	SB-85-47	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep			green seed	from ICRISAT
139	7 Mar.	<i>Glycine max</i>	GM-1	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office						from ICRISAT
140	7 Mar.	<i>Glycine max</i>	SB-91-11	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
141	7 Mar.	<i>Glycine max</i>	SB-84-17	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
142	7 Mar.	<i>Glycine max</i>	GM-8	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
143	7 Mar.	<i>Glycine max</i>	GM-11	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
144	7 Mar.	<i>Glycine max</i>	GM-9	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
145	7 Mar.	<i>Glycine max</i>	SB-91-18	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
146	7 Mar.	<i>Glycine max</i>	SJ-5	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT
147	7 Mar.	<i>Glycine max</i>	GROWFORD	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	township office		May-Aug/Sep				from ICRISAT

Table 3. List of Collected Materials (Collaborative exploration for collecting legume genetic resources in Myanmar, 2001)

No. 7

Collecti on No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitud e (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
148	7 Mar.	<i>Glycine max</i>	SB-60	Soybean	other	KALAW	N20.38.035	E96.34.130	1331	townshi p office		May- Aug/Sep				from ICRISAT
149	8 Mar.	<i>Phaseolus vulgaris</i>	PE TAING TAUNG(APHYU)	Kidney bean	landrace	LAT PAN PIN VILLAGE	N21.07.157	E96.27.878	1177	farm	Daw Khin Myo Htoo	May-Sep	Curry, Snack		climbing type	old variety
150	8 Mar.	<i>Phaseolus vulgaris</i>	PE TAING TAUNG(AKYAR)	Kidney bean	landrace	LAT PAN PIN VILLAGE	N21.07.157	E96.27.878	1177	farm	Daw Khin Myo Htoo	May-Sep	Curry, Snack		climbing type	old variety
151	8 Mar.	<i>Phaseolus vulgaris</i>	PE TAING TAUNG(APHYU)	Kidney bean	landrace	LAT PAN PIN VILLAGE	N21.07.157	E96.27.878	1177	farm	U Ba Thein	May-Sep	Curry, Snack		climbing type	old variety
152	8 Mar.	<i>Phaseolus vulgaris</i>	PE SEIN NI	Kidney bean	landrace	LAT PAN PIN VILLAGE	N21.07.157	E96.27.878	1177	farm	U Ba Thein	Any season	Curry, Snack		climbing type	old variety
153	8 Mar.	<i>Lablab purpurea</i>	PE GYI TAUNG	Lablab bean	landrace	LAT PAN PIN VILLAGE	N21.07.157	E96.27.878	1177	farm	U Aung Mi	May-Nov	Curry		climbing type	old variety
154	8 Mar.	<i>Glycine max</i>	PE POTE ATHEY	Soybean	landrace	LAT PAN PIN VILLAGE	N21.07.157	E96.27.878	1177	farm	U Nyein Awng	May-Sep	Curry, Snack		bush type	old variety
155	8 Mar.	<i>Glycine max</i>	PE POTE ATHEY	Soybean	landrace	YUA NGAN TOWN	N21.10.774	E96.27.070	1298	farm	U Soe Nyu Te	Sep-Jan	Curry		spread type	old variety
156	8 Mar.	<i>Glycine max</i>	PE POTE AGYI	Soybean	landrace	YUA NGAN TOWN	N21.10.774	E96.27.070	1298	farm	U Soe Nyu Te	May-Aug	Curry, Snack		erect type	old variety
157	8 Mar.	<i>Vigna umbellata</i>	PE YIN AWAR	Rice bean	landrace	YUA NGAN TOWN	N21.10.774	E96.27.070	1298	farm	U Soe Nyu Te	May- Sep/Oct	Curry, Green manure			old variety
158	8 Mar.	<i>Cajanus cajan</i>	NGARSAN PE	Pigeon pea	landrace	YUA NGAN TOWN	N21.10.774	E96.27.070	1298	farm	U Maung Ngwe	May-Dec	Export			from other division, 2-3 years
159	8 Mar.	<i>Vigna umbellata</i>	PE YIN AWAR	Rice bean	landrace	YUA NGAN TOWN	N21.10.774	E96.27.070	1298	farm	U Maung Ngwe	Jul-Dec	Green manure			old variety
160	8 Mar.	<i>Vigna umbellata</i>	PE YIN ANET	Rice bean	landrace	YUA NGAN TOWN	N21.10.774	E96.27.070	1298	farm	U Maung Ngwe	Jul-Dec	Green manure, Animal feed			old variety
161	8 Mar.	<i>Phaseolus lunata</i>	HTAW BUT PE	Lima bean	landrace	MYO GYI VILLAGE	N21.27.001	E96.22.529	182	farm	U Than Aye	Oct-Mar	Curry			old variety
162	8 Mar.	<i>Cajanus cajan</i>	PE SINE NGONE	Pigeon pea	landrace	MYO GYI VILLAGE	N21.27.001	E96.22.529	182	farm	U Than Aye	Jun-Feb	Curry			old variety
163	8 Mar.	<i>Lablab purpurea</i>	PE PA ZUN	Lablab bean	landrace	MYO GYI VILLAGE	N21.27.001	E96.22.529	182	farm	U Than Aye	May-Dec	Curry for young pod			old variety
164	8 Mar.	<i>Lablab purpurea</i>	PE GYI	Lablab bean	landrace	MYO GYI VILLAGE	N21.27.001	E96.22.529	182	farm	U Than Aye	Jun-Dec	Curry			old variety
165	8 Mar.	<i>Glycine max</i>	PE POTE(MADAYA)	Soybean	landrace	MANDALAY				division office		Oct/Nov- Feb/Mar	Curry			old variety
166	8 Mar.	<i>Vigna mungo</i>	MAT PE	Black gram	landrace	MANDALAY				division office		Oct-Feb	Snack, Sprout			old variety
167	8 Mar.	<i>Vigna unguiculata</i>	PE LWAN PYAR	Cow pea	landrace	MANDALAY				division office		Oct-Feb	Curry			old variety
168	8 Mar.	<i>Cicer arietinum</i>	ICCV-88202	Chick pea	landrace	MANDALAY				division office		Nov-Feb	Curry			from ICRISAT
169	8 Mar.	<i>Vigna umbellata</i>	PE YIN	Rice bean	landrace	MANDALAY				division office		Oct-Feb	Animal feed, Curry for soup			old variety
170	8 Mar.	<i>Lablab purpurea</i>	PE PA ZUN	Lablab bean	landrace	MANDALAY				division office		May-Feb	Curry			old variety
171	8 Mar.	<i>Cicer arietinum</i>	ICCV-5	Chick pea	landrace	MANDALAY				division office		Nov-Feb	Snack			from ICRISAT
172	8 Mar.	<i>Cajanus cajan</i>	SGWE DIN GAR	Pigeon pea	landrace	MANDALAY				division office		May-Feb	Curry			old variety
173	8 Mar.	<i>Cajanus cajan</i>	NGAR SAN PE	Pigeon pea	landrace	MANDALAY				division office		May-Jan	Curry			old variety



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No. 8

Collection No.	Date	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
174	8 Mar.	<i>Vigna mungo</i>	HIN THARA LONE GYI	Black gram	landrace	MANDALAY				division office		Oct/Nov-Jan/Feb	Curry, Sprout			
175	8 Mar.	<i>Vigna radiata</i>	MYA KYAY MON	Green gram	landrace	MANDALAY				division office		May-Aug/Oct-Jan	Curry, Sprout			
176	8 Mar.	<i>Vigna radiata</i>	V-3726	Green gram	landrace	MANDALAY				division office		May-Jul/Oct-Dec	Curry, Sprout			from ICRISAT
177	9 Mar.	<i>Lablab purpurea</i>	PE PA ZUN	Lablab bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	Daw Sein	May-Mar	Curry		climbing type	old variety
178	9 Mar.	<i>Phaseolus lunata</i>	PE SEITE TO	Lima bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	Daw Sein	May-Mar	Curry, Snack		climbing type	old variety
179	9 Mar.	<i>Phaseolus lunata</i>	PE LATE PYAR	Lima bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	Daw Sein	May-Mar	Curry		climbing type	old variety
180	9 Mar.	<i>Phaseolus lunata</i>	PE HTAW BUT	Lima bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	Daw Sein	May-Mar	Curry, Snack		climbing type	old variety
181	9 Mar.	<i>Pisum sativum</i>	SHWE PE THEE	Garden pea	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	U Ko Gyi	Sep-Jan	Curry for seed and young pod		climbing type	old variety
182	9 Mar.	<i>Pisum sativum</i>	TAIWAN SHWE PE THEE	Garden pea	other	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	U Aung Htwn	May-Sep/Sep-Jan	Curry for seed and young pod			2-3 years
183	9 Mar.	<i>Phaseolus vulgaris</i>	TAIN LYUT BO SER PE	Kidney bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	U Aung Htwn	May-Aug/Jul-Oct	Curry for young pod		bush type	20-25 years
184	9 Mar.	<i>Lablab purpurea</i>	NWE PE THEE(APHYU)	Lablab bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	U Hla Kyaw	May-Mar	Curry for young pod		climbing type	old variety
185	9 Mar.	<i>Lablab purpurea</i>	NWE PE THEE(A SEIN)	Lablab bean	landrace	MO GYO PYIT VILLAGE	N22.04.103	E96.30.573	1117	farm	U Hla Kyaw	May-Mar	Curry for young pod		climbing type	old variety
186	9 Mar.	<i>Vigna unguiculata</i>	PE TAUNT SHAY(ANI)	Cow pea	landrace	YIN NGE VILLAGE	N22.03.540	E96.31.371	1086	farm	U Kyo	May/Jun-Aug/Sep	Curry for young pod		climbing type	old variety
187	9 Mar.	<i>Vigna unguiculata</i>	PE TAUNT SHAY(APHYU)	Cow pea	landrace	YIN NGE VILLAGE	N22.03.540	E96.31.371	1086	farm	U Kyo	May/Jun-Aug/Sep	Curry for young pod		climbing type	old variety
188	9 Mar.	<i>Phaseolus vulgaris</i>	NILE LYUN PE	Kidney bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
189	9 Mar.	<i>Phaseolus vulgaris</i>	PE WET SEED	Kidney bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
190	9 Mar.	<i>Phaseolus lunata</i>	HTAW BUT PE	Lima bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
191	9 Mar.	<i>Phaseolus vulgaris</i>	MEY TAUGH PE	Kidney bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung				bush type	
192	9 Mar.	<i>Phaseolus lunata</i>	PE NI KYAR	Lima bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung		Curry, Snack			
193	9 Mar.	<i>Vigna radiata</i>	PE DE SINE	Green gram	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
194	9 Mar.	<i>Vigna umbellata</i>	PE YIN ALONE GYI	Rice bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
195	9 Mar.	<i>Vigna umbellata</i>	PE YIN	Rice bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
196	9 Mar.	<i>Vigna umbellata</i>	PE YIN AWAR THEY	Rice bean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung					
197	9 Mar.	<i>Glycine max</i>	PE POTE ALONE GYI	Soybean	landrace	PYIN OO LWIN	N22.01.434	E96.28.088	1130	market	U Aye Maung		Snack			
198	10 Mar.	<i>Phaseolus vulgaris</i>	BO KA DAW LE NYEIT	Kidney bean	landrace	THOME TAUNG VILLAGE	N21.53.696	E96.21.875	882	farm	U Htay Aung	Oct-Feb	Curry for young pod		climbing type	old variety

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No. 9

Collection No.	Date Month	Genus & Species	Cultivar or local name	Crop name	Status	Locality	Latitude	Longitude	Altitude (m)	Place	Person	Crop Season	Usage	Diseases & pests	Properties	Notes
199	10 Mar.	<i>Phaseolus vulgaris</i>	BO KA DAW LE MYINT(SHWE PE)	Kidney bean	landrace	THOME TAUNG VILLAGE	N21.53.696	E96.21.675	882	farm	U Htay Aung	Nov-Feb	Curry for young pod, Snack		climbing type	old variety
200	10 Mar.	<i>Pisum sativum</i>	SHWE PE	Garden pea		THOME TAUNG VILLAGE	N21.53.696	E96.21.675	882	farm	U Htay Aung	Oct-Feb	Curry for young pod		climbing type	old variety
201	10 Mar.	<i>Phaseolus lunata</i>	PE SEIT TO	Lima bean		THOME TAUNG VILLAGE	N21.53.696	E96.21.675	882	farm	U Myint Taung	Oct-Feb	Curry for seed		climbing type	old variety
202	10 Mar.	<i>Phaseolus lunata</i>	GAUK PE	Lima bean		THOME TAUNG VILLAGE	N21.53.696	E96.21.675	882	farm	U Myint Taung	Oct-Feb	Curry for seed		climbing type	old variety
203	11 Mar.	<i>Vigna unguiculata</i>	PE LUNE APHYE	Cow pea	landrace	ZAY CHO (MANDALAY)				market	U Win					old variety
204	11 Mar.	<i>Glycine max</i>	PE POTE SINE	Soybean	landrace	ZAY CHO (MANDALAY)				market	Kyow Si Thee					
205	11 Mar.	<i>Phaseolus vulgaris</i>	PA GAN PE(NIW LUNE)	Kidney bean		ZAY CHO (MANDALAY)				market	Kyow Si Thee					old variety
206	11 Mar.	<i>Glycine max</i>	KAR BO MYO	Soybean	landrace	ZAY CHO (MANDALAY)				market	Tef Ne Line					old variety
207	12 Mar.	<i>Glycine max</i>	PE POTE	Soybean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Feb	commercial			old variety
208	12 Mar.	<i>Vigna umbellata</i>	PE YIN	Rice bean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Mar	commercial			old variety
209	12 Mar.	<i>Cajanus cajan</i>	SHWE DIN GAR	Pigeon pea	landrace	AMARAPURA				township office	U Myo Naing	May-Dec	commercial			
210	12 Mar.	<i>Vigna mungo</i>	MART PE	Black gram	landrace	AMARAPURA				township office	U Myo Naing	Oct-Feb	commercial			
211	12 Mar.	<i>Lablab purpurea</i>	PE GYI	Lablab bean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Feb	Curry			
212	12 Mar.	<i>Phaseolus lunata</i>	HTAW BUT PE	Lima bean	landrace	AMARAPURA				township office	U Myo Naing		Commercial, Curry			
213	12 Mar.	<i>Phaseolus lunata</i>	PE KYAR	Lima bean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Mar	Curry, Snack			
214	12 Mar.	<i>Phaseolus lunata</i>	SWN TER PYAR	Lima bean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Mar	Curry			
215	12 Mar.	<i>Phaseolus lunata</i>	PE NI PYAR GYI	Lima bean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Mar	Curry, Snack			
216	12 Mar.	<i>Phaseolus lunata</i>	SUN TAG PYAR	Lima bean	landrace	AMARAPURA				township office	U Myo Naing	Oct-Mar	Curry, Snack		yield	

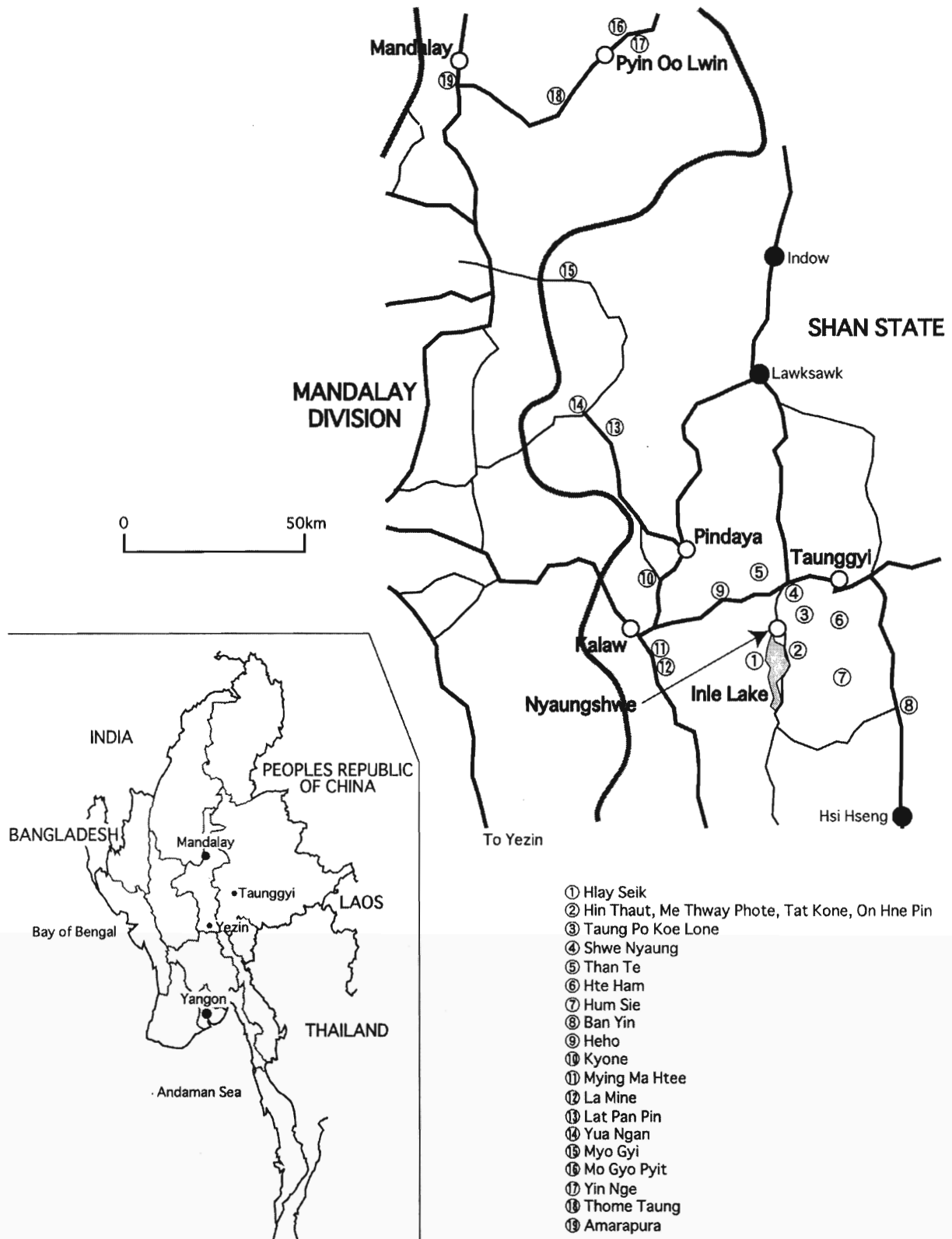


Fig. 1 Route of the exploration in Myanmar.

ミャンマーにおける探索ルート

- : 収集地点 (番号無しは収集拠点・収集地点)
- : 収集予定であったが、入域できなかった地点



写真1. インゲンマメ (*Phaseolus vulgaris*) の水耕栽培 (インレー湖)



写真2. Hit Thaut 村のマーケットで売られていた豆腐



写真3. マーケットでの情報収集 (Hit Thaut 村)



写真4. インレー湖北東部でのマメ類の探索



写真5. Taunggyi (タウンジー) 市のマーケットで売られていた納豆



写真6. Pindaya (ピンダヤ) 市近くのレンズマメ畑