

ベトナムにおける豆類遺伝資源の探索収集

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Exploration and Collection of Grain Legumes Germplasm in Vietnam

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Summary

The exploration for grain legumes was conducted in collaboration with Vietnamese government from February 24 to March 23, 1994. The itinerary, route and locality of exploration are shown Table 1 and Fig. 1. We visited East-North area, Central-South Plateau area and Central-South Coast area to collect local varieties which are in danger of disappearing. We collected a total of 163 samples, which consists of 160 local varieties and 3 wild species. The number of each species is as follows, 41 samples of *Glycine max*, 43 samples of *Vigna unguiculata*, 40 samples of *Vigna radiata*, 6 samples of *Vigna umbellata*, 2 samples of *Vigna glabrescens*, 21 samples of *Arachis hypogaea*, 5 samples of *Lablab purpureus*, 2 samples of *Phaseolus lunatus*, 1 sample of *Phaseolus vulgaris*, 1 sample of *Cajanus sajan* and another legume. These legumes are cultivated mostly in rainy season and used in daily life for food and feed. The different characters of samples are exhibited in seed color, cotyledon color, seed size, number of seed, pod type and growing period.

KEY WORDS : local varieties, grain legumes, Vietnam

1. 目的

ベトナムは、インドシナ半島の東岸に位置し、東は南シナ海に面している。北緯8°30'から北緯23°22'にあり、南北約1650km、東西50～400kmと南北に長く、S字型の国土である。内陸には2500～3000m級の山岳地帯や高原地域がある。北部の紅河と南部のメコン河の河口には、大きなデルタを形成している。年間の降雨量は800mmから3000mmあり、降雨の時期と降雨量は地域により差がみられるが、1年の気候は大きく4月から12月の雨期と1月から3月の乾期に分かれている。平均気温は北部で23.5℃、南部で27.5℃で、最低気温は1月に北部で約13℃、南部で約25℃と差がある。¹⁾²⁾³⁾

東南アジアでは、アジア原産の豆類を始め、多くの豆類が栽培され利用されている。ベトナムの主食は米であるが、豆類は国内どこでも栽培されており、食用、飼料用等として重要な作物である。また、栽培地域が変化に富んでいることから、それぞれの地域に適した遺伝的変異のある在来種が多数存在する。一方、ベトナム国内で豆類の新品種育成も進められ普及されている²⁾。こうした中消失の恐れがあり、貴重な遺伝資源である在来種を調査収集し保存することは、今後の育種素材としても重要である。

2. 探索収集方法

探索収集は、1994年2月24日から3月23日に実施した。探索収集の日程をTable 1、経路と地域をFig.1に示した。

探索収集地域は、1993年12月に行われたベトナムの関係者と農業生物資源研究所の中川原捷洋部長と国広泰史科長とのベトナムにおける事前の協議で得られた情報をもとに、在来種が栽培されている東北部地域、中南部高原地域、中南部沿岸地域の3地域とした。

ベトナムでは、2月25日にベトナム農業科学研究所を訪問し関係者と全体の日程、経路、地域、探索収集方法について打ち合わせを行った。2月26日からは農業科学研究所のMr. Thang氏とMr. Tung氏の協力により探索収集を行った。各地域では、州事務所と郡事務所を訪れ作物の栽培状況の説明を受けるとともに、豆類の探索収集地域と経路について打ち合わせを行った。その後、郡事務所の担当者と共に農家とマーケットを訪れ、栽培状況や入手先についての聞き取りと収集品の形質の調査を行い、同時に種子の分譲を受けた。また、東北部地域ではダイズとラッカセイの播種を、中南部沿岸地域ではダイズ、ササゲ、リョクトウ、ラッカセイの栽培を見ることが出来た。

Table 1 Itinerary of exploration for grain legumes germplasm in Vietnam.
ベトナムにおける豆類遺伝資源の探索収集日程 (Feb. 24-Mar. 23)

日数	月日 (曜日)	旅程	行動内容
1	2月24日 (木)	成田発 HANOI 着	
2	2月25日 (金)	HANOI	農業科学研究所表敬 打ち合わせ
3	2月26日 (土)	HANOI → THAI NGUYEN	BAC THAI 州探索収集
4	2月27日 (日)	THAI NGUYEN → CAO BANG	〃
5	2月28日 (月)	CAO BANG	CAO BANG 州探索収集
6	3月1日 (火)	CAO BANG → LANG SON	移動のみ
7	3月2日 (水)	LANG SON	LANG SON 州探索収集
8	3月3日 (木)	LANG SON → HANOI	〃
9	3月4日 (金)	HANOI → DA NANG	種子整理 移動
10	3月5日 (土)	DA NANG	DA NANG 州探索収集
11	3月6日 (日)	DA NANG → PLAYKU	移動のみ
12	3月7日 (月)	PLAYKU	GIA LAI 州探索収集
13	3月8日 (火)	PLAYKU → KON TUM → BOUN MA THUOT	KON TUM 州探索収集
14	3月9日 (水)	BOUN MA THUOT	DAC LAC 州探索収集
15	3月10日 (木)	BOUN MA THUOT → THU DAU MOT	〃
16	3月11日 (金)	THU DAU MOT → HO CHI MINH	SONG BE 州探索収集
17	3月12日 (土)	HO CHI MINH → DA LAT	DONG NAI 州探索収集
18	3月13日 (日)	DA LAT → PHAN RANG	LAM DONG 州探索収集
19	3月14日 (月)	PHAN RANG → NHA TRANG	NINH THUAN 州探索収集
20	3月15日 (火)	NHA TRANG → TUY HOA	KHANH HOA 州探索収集
21	3月16日 (水)	TUY HOA → QUY NHON	PHU YEN 州探索収集
22	3月17日 (木)	QUY NHON → QUANG NGAI	BINH DINH 州探索収集
23	3月18日 (金)	QUANG NGAI	QUANG NGAI 州探索収集
24	3月19日 (土)	QUANG NGAI → DA NANG	DA NANG 州探索収集
25	3月20日 (日)	DA NANG → HANOI	種子整理 移動
26	3月21日 (月)	HANOI	種子整理 検疫
27	3月22日 (火)	HANOI	農業科学研究所挨拶 検疫
28	3月23日 (水)	HANOI 発 成田着	

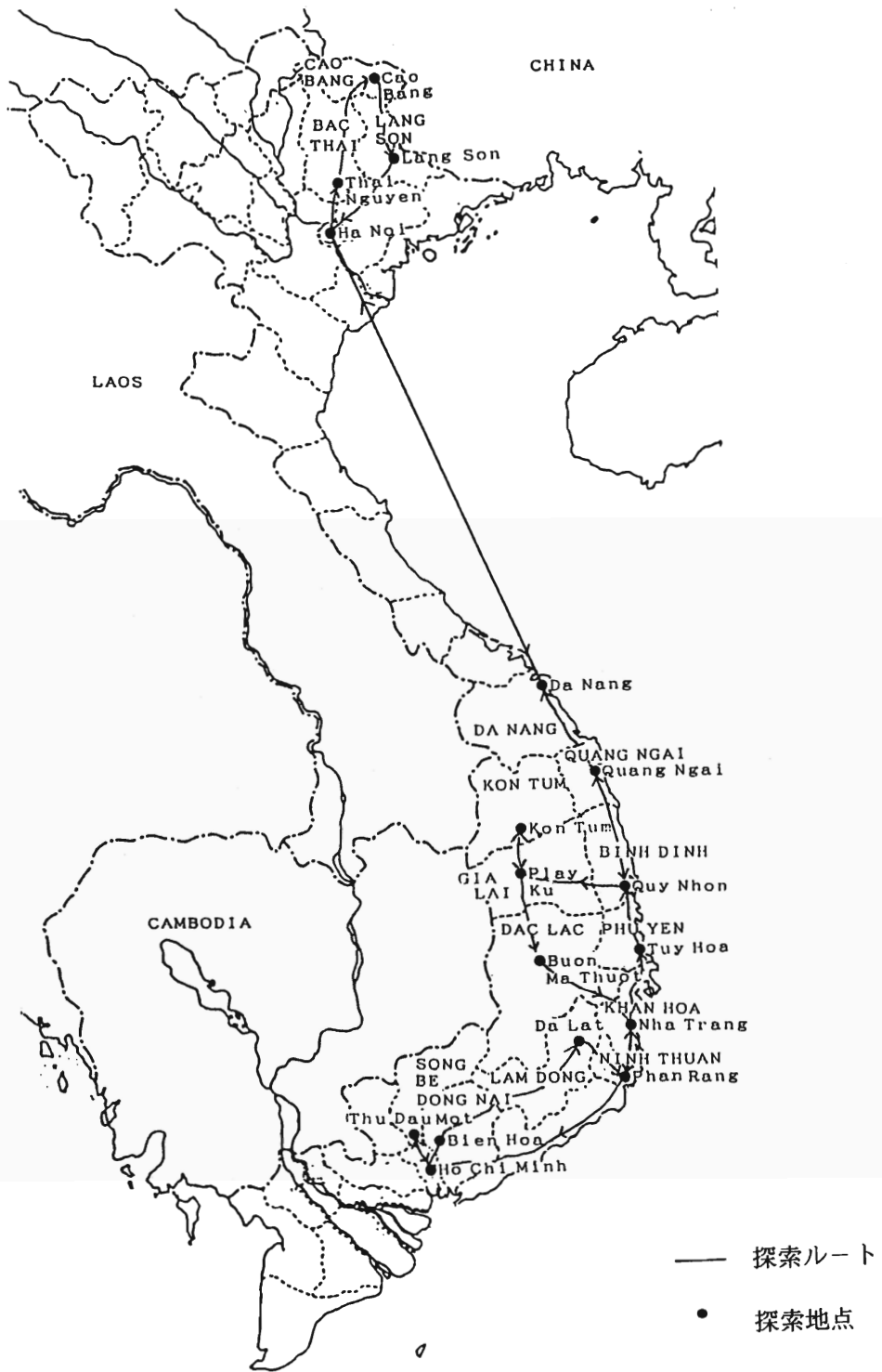


Fig. 1 Route and locality of exploration
 探索ルートおよび探索地点

3. 探索収集地域の特徴と在来品種の栽培状況

ベトナム東北部地域では、中国国境に近い Bac Tai 州と中国国境に接している Cao Bang 州、Lang Son 州で探索収集を行った。探索収集を行った地域は、ハノイから北へ150～300kmで、標高は、30m から500m 前後である。平地には稲が栽培され、山の斜面には棚田やお茶の栽培が多く見られた。稲の作付けはまだ始まっていなかったが、家の周囲には自家用の野菜が栽培されていた。中国国境近くでは、火山岩質の岩山が多く、この地域に住む少数民族の人達がダイズ、ラッカセイ、トウモロコシの播種を行っていた。標高の低い平地での豆類の栽培は、稲との輪作が多く、トウモロコシや他の豆類との混作や間作を行っている。標高の高い地域では斜面での栽培が多くなり、雨期を利用して年に1～2回栽培している。また、12～2月は乾期で雨は少なく、温度が低いため、この間の栽培は極僅か行われている程度である。ダイズの播種は、畦幅約50cm、株間約25cmで3～4粒を播種し、種子の周囲に堆肥を施した後、覆土を行っていた。ラッカセイも同様であった。

中南部高原地域は、Gia Lai 州、Kon Tum 州、Dac Lac 州、Dong Nai 州、Lam Dong 州で探索収集を行った。この地域は、ベトナム中部から南の内陸部に位置し、Kon Tum 州はラオスとカンボジア、他の州はカンボジアと接している。探索収集地域の標高は、150～930mであった。起伏のなだらかな山々が続き、広い平地も見られた。高原の低地には稲が栽培され、他にコーヒー、お茶、ゴム、サトウキビが多く見られた。豆類は、4月以降の雨期を利用し、年2回栽培されている。斜面での栽培が多く、トウモロコシや他の豆類との輪作及び混作や間作を行っている。

中南部沿岸地域は、Da Nang 州、Song Be 州、Ninh Thuan 州、Khan Hoa 州、Phu Yen 州、Binh Dinh 州、Quang Ngai 州で探索収集を行った。この地域は、ベトナム中部から南の沿岸に位置している。探索収集を行った地域の標高は、0～40mであった。主要作物は稲であるが、野菜、果物やサトウキビも多く見られた。この地域では、1年を通じて作物が栽培されている。豆類は、土壤に適したラッカセイが多く栽培され、稲との輪作が多く、トウモロコシや他の豆類との混作や間作を行っている。栽培されていたダイズ、ササゲ、リョクトウ、ラッカセイの生育は、開花期前後から成熟期であった。いくつかの圃場では乾期のため水分不足になり、生育量が劣っていた。ダイズの栽培では、長葉の改良種や白毛や褐毛の混ざった在来種が栽培されていた。

各地域のトウモロコシと豆類の混作や間作では、トウモロコシを収穫した後に豆類の収穫を行っている。また、ラッカセイと他の豆類の混作や間作では、ラッカセイの収穫が後になる。

4. 収集品の成果と特徴

収集品の内訳を Table 2 に示した。今回の探索収集の結果、ダイズ41点、ササゲ43点、リョクトウ40点、ツルアズキ6点、*Vigna glabrescens* 2点、ラッカセイ21点、フジマメ5点、ライマメ2点、インゲンマメ1点、キマメ1点、その他1点、合計163点を収集することが出来た。

ダイズの利用方法は、豆腐、豆乳、モヤシ、煮豆、油、枝豆に利用されている。各地域と

も同様に利用されており、豆腐、モヤシはマーケットでも売られていた。種皮色は、黄色、黄白色、淡緑色で、光沢は中から強程度であった。粒大は、小から中粒であった。臍色は、褐色か淡褐色であった。一部に褐斑粒と紫斑粒が見られた。生育期間は、75～90日であった。

ササゲの利用方法は、若莢を食用に利用することが多く、マーケットで多く売られていた。また、種子は煮豆に利用されている。種皮色は、白色、黒色、赤色、黒色と緑色の斑紋状、黒色と茶色の斑紋状であった。白色の種子は、臍の周囲が黒色、黒褐色、茶色があった。黒色と斑紋状の種子には、子葉の色が白色と緑色のものがあつた。生育期間は60～90日であった。

リョクトウの利用方法は、もやしと麺に多く利用されている。もやしは生野菜と一緒に食卓に出されることが多い。両方共マーケットで売られていた。他に、煮豆に利用されている。種皮色は、緑色と黄緑色であった。生育期間は、60～90日であった。

ラッカセイの利用方法は、種子を炒ったり煮たりして食用に利用する他、お菓子や油に利用されている。種皮色は、赤色と淡赤色であった。また、2粒莢と3粒莢があり、莢の表面のしわが明瞭なものとそうでないものがあつた。生育期間は、90日程であった。

他の豆類も食用として利用されている。ツルアズキは、濃赤色、緑色と茶色の斑紋状、緑色と黒色の斑紋状で、小粒であった。*Vigna glabrescens* は、黒色と緑色の斑紋状であった。フジマメは、白色と淡緑色であった。ライマメは、赤色と黄色の斑紋状、赤色と白色の斑紋状であった。キマメは小粒で、黄色であった。

Table 2 A list of samples collected from Vietnam in 1994
1994年にベトナムで収集した豆類遺伝資源のリスト

和名	種属名	収集点数
ダイズ	<i>Glycine max</i>	41
ササゲ	<i>Vigna unguiculata</i>	43
リョクトウ	<i>Vigna radiata</i>	40
ツルアズキ	<i>Vigna umbellata</i>	6
	<i>Vigna glabrescens</i>	2
ラッカセイ	<i>Arachis hypogaea</i>	21
フジマメ	<i>Lablab purpureus</i>	5
ライマメ	<i>Phaseolus lunatus</i>	2
インゲンマメ	<i>Phaseolus vulgaris</i>	1
キマメ	<i>Cajanus cajan</i>	1
その他		1
計		163

5. 所感

東南アジアを原産とする豆類はいくつかあり、在来種や野生種の変異が大きい。この地域では豆類は広く栽培され、また食生活に欠かすことができない重要な作物となっている。これまで東南アジアの国々で有用な豆類遺伝資源が多く収集されて来ており、今回もベトナムにおいて多くの豆類遺伝資源を収集することが出来ました。

探索収集を行った2月下旬から3月下旬は、まだ乾期であり、この間の雨は東北部地域で極僅かであった。この地域を探索収集した1週間は、曇天の日が続き、最低気温は10～15℃、最高気温は20℃前後で、肌寒い程であった。中南部では反対に晴天の日が続き、最低気温が25～27℃、最高気温は35℃前後であった。この1ヶ月間だけでも東北部地域と中南部地域の気候の違いが感じられ、また作物の栽培時期の違いも見られた。この時期の豆類の栽培は、東北部地域で播種を中南部沿岸地域で生育状況と刈り取りを少し見る事が出来た程度である。このため圃場から直接種子を収集することは行わず、農家の保存種子とマーケットで売られている種子の分譲により収集を行った。豆類の成熟期と合わせて探索収集するのに最も良い時期は、乾期の始まる11～12月が良いということである。また、今回探索収集を行えなかった地域でも、まだ多くの在来種が栽培されているそうである。

今回ベトナムの多くの関係者の方々の事前の調査や準備により、スムーズに探索収集を進めることが出来ました。これらの方々を始め、多くの御協力をいただいた農業技術会議事務局、農業生物資源研究所、農業研究センターの方々に、深く感謝いたします。

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Genus : *Glycine max*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
5	26/Feb	<i>Glycine max</i>	DAU TUONG	P	③	Dai Kim Vill. Phu Yen Dis. Bac Thai Prov. 30m	Early of March ~Early of May
7	"	"	DAU TUONG LUC NGAN VANG	"	"	"	End of February ~Early of Jun
11	"	"	LO 75	"	"	Van Gra Vill. Rhu Binh Dis. Bac Thai Prov. 30m	Early of March ~Early of May
13	27/Feb	"	DAU TUONG SAU THANG	"	"	Phuong Thong Vill. Bach Thang Dis. Bac Thai Prov. 190m	May ~ October
16	28/Feb	"	DAU TUONG BA THANG	"	"	Nguyen Vill. Quanc Hoa Dis. Cao Bang Prov. 360m	January ~ May May ~ August
17	"	"	"	"	"	"	"
19	"	"	DAU TUONG VO DO	"	"	"	January ~ April Jun ~ September
20	"	"	DAU TUONG QUOC PHONG	"	"	Quoc Phong Vill. Quanc Hoa Dis. Cao Bang Prov. 430m	February ~ May May ~ August
26	"	"	DAU TUONG DT 80	"	"	Phuc Sen Vill. Quanc Hoa Dis. Cao Bang Prov. 530m	July ~ October
28	"	"	DAU TUONG PHUC SEN	"	"	"	"
31	2/Mar	"	DAU TUONG BON THANG	"	"	Lang Nong Vill. Chi Lang Dis. Lang Son Prov. 290m	Jun ~ September
35	"	"	DAU TUONG BA THANG LUC NGAN	"	"	Don Sa Vill. Chi Lang Dis. Lang Son Prov. 350m	May ~ August
36	"	"	DAU TUONG CUC HUU LUNG	"	"	Nihat Tien Vill. Huu Lung Dis. Lang Son Prov. 60m	Early of March ~ May
37	"	"	DAU TUONG	"	"	"	"
40	"	"	DAU TUONG HAT TO	"	"	" 40m	March ~ May May ~ August
41	3/Mar	"	DAU TUONG XANH LO	"	"	Tan Lap Vill. Huu Lung Dis. Lang Son Prov. 30m	March ~ May May ~ July
42	"	"	DAU TUONG BON THANG	"	"	"	Jun ~ September
49	5/Mar	"	DAU TUONG	"	"	Dien Phuoc Vill. Dien Ban Dis. Da Nang Prpv. 0m	September ~ Early of March

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with maize rotation with rice	Food Feed	None	③	①	③	Light green seed, Brown hilum, Small grain	NGHIEN XUAN NGHI Dai Kim Vill.
"	Food	"	"	"	"	Yellow-White seed, Light brown hilum	NGUIEN VAN LAI Dai Kim Vill.
"	Food Feed	"	"	"	"	Light green seed, Brown hilum, Small grain	DUONG THI HOD Van Gra Vill.
single cropping	Food	Virus	⑤	②	"	Yellow-White seed, Brown hilum, Small grain	HOANG KHAI THACH Phuong Thong Vill
mixed with maize	"	Virus Purple speck	"	"	"	"	TRUONG VAN THANG Nguyen Vill.
"	"	Weevil	"	"	"	Yellow seed, Brown hilum, Small grain	"
single cropping	"	Virus Weevil	"	"	"	Yellow seed, Light brown hilum, Small grain	"
single cropping mixed cropping	"	None	"	"	"	Yellow-White seed, Brown hilum, Small grain	NGONG VAN TAM Quoc Phong Vill.
single cropping	"	"	"	"	"	"	LONG VAN PAO Phuc Sen Vill.
mixed with maize	"	"	"	"	"	Yellow seed, Brown hilum, Small grain	"
single cropping	"	"	"	"	"	Yellow-White seed, Brown hilum, Medium grain	LANG VAN XICH Lang Nong Vill.
single cropping	"	Virus	"	"	"	"	VI VAN CHAN Don Sa Vill.
rotation with rice	"	None	"	"	"	Yellow-White seed, Light brown hilum	NGO THI LINH Nihat Tien Vill.
"	"	Purple speck	"	"	"	Yellow seed, Brown hilum, Small grain	"
"	"	"	"	"	"	Yellow seed, Light brown hilum, Medium grain	NOY THI CHINH Nihat Tien Vill.
mixed with maize rotation with rice	"	None	③	①	-	Light green seed, Brown hilum, Small grain	TRAN VAN DANG
rotation with rice	"	Virus	"	"	-	Yellow seed, Brown hilum, Small grain	LE ULI LAP
rotation with other besns	"	None	"	"	③	"	MAI TOAN Dien Phuoc Vill.

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Glycine max*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
57	7/Mar	<i>Glycine max</i>	DAU TUONG HAT TO	P	③	Apumpa Town Apumpa Dis. Gia Lai Prov. 250m	May ~ August
60	"	"	DAU TUONG HAT NHO	"	"	Chu Se Town Chu Se Dis. Gia Lai Prov. 610m	"
67	8/Mar	"	DAU NANH SE	"	"	Ya Chim Vill. Kon Tum Town Kon Tum Prov. 620m	August ~ November
73	"	"	"	"	"	Sa Binh Vill. Sa Thay Dis. Kon Tum Prov. 610m	"
74	"	"	DAU NANH	"	"	Eahi Leo Town Eahi Leo Dis. Dac Lac Prov. 650m	July ~ September
78	9/Mar	"	DAU TUONG BA THANG	"	"	Cum Gar Town Cum Gar Dis. Dac Lac Prov. 510m	May ~ End of July
83	"	"	"	"	"	" 500m	May ~ July
87	10/Mar	"	DAU NANH	"	"	Madrak Town Madrak Dis. Dac Lac Prov. 450m	"
91	11/Mar	"	DAU TUONG	"	"	Tan Uyen Town Tan Uyen Dis. Song Be Prov. 0m	"
92	"	"	DAU TUONG TAN UYEN	"	"	"	May ~ End of July
99	"	"	DAU TUONG	"	"	Thn Dan Mo Town Tan Uyen Dis. Song Be Prov. 0m	-
103	12/Mar	"	"	"	"	Bien Hoa Town Bien Hoa Dis. Dong Nai Prov. 0m	April ~ Eary of July
105	"	"	"	"	"	Dau Giay Vill. Thong Nhai Dis. Dong Nai Prov. 150m	April ~
108	13/Mar	"	DAU TUONG HAT TO	"	"	Lien Nghia Vill. Duc Trang Dis. Lam Dong Prov. 930m	April, May ~ 90 days
113	"	"	"	"	"	"	April ~ July July ~ November
114	"	"	DAU TUONG HAT NHO	"	"	"	April, May ~ 90 days
122	14/Mar	"	DAU NANH	"	"	Bagai Vill. Cum Ranh Dis. Khanh Hoa Prov. 0m	August ~ 90 days
131	15/Mar	"	DAU TUONG	"	"	Ninh Xim Vill. Ninh Hoa Dis. Khanh Hoa Prov. 0m	February ~ April

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topog-raphy ³⁾	Site ⁴⁾	Drain-age ⁵⁾	Characteristics	Notes Name & address. etc
single cropping mixed cropping	Food	Purple speck	⑤	②	—	Yellow seed, Brown hilum, Medium grain	HOANG THI LAI
single cropping	"	None	"	"	—	Yellow seed, Brown hilum, Small grain	NGUYEN THI HAI
rotation with Groundnut	"	"	"	"	③	Yellow seed, Brown hilum, Medium grain	PHAN RY Ya Chim Vill.
rotation with Maize	"	Purple speck Weevil	"	"	"	Yellow seed, Brown hilum, Small grain	DINH VAN AN Sa Binh Vill.
single cropping	"	None	"	"	—	Yellow seed, Brown hilum, Medium grain	NGUYEN THI LOAN
rotation with Groundnut	"	"	"	"	"	Yellow seed, Brown hilum, Small grain	NGUYEN VAN HAI Cum Gar Town
"	"	"	"	①	—	"	LAM THI KIU LAM
single cropping	"	"	"	"	—	"	NGUYEN THI SNOI
rotation with other beans	"	"	③	"	—	Yellow-White seed, Light brown hilum	NGUYEN BACH TWYEI
"	"	"	"	"	—	Yellow seed, Light Brown hilum, Medium seed	"
single cropping	"	"	"	"	—	Yellow seed, Brown hilum, Small grain	TRAN THI DUNG
—	"	"	—	—	—	"	BAI THI HOA
mixed with maize	"	"	—	—	—	"	NGUYEN THI XUAN
single cropping	"	"	⑤	①	—	Yellow seed, Brown hilum, Medium grain	NGUYEN THI HIEN
intercropping with maize	"	Purple speck	"	"	—	Yellow-White seed, Brown hilum, Medium grain	LE THI YEN
mixed with maize	"	Virus Purple speck	"	"	—	Yellow-White seed, Brown hilum, Small grain	"
single cropping	"	None	③	"	—	Yellow-White seed, Brown hilum, Medium grain	PHAN THI LAI
"	"	Purple speck	—	—	—	Yellow-White seed, Brown hilum, Small grain	—

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Glycine max*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
132	15/Mar	<i>Glycine max</i>	DAU TUONG	P	③	Ninh An Vill. Ninh Hai Dis. Khanh Hoa Prov. 10m	February ~ 90 days
137	16/Mar	"	DAU NANH	"	"	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 25m	Dec. Jan. ~ March, April
147	"	"	DAU NANH BA THANG	"	"	An Hiep Vill. Tuy An Dis. Phu Yen Prov. 10m	January ~ March July ~September
148	17/Mar	"	DAU HONG NGU	"	"	Nim Khanh Vill. An Nhan Dis. Binh Dinh Prov. 30m	April, Dec. ~ 90 days
150	"	"	DAU NANH	"	"	"	December ~ 75 days

Genus : *Vigna unguiculata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Mont	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
1	26/Feb	<i>Vigna unguiculata</i>	DAU QUOC	P	③	Dai Kim Vill. Phu Yen Dis. Bac Thai Prov. 30m	Early of March ~ Early of May
3	"	"	"	"	"	"	"
4	"	"	DAU DEN	"	"	"	"
9	"	"	DAU TARNG	"	"	"	"
12	"	"	DAU MAN TARNG	"	"	Van Gra Vill. Rhu Binh Dis. Bac Thai Prov. 30m	"
21	28/Feb	"	DAU TARNG	"	"	Quoc Phong Vill. Quanc Hoa Dis. Cao Bang Prov. 430m	May ~ August July ~September
23	"	"	DAU DEN QUOC PHONG	"	"	"	May, Jun ~August September
27	"	"	DAU TARNG	"	"	Phuc Sen Vill. Quanc Hoa Dis. Cao Bang Prov. 530m	July ~ September
34	2/Mar	"	"	"	"	Lang Nong Vill. Chi Lang Dis. Lang Son Prov. 290m	Jun ~ September
43	3/Mar	"	"	"	"	Tan Lap Vill. Huu Lung Dis. Lang Son Prov. 30m	March ~ May Jun ~ August

1) Sample: P(population), In(individual), 2) Status: ①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4) Site: ①level ②slope ③summit ④depression. 5) Drainage: ①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
single cropping	Food	None	③	①	③	Yellow seed, Brown hilum, Medium grain	NGUYEN VAN LONG Ninh An Vill
rotation with rice	"	"	"	"	"	Yellow seed, Brown hilum, Small grain	HA VAN HO Xuan Quang I Vill.
"	"	"	"	"	"	"	HOANG THI THAI Tuy An Town
"	"	"	"	"	"	Yellow seed, Light brown hilum, Small grain	DAO MINH HOA Ninh Khanh Vill.
single cropping	"	"	"	"	"	Yellow seed, Brown hilum, Small grain	"

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Groundnut rotation with rice	Food	None	③	①	③	Black-brown and black-green speckle seed	NGHIEN XUAN NGHI Dai Kim Vill.
"	"	"	"	"	"	"	NGHIEN XUAN BON Dai Kim Vill.
"	"	"	"	"	"	Black seed, White cotyledon	"
mixed with SweetPotato rotation with rice	"	"	"	"	"	White seed, Brown around hilum	NGUYEN TRIEN VAN Dai Kim Vill.
mixed with Groundnut rotation with rice	"	"	"	"	"	"	DUING VAN QUYET Van Gra Vill.
single cropping mixed cropping	"	"	⑤	②	"	"	LONG VAN TAM Quoc Phong Vill.
single cropping	"	"	"	"	"	Black seed, Green cotyledon	LONG VAN DAI Quoc Phong Vill.
"	"	"	"	"	"	White seed, Brown around hilum	LONG VAN PAO Phuc Sen Vill.
"	"	"	"	"	"	Light green seed, Brown around hilum	LANG VAN XICH Lang Nong Vill.
-	"	"	③	①	-	White seed, Dark-brown around hilum	MOANG THI THANG

3) Topography: ①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Vigna unguiculata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
44	3/Mar	<i>Vigna unguiculata</i>	DAU DEN	P	③	Tan Lap Vill. Huu Lung Dis. Lang Son Prov. 30m	March ~ Jun Jun ~ September
47	5/Mar	"	"	"	"	Dien Phuoc Vill. Dien Ban Dis. Da Nang Prov. 0m	December ~ April
50	"	"	DAU DO	"	"	"	September ~ February
51	7/Mar	"	DAU TRANG	"	"	Apumpa Town Apumpa Dis. Gia Lai Prov. 250m	May ~ August
52	"	"	DAU DEN	"	"	"	"
55	"	"	DAU CUT	"	"	"	"
59	"	"	DAU HUYET	"	"	Chu Se Town Chu Se Dis. Gia Lai Prov. 610m	"
61	"	"	DAU DEN XANH LONG	"	"	"	"
66	8/Mar	"	"	"	"	Ya Chim Vill. Kon Tum Town Kon Tum Prov. 620m	April ~ July
69	"	"	DAU TRANG	"	"	"	August ~ November
75	"	"	DAU DEN	"	"	Eahi Leo Town Eahi Leo Dis. Dac Lac Prov.	May ~ July
79	9/Mar	"	DAU DO	"	"	Cum Gar Town Cum Gar Dis. Dac Lac Prov. 510m	May ~ End of July
80	"	"	DAU TRANG	"	"	" 500m	May ~ July
81	"	"	DAU DEN	"	"	"	"
86	10/Mar	"	DAU DEN HAT NHO	"	"	Madrak Town Madrak Dis. Dac Lac Prov. 450m	April ~ Jun
89	"	"	DAU TRANG	"	"	"	May ~ July
96	11/Mar	"	DAU DEN LONG TRANG	"	"	Uyen Hung Vill. Tan Uyen Dis. Song Be Prov. 0m	May, Aug, Dec, ~ 60 days
100	"	"	DAU TRANG TAN UYEN	"	"	Thn Dan Mo Town Tan Uyen Dis. Song Be Prov. 0m	May, August ~ 60 days

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Maze rotation with Rice	Food	None	③	①	—	Black seed, Green cotyledon	NGUYEN THI THUY
rotation with Mung bean, Sesame	"	"	"	"	③	Black seed, White cotyledon	MAI TOAN Dien Phuoc Vill.
rotation with other beans	"	"	"	"	"	Dark red seed	"
mixed with Maze	"	Weevil	⑤	"	—	White seed, Dark-brown around hilum	HOANG THI LAI
"	"	"	"	②	—	Black seed, White cotyledon	"
"	"	"	"	"	—	Black-brown and black- green speckle seed	LE THI NAM
"	"	None	"	"	—	Dark red seed	NGUYEN THI HAI
"	"	Weevil	"	"	—	Black seed, White cotyledon	"
rotation with other beans	"	"	"	①	③	"	PHAN RY Ya Chim Vill.
"	"	None	"	②	"	White seed, Dark brown around hilum	"
"	"	Weevil	"	"	—	Black seed, White cotyledon	NGUYEN THI LOAN
continuous cropping	"	None	"	"	③	Dark red seed	NGUYEN VAN HAI Cum Gar Town
—	"	Weevil	"	"	—	White seed, Dark-brown around hilum	LAM THI KIU LAM
—	"	"	"	"	—	Black seed, White cotyledon	"
single cropping	"	Weevil	"	②	—	"	NGUYEN THI SNOI
rotation with Groundnut	"	None	"	①	—	White seed, Black around hilum	LAMA THI NGO
single cropping mixed cropping	"	"	③	"	③	Black seed, White cotyledon	NGUYEN HANG DUI Uyen Hung Vill.
single cropping mixed cropping	"	Weevil	"	"	—	White seed, Black around hilum	TRAN THI DUNG

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Vigna unguiculata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
101	11/Mar	<i>Vigna unguiculata</i>	DAU DO	P	③	Thn Dan Mo Town Tan Uyen Dis. Song Be Prov. 0m	-
107	13/Mar	"	DAU CHI CHI	"	"	Lien Nghia Vill. Duc Trang Dis. Lam Dong Prov. 930m	April ~ 70 days
109	"	"	DAU DEN LONG XANH	"	"	"	April, May ~ 70 days
110	"	"	DAU HONG DAO	"	"	"	April ~ 90 days
116	"	"	DAU DEN	"	"	Ninh Son Vill. Ninh Son Dis. Ninh Thuan Prov. 140m	April ~ Jun
120	14/Mar	"	"	"	"	Rhanh Hui Vill. Ninh Hai Dis. Ninh Thuan Prov. 0m	August ~ 90 days
124	"	"	"	"	"	"	August ~ 75days
125	"	"	DAU BI	"	"	"	"
129	15/Mar	"	DAU DEN LONG XANH	"	"	Ninh Xim Vill. Ninh Hoa Dis. Khanh Hoa Prov. 0m	April ~ July
140	16/Mar	"	"	"	"	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 25m	Dec. Jan. ~ 75 days
141	"	"	DAU DEN TRANG LONG	"	"	"	"
152	17/Mar	"	DAU DEN	"	"	Cat Tay Vill. Phu Cat Dis. Binh Dinh Prov. 35m	December ~ April April ~ July
155	18/Mar	"	"	"	"	Tinh Long Vill. Son Tinh Dis. Quang Ngai Prov. 0m	December ~ 70 days
157	"	"	DAU TRANG	"	"	"	April ~ 70 days
161	19/Mar	"	-	"	"	Da Nang City Da Nang Prov. 0m	December ~ March

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
single cropping	Food	Weevil	③	①	—	Red seed	TRAN THI DUNG
mixed with Maize	"	None	⑤	②	—	Black-green speckle seed, Green cotyledon	NGUYEN THI HIEN
single cropping	"	"	"	"	—	Black seed, Green cotyledon	"
single cropping mixed cropping	"	"	"	①	—	Light red seed	"
mixed with Maize	"	Weevil	"	"	—	Black seed, White and Green cotyledon mixed	LAM THI LUC
single cropping	"	None	③	"	③	Black seed, Green cotyledon	NGUYEN TRONG Rhanh Hui Vill.
mixed with Maize	"	"	"	"	—	Black seed, White cotyledon	LE THI LAN
single cropping	"	"	"	"	—	White seed, Black around hilum	"
"	"	"	—	—	—	Black seed, Green cotyledon	—
mixed with Groundnut	"	"	③	①	③	"	DO THE DUNG Xuan Quang III Vill.
"	"	Weevil	"	"	"	Black seed, White cotyledon	"
"	"	None	①	"	②	"	—
mixed with Maize, other beans	"	"	③	"	③	Black seed, Green cotyledon	HA THI SON Tinh Long Vill.
single cropping	"	Weevil	"	"	"	White seed, Brown around hilum	"
mixed with Maize,	"	None	—	—	—	Red seed	—

3) Topography: ①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Vigna radiata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov.Vill., km) & Altitude(m)	Crop season
2	26/Feb	<i>Vigna radiata</i>	DAU XANH	P	③	Dai Kim Vill. Phu Yen Dis. Bac Thai Prov. 30m	Early of March~ Early of May
6	"	"	"	"	"	"	End of February ~ Early of Jun
14	27/Feb	"	DAU XANH MOC	"	"	Phuong Thong Vill. Bach Thong Dis. Bac Thai Prov. 190m	Jun ~ August
18	28/Feb	"	"	"	"	Nguyen Vill. Quang Hoa Dis. Cao Bang Prov. 360m	May ~ October
22	"	"	DAU XANH QUANG HOA	"	"	Quoc Phong Vill. Quanc Hoa Dis. Cao Bang Prov. 430m	Jun, July~August , September
33	"	"	DAU XANH THUA KHEO	"	"	"	Jun ~ August
39	"	"	DAU XANH MOC	"	"	Nihat Tien Vill. Huu Lung Dis. Lang Son Prov. 60m	Early of March ~ May
45	3/Mar	"	"	"	"	Tan Lap Vill. Huu Lung Dis. Lang Son Prov. 30m	March ~ May Jun ~ August
46	5/Mar	"	DAU XANH	"	"	Dien Phuoc Vill. Dien Ban Dis. Da Nang Prov. 0m	Jan. ~ April April ~ July
56	7/Mar	"	DAU XANH MOC	"	"	Apumpa Town Apumpa Dis. Gia Lai Prov. 250m	May ~ August
62	"	"	"	"	"	Chu Se Town Chu Se Dis. Gia Lai Prov. 610m	"
68	8/Mar	"	DAU XANH SE	"	"	Ya Chim Vill. Kon Tum Town Kon Tum Prov. 620m	April ~ July
70	"	"	DAU XANH MO	"	"	"	"
72	"	"	"	"	"	Sa Binh Vill. Sa Thay Dis. Kon Tum Prov. 610m	April ~ Jun August~November
76	"	"	"	"	"	Eahi Leo Town Eahi Leo Dis. Dac Lac Prov. 500m	May ~ July
82	9/Mar	"	"	"	"	Cum Gar Town Cum Gar Dis. Dac Lac Prov. 500m	"
84	"	"	"	"	"	Buon Ma Thuot City Dac Lac Prov. 560m	"
90	11/Mar	"	DAU XANH MOC	"	"	Tan Uyen Town Tan Uyen Dis. Song Be Prov. 0m	May, Aug. Dec. ~ 60 days

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topog-raphy ³⁾	Site ⁴⁾	Drain-age ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Groundnut	Food	None	③	①	③	Green seed	NGHIEN XUAN NGHI Dai Kim Vill.
mixed with Maize rotation with Rice	"	"	"	"	"	Yellow-Green seed	NGUIEN THI BINH Dai Kim Vill.
single cropping	"	"	⑤	②	"	Green seed	HOANG KHAI THACH Phuong Thong Vill
single cropping mixed cropping	"	"	"	"	"	"	TRUONG VAN THANG Nguyen Vill.
single cropping	"	"	"	"	"	"	LONG VAN TAM Quoc Phong Vill.
single cropping	"	"	"	②	"	Green seed	LANG VAN XICH Lang Nong Vill.
rotation with Rice	"	"	"	"	"	"	NGO THI LINH Nihat Tien Vill.
"	"	"	③	①	-	"	HOANG THI THANH
rotation with Groundnut	"	"	"	"	③	"	MAI TOAN Dien Phuoc Vill.
mixed with Maize	"	"	⑤	②	-	"	LE THI NAM
"	"	"	"	"	-	"	NGUYEN THI HAI
rotation with other beans	"	"	"	"	③	"	PHAN RY Ya Chim Vill.
"	"	"	"	"	"	"	"
rotation with Maize	"	Weevil	"	"	"	"	DINH VAN AN Sa Binh Vill.
single cropping	"	"	"	"	-	"	NGUYEN THI LOAN
-	"	None	"	"	-	"	LAM THI KIU LAM
rotation with other beans	"	"	"	"	③	"	LAM THI KIEN LAM
rotation with Groundnut	"	Weevil	③	①	-	"	NGUYEN BACH TWYEI

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Vigna radiata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
95	11/Mar	<i>Vigna radiata</i>	DAU XANH MOC	P	③	Uyen Hung Vill. Tan Uyen Dis. Song Be Prov. 0m	May, Aug. Dec. ~ 60 days
97	"	"	DAU XANH MO	"	"	Thn Dan Mo Town Tan Uyen Dis. Song Be Prov. 0m	"
98	"	"	DAU XANH TAN UYEN	"	"	"	"
104	12/Mar	"	DAU XANH MO	"	"	Bien Hoa Town Bien Hoa Dis. Dong Nai Prov. 0m	April ~ Early of July
106	"	"	"	"	"	Dau Giay Vill. Thong Nhai Dis. Dong Nai Prov. 150m	May ~
111	13/Mar	"	"	"	"	Lien Nghia Vill. Duc Trang Dis. Lam Dong Prov. 930m	April ~ 65 days
112	"	"	DAU XANH LA TRE	"	"	"	"
117	"	"	DAU XANH MO	"	"	Ninh Son Vill. Ninh Son Dis. Ninh Thuan Prov. 140m	April ~ July
119	14/Mar	"	"	"	"	Rhanh Hui Vill. Ninh Hai Dis. Ninh Thuan Prov. 0m	August ~ 90 days
123	"	"	"	"	"	Bagai Vill. Cam Ranh Dis. Khanh Hoa Prov. 0m	July ~ 65 days
127	"	"	DAU XANH MOC	"	"	"	August ~ 65 days
130	15/Mar	"	DAU XANH MO	"	"	Ninh Xim Vill. Ninh Hoa Dis. Khanh Hoa Prov. 0m	February ~ April
133	"	"	DAU XANH	"	"	Ninh An Vill. Ninh Hoa Dis. Khanh Hoa Prov. 0m	February ~ 65 days
135	"	"	DAU XANH MO	"	"	Van Lung Vill. Van Ninh Dis. Khanh Hoa Prov. 40m	December ~ 75 days
139	16/Mar	"	"	"	"	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 250m	Dec. Jan. ~ March, April
146	"	"	DAU XANH XE MOC	"	"	Tuy An Town Tuy An Dis. Phu Yen Prov. 20m	December ~ March
149	17/Mar	"	DAU XANH XE	"	"	Nhinh Khanh Vill. An Nhan Dis. Binh Dinh Prov. 30m	December ~ 70 days
151	"	"	DAU XANH	"	"	Cat Tay Vill. Phu Cat Dis. Binh Dinh Prov. 35m	December ~ April April ~ July

1)Sample:P(population), In(individual). 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address, etc
mixed with Groundnut	Food	None	③	①	③	Green seed	NGUYEN HANG DUI Uyen Hung Vill.
"	"	Weevil	"	"	-	"	TRAN THI DUNG
"	"	None	"	"	-	"	"
-	"	"	-	-	-	"	BAI THI HOA
mixed with Groundnut	"	Weevil	-	-	-	"	NGUYEN THI XUAN
mixed with Maize	"	None	⑤	①	-	"	NGUYEN THI HIEN
"	"	"	"	"	-	"	HOANG THI LIEN
single cropping	"	"	"	"	-	"	LAM THI LUG
"	"	Weevil	③	"	③	"	NGUYEN TRONG Rhanh Hui Vill.
"	"	None	"	"	-	"	PHAN THI LAI
mixed with Maize	"	Weevil	-	-	-	"	LE THI LAN
-	"	"	-	-	-	"	-
single cropping	"	None	③	①	③	"	NGUYEN VAN LONG Ninh An Vill.
mixed with Groundnut	"	Weevil	"	"	"	"	HOANG VAN TINH Van Lung Vill.
"	"	None	"	"	"	"	DO THE DUNG Xuan Quang III Vill.
mixed with Groundnut rotation with Rice	"	Weevil	"	"	"	"	HOANG THI THAI Tuy An Town
mixed with Groundnut	"	None	"	"	"	"	DAO MINH HOA Ninh Khanh Vill.
"	"	"	"	"	"	"	-

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Vigna radiata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
154	18/Mar	<i>Vigna radiata</i>	DAU XANH	P	③	Tinh Long Vill. Son Tinh Dis. Quang Ngai Prov. 0m	April ~ 70 days
158	"	"	DAU XANH MOC	"	"	Tay An Vill. Quang Ngai Town Quang Ngai Prov. 20m	"
159	"	"	DAU XANH MO	"	"	"	"
160	"	-	-	"	"	Da Nang City Da Nang Prov. 0m	December ~ March

Genus : *Vigna umbellata*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
15	28/Feb	<i>Vigna umbellata</i>	DAU NHO NHE	P	③	Nguyen Vill. Quang Hoa Dis. Cao Bang Prov. 360m	Early of March ~ October
30	2/Mar	"	"	"	"	Lang Nong Vill. Chi Lang Dis. Lang Son Prov. 290m	March ~ December
88	10/Mar	"	DAU DO	"	"	Madrak Town Madrak Dis. Dac Lac Prov. 450m	May ~ July
126	14/Mar	"	"	"	"	Bagai Vill. Cam Ranh Dis. Khanh Hoa Prov. 0m	August ~ 90 days
142	16/Mar	"	DAU DO HAT BE	"	"	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 25m	September ~ February
143	"	"	DAU DO HAT TO	"	"	"	-

Genus : *Vigna glabrescens*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
25	28/Feb	<i>Vigna glabrescens</i>	DAU XANH VO XAM	P	③	Phuc Sen Vill. Quang Hoa Dis. Cao Bang Prov. 530m	April ~ October
32	2/Mar	"	DAU XANH THUA COOK	"	"	Lang Nong Vill. Chi Lang Dis. Lang Son Prov. 290m	March ~ September

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Groundnut	Food	None	③	①	③	Green seed	HA THI SON Tinh Long Vill.
"	"	"	"	"	"	"	NGUYEN VAN DUC Tay An Vill.
"	"	"	"	"	"	"	"
mixed with Maize	"	"	-	-	-	"	-

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Maize	Food	None	⑤	②	③	Green-brown speckle seed	TRUONG VAN THANG Nguyen Vill.
"	"	"	"	"	"	Black-green, Black-brown speckle seed	LANG VAN XICH Lang Nong Vill.
single cropping	"	"	"	"	-	Dark red seed	NGUYEN THI SNOI
single cropping mixed cropping	"	Weevil	③	①	-	"	LE THI LAN
single cropping	"	"	⑤	②	③	"	DO THE DUNG Xuan Quang III Vill.
"	"	None	"	"	"	"	"

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Maize	Food	None	⑤	②	③	Black-green speckle seed	LONG VAN PAD Phuc Sen Vill.
"	"	"	"	①	"	"	LANG VAN XICH Lang Nong Vill.

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
8	26/Feb	<i>Arachis hypogaea</i>	LAC TRANG	P	③	Dai Kim Vill. Phu Yen Dis. Bac Thai Prov. 360m	Middle of January ~ July
10	"	"	DO BAC GIANG	"	"	Van Gra Vill. Rhu Binh Dis. Bac Thai Prov. 30m	End of January ~ End of Jun
24	28/Feb	"	LAC QUOC PHONG	"	"	Quoc Phong Vill. Quanc Hoa Dis. Cao Bang Prov. 430m	July ~ October
29	2/Mar	"	LAC BA THANG	"	"	Lang Nong Vill. Chi Lang Dis. Lang Son Prov. 290m	March ~ May August~October
38	"	"	"	"	"	Nihat Tien Vill. Huu Lung Dis. Lang Son Prov. 40m	Early of March ~ Jun
54	7/Mar	"	LAC BON THANG	"	"	Apumpa Town Apumpa Dis. Gia Lai Prov. 250m	May ~ August October~January
58	"	"	DAU PHONG SE	"	"	Chu Se Town Chu Se Dis. Gia Lai Prov. 600m	May ~ July July~September
63	"	"	DAU PHONG LANG	"	"	My Thach Vill. Chu Se Dis. Gia Lai Prov. 610m	May ~ August July~September
64	8/Mar	"	DAU PHONG SE	"	"	Ya Chim Vill. Kon Tum Town Kon Tum Prov. 620m	April ~ July
65	"	"	DAU PHONG BA NHAN	"	"	"	"
77	9/Mar	"	DAU PHONG	"	"	Cum Gar Town Cum Gar Dis. Dac Lac Prov. 510m	July ~ October
93	11/Mar	"	LAC GIAY	"	"	Uyen Hung Vill. Tan Uyen Dis. Song Be Prov. 0m	May, Aug. Dec. ~ 90 days
94	"	"	LAC NU	"	"	"	May, Aug. Dec. ~ Aug. Oct. March
115	13/Mar	"	"	"	"	Lien Nghia Vill. Duc Trang Dis. Lam Dong Prov. 930m	August~October, November
121	14/Mar	"	LAC NINH HAI	"	"	Rhanh Hui Vill. Nih Hai Dis. Ninh Thanh Prov. 0m	August ~ 90 days
128	"	"	DAU PHONG MO	"	"	Bagai Vill. Cam Ranh Dis. Khanh Hoa Prov. 0m	"
134	15/Mar	"	LAC XE	"	"	Van Lung Vill. Van Ninh Dis. Khanh Hoa Prov. 40m	September ~ 90 days
136	16/Mar	"	DAU PHUNG XE	"	"	Xuan Quang I Vill. Dong Xuan Dis. Phu Yen Prov. 25m	December ~ 90 days

1)Sample:P(population), In(individual). 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Maize rotation with rice	Food	None	③	①	③	Light red seed	NGUIEN VAN LAI Dai Kim Vill.
mixed with Mung bean rotation with rice	"	"	"	"	"	Red seed	DUONG VAN QUYET Van Gra Vill.
single cropping	"	"	⑤	②	"	"	LONG VAN DAI Quoc Phong Vill.
"	"	"	"	"	"	"	VI BAN BEN Lang Nong Vill.
rotation with rice	"	"	"	"	"	"	NOY THI CHINH Hihat Tien Vill.
single cropping	"	"	"	"	-	Light red seed	HOANG THI LAI
-	"	"	"	"	③	"	HOANG PHUIC BINH Chu Se Town
single cropping	"	"	"	"	"	"	TOTHI THUUNG My Thach Vill.
rotation with beans	"	"	"	"	"	"	PHAN RY Ya Chim Vill.
"	"	"	"	"	"	Light red seed Three grain pod	A KHEO Ya Chim Vill.
rotatin with Maize	"	"	"	"	"	Light red seed Three grain pod	NGUYEN VAN HAI Cum Gar Town
mixed with Mung bean	"	"	③	①	"	Light red seed	NGUYEN HANG DUI Uyen Hung Vill.
"	"	"	"	"	"	"	"
intercropping with Maize	"	"	⑤	"	-	"	LE THI YEN
single cropping	"	"	③	"	③	"	NGUYEN TRONG Rhanh Hui Vill.
"	"	"	"	"	"	"	BUI THI HONG Bagai Hui Vill.
mixed with Mung bean	"	"	"	"	"	"	HOANG VAN TINH Van Lung Vill.
"	"	"	"	"	"	"	HA VAN HIO Xuan Quang I Vill.

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Arachis hypogaea*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
138	16/Mar	<i>Arachis hypogaea</i>	DAU PHUNG	P	③	Xuan Quang I Vill. Dong Xuan Dis. Phu Yen Prov. 25m	December, January ~ March, April
153	17/Mar	"	DAU PHONG	"	"	Cat Tay Vill. Phu Cat Dis. Binh Dinh Prov. 35m	December ~ March
156	18/Mar	"	DAU PHONG SE	"	"	Tinh Long Vill. Son Tinh Dis. Quang Ngai Prov. 0m	December ~ 90 days

Genus : *Lablab purpureus*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
48	5/Mar	<i>Lablab purpureus</i>	DAU VAN	P	③	Dien Phuoc Vill. Dien Ban Dis. Da Nang Prov. 0m	through the year 3 months
53	7/Mar	"	DAU VAN BO	"	"	Apumpa Town Apumpa Dis. Gia Lai Prov. 250m	May ~ August
71	8/Mar	"	DAU VAN	"	"	Ya Chim Vill. Kon Tum Town Kon Tum Prov. 620m	April ~ August
118	14/Mar	"	"	"	"	Ti Thuy Tr Tai Vill. Nih Hai Dis. Ninh Thanh Prov. 0m	July ~ January
144	16/Mar	"	DAU VA TRANG	"	"	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 25m	August ~ February

Genus : *Phaseolus lunatus*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
145	16/Mar	<i>Phaseolus lunatus</i>	DAU NGU	P	③	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 25m	August ~
162	13/Mar	"	-	"	"	Lien Nghia Vill. Duc Trang Dis Lam Dong Prov. 930m	-

Genus : *Phaseolus vulgaris*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
85	10/Mar	<i>Phaseolus Vulgaris</i>	DAU DEN HAT TO	P	③	Madrak Town Madrak Dis. Dac Lac Prov. 450m	April ~ July

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
mixed with Mung bean	Food	None	③	①	③	Light red seed	HA VAN HO Xuan Quang I Vill.
"	"	"	"	"	"	"	-
mixed with bean	"	"	"	"	"	"	HA THI SON Tinh Long Vill.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
single cropping	Food	None	③	①	③	White seed	MAI TOAN Dien Phuoc Vill.
"	"	"	⑤	②	-	Light green seed	HOANG THI LAI
rotation with other beans	"	"	"	"	③	White seed	A KEO Ya Chim Vill.
mixed with Maize, Mung bean	"	"	③	①	-	"	TRAN VAN NGO
mixed with cassava	"	"	⑤	"	③	"	DO THE DUNG Xuan Quang III Vill.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
single cropping	Food	None	③	①	③	Red-yellow speckle seed	DO THE DUNG Xuan Quang III Vill.
-	"	"	-	-	-	Red-white speckle seed	-

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
single cropping	Food	None	③	①	-	Black seed White cotyledon	NGUYEN THI SNOI

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.

Genus : *Cajanus cajan*

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
102	11/Mar	<i>Cajanus cajan</i>	DAU TRIEN	P	③	Thu Dau Mo Town. Tan Uyen Dis. Song Be Prov. 0m	May ~ December

Genus : -

LIST OF COLLECTED MATERIALS IN VIETNAM, 1994

Collection No.	Date Month	Genus & Species	Cultivar or local name	Sample P/In ¹⁾	2) Status	Locality(Prov. Vill., km) & Altitude(m)	Crop season
163	3/11	-	-	P	①	Xuan Quang III Vill. Dong Xuan Dis. Phu Yen Prov. 0m	-

1)Sample:P(population), In(individual), 2)Status:①wild ②weedy ③landrace ④improved ⑤breeder's line ⑥others.
4)Site:①level ②slope ③summit ④depression. 5)Drainage:①poor ②moderate ③good ④excessive.

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
-	Food	None	③	①	-	Yellow seed	TRAN THI DUNG

Cultural practice	Usage	Diseases. & pests	Topography ³⁾	Site ⁴⁾	Drainage ⁵⁾	Characteristics	Notes Name & address. etc
-	Medicine	None	③	①	-	Brown seed Extremely small grain	-

3)Topography:①swamp ②flood plain ③plain level ④undulating ⑤hilly ⑥mountainous ⑦others.