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Collaborative Exploration of Genetic Resources Mainly Solanaceous Crops in North-Central Vietnam, 2024

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Summary

The National Agriculture and Food Research Organization (NARO) and the Plant Resources Center (PRC) of the Vietnamese Academy of Agricultural Sciences have collaborated since 2014 under the Plant Genetic Resources in Asia project to survey the genetic resources available mainly in vegetables in Vietnam. As part of this project, ten field surveys have been carried out throughout Vietnam, mainly in the mountainous regions, since 2014. In July 2024, we conducted a 11th field survey on two areas of Que Phong district and Thuong Duong district in Nghe An province located on the north-central region of Vietnam. As a result, we collected 42 samples of *Capsicum* (12 samples of *Capsicum annuum* and 30 *C. frutescens*), 36 samples of *Solanum* (29 of *Solanum melongena*, 2 *S. aethiopicum*, 2 *S. sanitwongsei*, 1 *S. violaceum* and 2 *S. torvum*), 6 samples of *Cucumis* (5 *Cucumis sativus* and 1 *C. melo*), 5 samples of *Cucurbita* (3 *Cucurbita moschata* and 2 *Cucurbita* sp.), 4 samples of *Vigna* (*Vigna unguiculata*) and 1 sample of *Trichosanthes* (*Trichosanthes cochinchinensis*), total number of 94 genetic resources consisting of 12 species in 6 genera (including 2 unknown species of *Cucurbita*), on two areas in the north-central Vietnam. These collected seed samples, except for the two cowpeas for which seeds could not be obtained, will be introduced into Japan under the material transfer agreement (MTA) after the seed cleaning and packing processing at PRC in Vietnam.

KEY WORDS: *Capsicum*, Solanaceae, *Cucumis*, *Cucurbita*, *Vigna*, *Trichosanthes*, Genetic resources, Vietnam

Introduction

Solanaceae crops including tomatoes (*Solanum lycopersicum*), eggplants (*S. melongena*) and chili peppers (*Capsicum* spp.) are important crops that are essential to our diet, and are widely cultivated throughout the world.

Southeast Asia is rich in genetic resources for many useful crops, including solanaceous crops (Matsunaga *et al.* 2010). However, most of these useful crops have not been evaluated and utilized as genetic resources for breeding. In recent years, traditional agriculture is gradually being lost due to the development of the logistics system, urbanization, and agricultural production technology, and there are concerns that many useful genetic resources will be lost as a result (Sugita *et al.* 2017, 2020). Actually, many of the valuable genetic resources in these regions are being replaced by superior varieties with higher yields and more consistent quality. These genetic resources contain many genes that may be important for our diet and agricultural production in the future, and their loss would be a great loss for humanity. The use of genetic resources is essential for breeding (Saito *et al.* 2006; Matsunaga *et al*. 2015; Sugita *et al.* 2017, 2020), and the development of varieties with new traits using many of these genetic resources has contributed to our stable food supply. Therefore, it is

desirable to promote the exploration of plant genetic resources in these regions, protect these resources, evaluate the genetic characteristics of the collected genetic resources, and use them effectively as breeding materials.

As previously mentioned, in these regions, the spread of commercial varieties of vegetables associated with urbanization is increasing the risk of losing landraces which are valuable genetic resources. In order to promote the conservation of plant genetic resources and their effectively utilization, the Plant Genetic Resources in Asia (PGRAsia) project was launched in 2014. As part of this project, surveys of plant resources have been conducted in Vietnam since 2014. The project has so far conducted 10 explorations, mainly in the central and northern Vietnam. In particular, many genetic resources have been collected for such as Solanaceae, Cucurbitaceae and Fabaceae crops.

For the 11th survey, we report the results of an exploration of genetic resources conducted in July 2024 in Que Phong and Tuong Duong districts, Nghe An province, located on the north-central Vietnam.

Methods

The 11th field survey was conducted from July 10 to 21, 2024, in two areas of Que Phong and Tuong Duong districts, Nghe An province, located on the north-central Vietnam (Table 1 and Fig. 1). We arrived in Hanoi on the 10 and moved to Vinh city, Nghe An province on the 11. We called at the Nghe An province office on the same date, and we also called at the district and commune offices in each area before the exploration. We visited mainly minority ethnic groups' houses living in mountainous areas by car under directions of district and commune staff members according to the itinerary of the field survey shown in Table 1, and mainly explored at visited farmers' house, yards and fields. When collecting genetic resources, information such as the collection location (i.e., latitude, longitude, and altitude) determined by a global positioning system receiver (GarmineTrex20J GPS technology; Garmin International Inc., Olathe, KS, USA), their origins, local name, cultivation history, and cooking method of the genetic resources was collected through interviews. We collected mature fruits or farmers' stocked seeds if we determined that the samples represented local landraces by interviews. Each collected the genetic resource was assigned a collection number, photographed, and stored with the recorded information. As for the samples of *Capsicum*, we determined to species using the taxonomic key (Eshbaugh 2012). Seeds were harvested from mature fruits within a few days of collection and then dried for several days.

Results

We conducted a genetic resource field survey for four days each, in the mountainous areas of two districts, Que Phong and Tuong Duong, in Nghe An province (Table 1 and Fig. 1).

In this field survey, we ultimately collected 42 samples of *Capsicum* (12 samples of *Capsicum annuum* and 30 *C. frutescens*), 36 samples of *Solanum* (29 of *Solanum melongena*, 2 *S. aethiopicum*, 2 *S. sanitwongsei*, 1 *S. violaceum* and 2 *S. torvum*), 6 samples of *Cucumis* (5 *Cucumis sativus* and 1 *C. melo*), 5 samples of *Cucurbita* (3 *Cucurbita moschata* and 2 *Cucurbita* sp.),

Table 1. Itinerary of the field survey in north-central Vietnam, 2024

Date	Day	Itinerary	District
10-July	Wed	Chubu 09:30 (VN347) -- 13:45 Hanoi	
11-July	Thu	Move to Vinh City. Meet with Department of Agriculture and Rural Development (DARD) of Nghe An Province.	
12-July	Fri	Move to Que Phong district; Meet with DARD of Que Phong district. Survey, interview and collect: Chau Kim Commune (1) [Z]	Que Phong
13-July	Sat	Kim Son town (1), Commune: Nam Nhoong (2)	Que Phong
14-July	Sun	Commune: Dong Van (2)	Que Phong
15-July	Mon	Commune: Quang Phong (2)	Que Phong
16-July	Tue	Move to Tuong Duong district; Meet with DARD of Tuong Duong district. Survey, interview and collect: Tam Thai Commune (1)	Tuong Duong
17-July	Wed	Commune: Yen Na (2)	Tuong Duong
18-July	Thu	Commune: Nga My (2)	Tuong Duong
19-July	Thu	Commune: Luu kien (3)	Tuong Duong
20-July	Fri	Move to Hanoi city	
21-July	Sat	Hanoi 00:15 (VN346) -- 6:55 Chubu	

[Z] Numbers in parentheses indicate the number of villages visited.

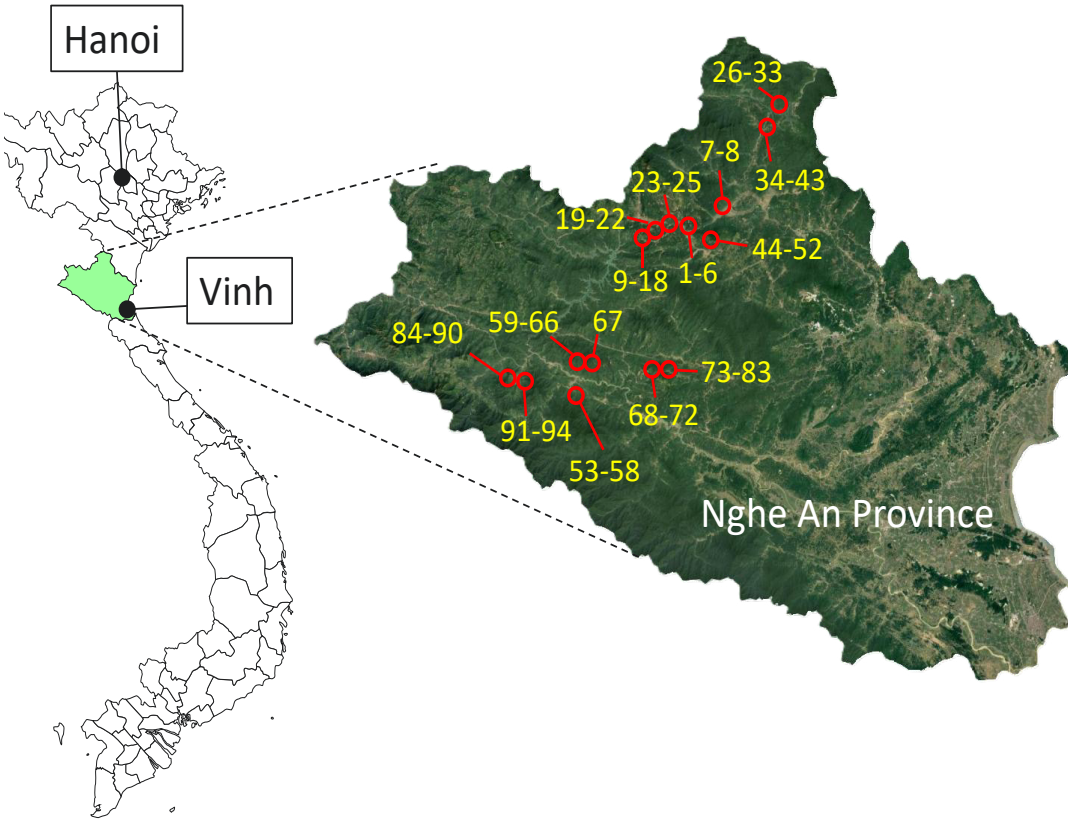

Fig. 1. The collection sites during the 2024 exploration in north-central Vietnam. This map shows Vietnam before the reorganization of provinces and cities that enforced on July 1, 2025. Nghe An province is not included in the reorganization. This map image and location data were created using Google Earth, provided by Google LLC.

Table 2. A summary of collected genetic resources by genus and species in north-central Vietnam, 2024

	Collected samples in Nghe An province		Total
	Que Phong District	Tuong Duong District	
Capsicum annuum	6	6	12
Capsicum frutescens	15	15	30
Solanum melongena	11	18	29
Solanum aethiopicum	2	0	2
Solanum sanitwongsei	0	2	2
Solanum violaceum	1	0	1
Solanum torvum	2	0	2
Cucumis melo	1	0	1
Cucumis sativus	5	0	5
Cucurbita moschata	2	1	3
Cucurbita sp.	2	0	2
Trichosanthes cochinchinensis	1	0	1
Vigna unguiculata	4 (2)[Z]	0	4 (2)[Z]
	52 (50)	42	94 (92)

[Z] Numbers in parentheses indicate the number of seed samples collected.

4 samples of *Vigna* (*Vigna unguiculata*) and 1 sample of *Trichosanthes* (*Trichosanthes cochinchinensis*), total number of 94 genetic resources (including 2 unknown accessions of *Cucurbita*) consisting of 12 species in 6 genera, on two areas in the north-central Vietnam (Tables 2 and 3, Fig. 1). The survey was conducted in six villages across five communes in Que Phong district, and ten villages across four communes in Tuong Duong

Photo 1. Traditional dwelling of Thai people, in Na village, Que Phong district, where genetic resources were collected (left) and traditional clothes (right).

Photo 2. Kho mu farmer's house in Yen Son village, Tuong Duong district (left) and sowing chili pepper seeds (right). Soil mixed with charcoal is used as seedling soil for chili pepper seedlings.

Photo 3. Typical dwelling of Mong du people in Luu Thong village, Tuong Duong district, where genetic resources were collected (left) and traditional musical instrument (right). Most of the Mong du people live in one-story houses.

district. In addition, genetic resources were collected from two ethnic minority groups, Thai (Photo 1) and Kho mu, in Que Phong district, and four ethnic minority groups, Thai, Kho mu (Photo 2), Mong du (Photo 3), and O du, in Tuong Duong district (Table 3). In conclusion, 92 seed samples were collected, excluding the two cowpea samples (*Vigna unguiculata*) for which seeds could not be obtained, and these collected seed samples are due to be introduced to Japan after the seed cleaning and packing processing by PRC in Vietnam.

Discussion

To date, 10 explorations have been carried out in this project, and over 800 genetic resources have been collected, including Solanaceae, Cucurbitaceae,

Photo 4. Decorative items displayed at the entrance of the houses of the Mong du people in Luu Thong village. This decorative item, similar to the "shimenawa" rope used in Japan, is displayed as amulet.

Amaranthaceae and Fabaceae, and so on (Sugiyama *et al.* 2015; Shimomura *et al.* 2016; Kawazu *et al.* 2017; Fujito *et al.* 2018; Kami *et al.* 2019; Sugita *et al.* 2020; Tran *et al.* 2021, 2022, Kondo *et al.* 2023; Ozaki *et al.* 2024). This 11th survey was conducted in Que Phong and Tuong Duong districts of Nghe An province, located in north-central Vietnam. This is the 2nd survey in Nghe An province, following one conducted in Con Cuong district in 2016. In the 2016 survey, a total of 77 genetic resources including amaranth, pumpkin, melon and cucumber, were collected (Kawazu *et al.* 2017). Nghe An province is located in north-central Vietnam, facing the gulf of Tonkin on the east side and consisting of a wide plain. The area from northwest to southwest of Nghe An province, where this survey was conducted borders Laos and is bounded by the Annamite Mountains. Many ethnic minorities live in this region, preserving their traditional culture.

Vietnam has 54 ethnic groups officially recognized by the Vietnamese government. The largest ethnic group is the Kinh, accounting for approximately 86% of the total population (General Statistical Office of Vietnam 2010). The remaining 53 ethnic groups are minority groups, and have their own languages and traditional cultures. Therefore, we visited villages of ethnic minorities who have lived in mountainous areas for generations, and collected their genetic resources.

In this field survey, we collected 94 genetic resources from four ethnic minority groups: Thai, Kho mu, Mong du, and O du (Table 3). These ethnic minority groups have inherited the traditional culture and their lifestyles including food culture, and it is thought that the crops they use in their cooking are also being preserved in these areas for many years (Photos 1-4).

Capsicum

A total of 42 *Capsicum* samples were collected,

which were morphologically classified into the two species of *annuum* (12 samples) and *frutescens* (30).

These collected *C. annuum* samples were accessions with white or purple (Nos. 33, 48, 66 and 84) flowers, green or purple (No. 33) immature fruits, and red or orange (No. 13) mature fruits (Table 3). The expression of anthocyanin pigments in fruit varied among the accessions. The accession in collection No. 77 had anthocyanin pigments expressed in the pedicel, and has upwards clustered fruits. In addition, we collected accessions with round fruits (No.13), and with elongated or wedge-shaped fruits (No. 40).

These collected *C. frutescens* samples had light green flowers, white, yellowish white, light green or green immature fruits, and red or orange mature fruits (Table 3). The fruit lengths of the collected accessions varied from as short as approximately 1 cm to as long as approximately 4 cm. Generally, *C. frutescens* fruits tend to shed of when they mature, but some of the accessions collected in this survey showed resistant to fruit shedding even when the fruits were red and mature. However, in the fields where these non-shedding accessions were collected, fully mature fruits may have already been harvested by farmers.

According to interviews with farmers, these harvested peppers are generally used fresh or dried as spices at home, and also, some fields were cultivated for sale at the market. It is also eaten pickle in salt with chili pepper and sliced bamboo shoots (Photo 5). *C. frutescens* is used as a sour sauce for eating with bamboo shoots by boiling with eggplant and adding lemon juice, or as a sauce mixed with fish sauce and garlic.

Solanum

A total of 36 *Solanum* samples were collected, which were morphologically classified into the five species of *melongena* (29), *aethiopicum* (2), *sanitwongsei* (2), *violaceum* (1) and *torvum* (2).

The collected *S. melongena* samples varied from accessions with no thorns at all to accessions with numerous thorns on the stems, calyx, and leaves, and the length of the thorns also varied. The flower colors ranged from white to pale purple and purple. The immature fruit color was mostly white or light green with light green or green stripes. In addition, some accessions showed purple pigments in the fruit. The fruits were mostly small and round or oval in shape. All accessions identified in this survey had yellow mature fruit.

Photo 5. Salt-pickled bamboo shoots with chili peppers.

Two accessions (Nos. 11 and 22) of Ethiopian eggplant (*S. aethiopicum*) were collected in Na village located at an altitude of over 700 m, Que Phong district. Interviews with the growers revealed that they brought these plants from the forest. The immature fruit is green but turns red when mature, and is eaten sliced and soaked in salt water in salads.

Two accessions (Nos. 85 and 93) of *S. sanitwongsei*, also known as Talong-Siam, were collected from two villages in Tuong Duong district. The small round fruits about 1 cm long bear in clusters. Immature fruit color is light green and turns orange when mature. The young fruits are eaten boiled or in soup. It has a bitter taste and is used as a medicinal plant to treat diabetes and stimulate appetite.

One accession (No. 20) of *S. violaceum*, also known as Indian nightshade, was collected in Na village, Tuong Duong district. The flowers are white, and small round fruits about 1 cm long bear in clusters.

Two accessions (Nos. 1 and 19) of *S. torvum* were collected in Que Phong district. These fruits are about 1 cm long bear in clusters, and immature fruit color is green and turns brown when mature. These immature fruits are eaten by crushing them with chili pepper and salt.

Cucumis

A total of 6 *Cucumis* samples were collected in Que Phong district were morphologically classified into the two species of *melo* (1) and *sativus* (5).

One accession (No. 34) of *C. melo* was collected from farmer's stored seeds. The young fruit is eaten as a vegetable, and the mature fruit is eaten as a fruit. All five accessions of *C. sativus* were collected from seeds or mature fruit stored by farmers. According to interviews, the mature fruit color of No. 5 is white. These young fruits are eaten with boil, fry or soup, and eaten fresh as a salad in this region.

Cucurbita

A total of 5 *Cucurbita* samples were collected from farmer's stored fruits and seeds.

Three accessions (Nos. 16, 23 and 81) collected from fruits were morphologically classified as *C. moschata*, while the remaining two accessions of No. 36 and No. 37 were difficult to classify because they were collected from farmer's stored seeds. The fruit shapes of the three accessions collected were flat (No. 16), crane-necked (No. 23) and round (No. 81), respectively. No. 36 and No. 37, collected from stored seeds, are locally called "Mac uc nhao" and "Mac uc pom", respectively. Locally, "nhao" means "crane-necked" and "pom" means "round". The immature and mature fruits of these pumpkins are eaten fried or boiled in this region.

Vigna

A total of 4 *Vigna* samples were collected in Que Phong district, were morphologically classified as cowpea (*Vigna unguiculata*). However, only poor-quality seeds were obtained from two collected samples, No. 21 and No. 32.

The young fruits are fried or boiled and eaten in salads, and boiled young leaves are eaten with lemon and chili peppers. Moreover, the dried seeds are steamed and used as a filling for sweets and dishes.

Trichosanthes

A sample (No. 3) of *Trichosanthes* collected as stored seeds in Co Muong village, Que Phong district, was morphologically classified as *T. cochinchinensis*. Immature fruit color is green and turns red when mature. The young fruits are eaten with boiled or fried, and it has a bitter taste. This plant grows naturally in the forest.

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2024 年ベトナム中北部における
ナス科作物を中心とした遺伝資源の共同探索

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和文摘要

農業・食品産業技術総合研究機構（NARO）とベトナム植物遺伝資源センター（PRC）は，2014 年から PGRAsia（Plant Genetic Resource in Asia）プロジェクトのもと，ベトナム国内における野菜類を中心とした遺伝資源を共同で探索・収集している．本プロジェクトでは，2014 年以降，ベトナムの山岳地帯を中心に，10 回の現地調査を実施してきた．2024 年 7 月には，ベトナム北中部に位置するゲアン省の 2 地域で 11 回目の現地調査を実施した．その結果，ゲアン省クエフォン郡およびトゥオンズオン郡の 2 つの地域で，トウガラシ属 42 点（*Capsicum annuum* 12 点，*C. frutescens* 30 点），ナス属 36 点（*Solanum melongena* 29 点，*S. aethiopicum* 2 点, *S. sanitwongsei* 2 点, *S. violaceum* 1 点, *S. torvum* 2 点）, キュウリ属 6 点（*Cucumis sativus* 5 点, *C. melo* 1 点），カボチャ属 5 点（*Cucurbita moschata* 3 点，*Cucurbita* sp. 2 点），ササゲ属 4 点（*Vigna unguiculata*）およびカラスウリ属 1 点（*Trichosanthes cochinchinensis*）の 6 属 12 種からなる計 94 点の遺伝資源（未同定のカボチャ属 2 点を含む）を収集した．種子が得られなかったササゲ 2 点を除く 92 点について，PRC において種子洗浄および梱包処理をしたのち，試料移転協定（MTA）に基づき日本に導入する予定である．

Table 3. Exploration of genetic resources in north-nentral Vietnam, 2024 (Que Phong and Tuong Duong district, Nghe An province)

Coll. No.	JP No.	Date	Genus & Species	District	Commune	Village	North latitude/ East longitude	Altitude (m)	Source	Type of sample	Status	Local name	Ethnic group name	Sowing	Harvest	Fruit characteristics, origin, etc.
1	293831	July. 12	*Solanum torvum*	Que Phong	Chau Kim	Co Muong	19-34-26.3/ 104-52-23.3	201	Backyard	fruit	landrace	Hanh ho	Thai	Grow naturally	All year round	Very small fruit. Ligth green immature fruit. Brown mature fruit. Mix and crush with chili peppers and salt, and eat it.
2	293832	July. 12	*Solanum melongena*	Que Phong	Chau Kim	Co Muong	19-34-26.3/ 104-52-23.3	201	Storage	seeds	landrace	Khua san	Thai	2	3	White and green stripes immature fruit. Eat with boil or fry.
3	293833	July. 12	*Trichosanthes cochinchinensis*	Que Phong	Chau Kim	Co Muong	19-34-26.3/ 104-52-23.3	201	Storage	seeds	wild	Ko dom	Thai	UNK	UNK	Eat young fruits with boil or fry. The taste is bitter. Green immature fruit. Red mature fruit. Grow naturally in the forest.
4	293834	July. 12	*Cucumis sativus*	Que Phong	Chau Kim	Co Muong	19-34-26.3/ 104-52-23.3	201	Storage	seeds	landrace	Tanh sang	Thai	2	5	Eat with boil or fry as a salad. Green immature fruit. Yellow mature fruit.
5	293835	July. 12	*Cucumis sativus*	Que Phong	Chau Kim	Co Muong	19-34-26.3/ 104-52-23.3	201	Storage	seeds	landrace	Tanh sang	Thai	2	5	Eat with fry or boil as a salad. Green immature fruit. White mature fruit.
6	293836	July. 12	*Capsicum frutescens*	Que Phong	Chau Kim	Co Muong	19-34-26.3/ 104-52-23.3	201	Storage	seeds	landrace	Uot tay	Thai	1	5	Eat with raw as a spice.
7	293837	July. 13	*Solanum melongena*	Que Phong	Kim Son town	Tay son	19-36-16.6/ 104-54-59.9	129	Backyard	fruit	landrace	Mac khua	Thai	3	5-6	Thornless. Purple flower. Light green immature fruit (No stripes). Yellow mature fruit. Young fruits are eaten with fry or sliced and salted. The seeds of mature fruit are removed and eaten.
8	293838	July. 13	*Solanum melongena*	Que Phong	Kim Son town	Tay Son	19-36-16.6/ 104-54-59.9	129	Backyard	fruit	landrace	Mac khua	Thai	3	5-6	White flower.
9	293839	July. 13	*Solanum melongena*	Que Phong	Nam Nhoong	Nam Nhoong commune office	19-31-50.6/ 104-42-57.9	718	Office front yard	fruit	landrace	Mac khua	Thai	UNK	UNK	Thornless. Purple flower. White and green stripes immature fruit. Yellow mature fruit.
10	293840	July. 13	*Capsicum frutescens*	Que Phong	Nam Nhoong	Na	19-32-03.9/ 104-43-18.0	719	Backyard	fruit	landrace	Mac uot	Thai	3	5-10	Grind for spices.
11	293841	July. 13	*Solanum aethiopicum*	Que Phong	Nam Nhoong	Na	19-32-03.9/ 104-43-18.0	719	Backyard	fruit	landrace	Mac khua khom	Thai	UNK	UNK	Collected from the forest. Slices in salted water and eaten in salads.
12	293842	July. 13	*Solanum melongena*	Que Phong	Nam Nhoong	Na	19-32-03.9/ 104-43-18.0	719	Backyard	fruit	wild	Mac khua khun	Thai	No sowing	UNK	Many long thorns. Not bitter, but sting. Purple flower. White and light green stripes immature fruit. Yellow mature fruit.
13	293843	July. 13	*Capsicum annuum*	Que Phong	Nam Nhoong	Na	19-32-03.9/ 104-43-18.0	719	Backyard	fruit	landrace	Ot phom	Thai	3	5-9	It was brought to this village more than 10 years ago. It is said to have originated in Peru. White flower. Small and round fruit. Green immature fruit. Orange mature fruit. Very hot and used as a spice. No shedding of mature fruit.
14	293844	July. 13	*Cucumis sativus*	Que Phong	Nam Nhoong	Na	19-32-02.8/ 104-43-12.3	723	Storage	fruit	landrace	Tanh sang	Thai	2-3	5-6	White mature fruit. Eat with fry or raw as a salad.
15	293845	July. 13	*Cucumis sativus*	Que Phong	Nam Nhoong	Na	19-32-02.8/ 104-43-12.3	723	Storage	fruit	landrace	Tanh sang	Thai	2-3	5-6	Yellow mature fruit. Eat with fry or raw as a salad.
16	293846	July. 13	*Cucurbita moschata*	Que Phong	Nam Nhoong	Na	19-32-02.8/ 104-43-12.3	723	Storage	fruit	landrace	Mac uc	Thai	2-6	5 or 9-10	Eat with boil.
17	293847	July. 13	*Capsicum frutescens*	Que Phong	Nam Nhoong	Na	19-32-02.8/ 104-43-12.3	723	Storage	fruit	landrace	Mac uot hay	Thai	3	6-12	Eat as a spice. Green immature fruit. Red mature fruit. Small fruit about 1 cm.
18	293848	July. 13	*Capsicum frutescens*	Que Phong	Nam Nhoong	Na	19-32-02.8/ 104-43-12.3	723	Storage	fruit	landrace	Mac uot din	Thai	3	6-12	Eat as a spice. Green immature fruit. Red mature fruit. Small fruit about 2 cm. No shedding of mature fruit.
19	293849	July. 13	*Solanum torvum*	Que Phong	Nam Nhoong	Na	19-32-00.6/ 104-44-11.7	2285 feet	Backyard	fruit	wild	Hanh ho	Thai	UNK	UNK	White flower. Small round fruit about 1 cm. Green immature fruit. Brown mature fruit.
20	293850	July. 13	*Solanum violaceum*	Que Phong	Nam Nhoong	Na	19-32-00.6/ 104-44-11.7	2285 feet	Backyard	fruit	wild	Hanh khom	Thai	UNK	UNK	White flower. Small round fruit about 1 cm. Green immature fruit. Red mature fruit.
21	293851	July. 13	*Vigna unguiculata*	Que Phong	Nam Nhoong	Na	19-32-16.2/ 104-44-20.8	701	Backyard	fruit	landrace	Mac thua	Thai	3	5	Eat with fry or boil as a salad. Missing number due to poor quality of seeds
22	293852	July. 13	*Solanum aethiopicum*	Que Phong	Nam Nhoong	Na	19-32-16.2/ 104-44-20.8	701	Backyard	fruit	landrace	Mac khua khom	Thai	UNK	UNK	Collected from the forest. Slices in salted water and eaten in salads (Same as number 11).
23	293853	July. 13	*Cucurbita moschata*	Que Phong	Nam Nhoong	Huoi Cam	19-32-48.8/ 104-45-23.1	672	Storage	fruit	landrace	Upi ri	Kho mu	3	6-7	Immature and mature fruits are eaten with fry or boil. A large crane-necked fruit with 40 cm long and 20 cm wide.

Table 3. (Continued).

Coll. No.	JP No.	Date	Genus & Species	District	Commune	Village	North latitude/ East longitude	Altitude (m)	Source	Type of sample	Status	Local name	Ethnic group name	Sowing	Harvest	Fruit characteristics, origin, etc.
24	293854	July. 13	*Capsicum frutescens*	Que Phong	Nam Nhoong	Huoi Cam	19-32-48.8/ 104-45-23.1	672	Storage	fruit	landrace	Bric	Kho mu	2	5-10	White immature fruit. Red mature fruit. Slightly large fruit about 3 cm. Used as a spice after drying.
25	293855	July. 13	*Capsicum frutescens*	Que Phong	Nam Nhoong	Huoi Cam	19-32-48.8/ 104-45-23.1	672	Storage	fruit	landrace	Bric	Kho mu	2	5-10	Green immature fruit. Red mature fruit. Medium sized large fruit about 2 - 2.5 cm. Used as a spice after drying.
26	293856	July. 14	*Solanum melongena*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-44.3/ 105-00-32.0	173	Backyard	fruit	landrace	Mac khua	Thai	3-4	5-10	Thornless. White and light green stripes immature fruit. Yellow mature fruit. Young fruits are eaten with fry or boil, and eaten pickled with chili peppers.
27	293857	July. 14	*Capsicum annuum*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-44.3/ 105-00-32.0	173	Backyard	fruit	landrace	Mac uot noi	Thai	3	6-11	Elongated chili pepper. White flower. Green immature fruit. Red mature fruit. Used as a spice after drying. Eat with fresh. The trees updated every 3 to 4 years.
28	293858	July. 14	*Capsicum annuum*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-44.3/ 105-00-32.0	173	Backyard	fruit	landrace	Mac uot om	Thai	3	6-11	Elongated chili pepper. White flower. Green immature fruit. Red mature fruit. Used as a spice after drying. Eat with fresh. The trees updated every 3 to 4 years.
29	293859	July. 14	*Solanum melongena*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-44.3/ 105-00-32.0	173	Road side	fruit	landrace	Mac khua khun	Thai	UNK	UNK	Many thorns on the stems, calyxs and leaves. Light green stripes immature fruit. Yellow mature fruit. Young fruits are eaten with fry or boil, and eaten pickled with chili peppers. Throat will get itchy unless the seeds are removed.
30	293860	July. 14	*Solanum melongena*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-45.4/ 105-00-30.8	227	Backyard	fruit	landrace	Mac khua pem	Thai	3-4	5-10	Thornless. Purple flower. White and Light green stripes immature fruit. Yellow mature fruit. Young fruits are eaten with fry or boil, and eaten pickled with chili peppers. Throat will get itchy unless the seeds are removed.
31	293861	July. 14	*Capsicum frutescens*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-45.4/ 105-00-30.8	227	Backyard	fruit	landrace	Mac uot din	Thai	3	5-12	Green immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits.
32	293862	July. 14	*Vigna unguiculata*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-45.4/ 105-00-30.8	227	Backyard	fruit	landrace	Mac thua man mu	Thai	3	5-8	The young fruits are eaten with fry or boil as a salad. Boiled young leaves are eaten with lemon and chili pepper. Missing number due to poor quality of seeds
33	293863	July. 14	*Capsicum annuum*	Que Phong	Dong Van	Na Chao Pieng Van	19-47-45.4/ 105-00-30.8	227	Backyard	fruit	landrace	Mac uot le	Thai	3	5-10	Purple flower. Purple immature fruit. Red mature fruit. The fruit grow downwards. Eat with raw as a spice.
34	293864	July. 14	*Cucumis melo*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Storage	seeds	landrace	Tanh lai	Thai	2-3	6-7	The young fruits are eaten as a vegetable and the mature fruits as a fruit.
35	293865	July. 14	*Cucumis sativus*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Storage	seeds	landrace	Tanh sang	Thai	2-3	5-7	The young fruits are eaten with fry or soup, and eaten fresh as a salad.
36	293866	July. 14	*Cucurbita sp.*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Storage	seeds	landrace	Mac uc nhao	Thai	1	5-7	"Nhao" shows crane-neck shape. Immature and mature fruits are eaten with fry or boil as a salad. Larger seeds compared to No. 37.
37	293867	July. 14	*Cucurbita sp.*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Storage	seeds	landrace	Mac uc pom	Thai	1	5-7	"Pom" shows round shape. Immature and mature fruits are eaten with fry or boil as a salad. smaller seeds compared to No. 36.
38	293868	July. 14	*Capsicum frutescens*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Backyard	fruit	landrace	Mac uot din	Thai	2	5-10	Green immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits.
39	293869	July. 14	*Solanum melongena*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Backyard	fruit	landrace	Mac khua cang cop	Thai	5	8-10	Thornless. White and light green stripes immature fruit. Yellow mature fruit. Young fruits are eaten with fry or boil, and eaten pickled with chili peppers.
40	293870	July. 14	*Capsicum annuum*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Storage	fruit	landrace	Mac uot om	Thai	2	5-10	Green immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits, dry powder. Wedge-shaped chili pepper. The trees updated every 3 years.
41	293871	July. 14	*Capsicum frutescens*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Backyard	fruit	landrace	Mac uot don	Thai	2	5-10	Light green near white immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits. The trees updated every 3 years.
42	293872	July. 14	*Vigna unguiculata*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Storage	fruit	landrace	Mac thua lai	Thai	2	5-6	The young fruits are eaten with fry or boil as a salad. Steam the dried seeds to make the filling.
43	293873	July. 14	*Capsicum frutescens*	Que Phong	Dong Van	Dong Moi	19-46-17.0/ 104-59-48.1	206	Backyard	fruit	landrace	Mac uot din	Thai	2	5-10	Green immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits. The trees updated every 3 years. Shedding of mature fruit.
44	293874	July. 15	*Capsicum frutescens*	Que Phong	Quang Phong	Pao	19-30-35.0/ 104-53-54.2	334	Backyard	fruit	landrace	Mac uot hay	Thai	2	5-10	Green immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits, dry powder. Eat the fruit soaked in salt. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce for boiled bamboo shoots.
45	293875	July. 15	*Solanum melongena*	Que Phong	Quang Phong	Pao	19-30-35.0/ 104-53-54.2	334	Backyard	fruit	landrace	Khua khun	Thai	UNK	UNK	Naturally growing. Thorns on the stems, calyxs and leaves. Green stripes immature fruit. Yellow mature fruit. Eat the fruit soaked in salt. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce for boiled bamboo shoots.

Table 3. (Continued).

Coll. No.	JP No.	Date	Genus & Species	District	Commune	Village	North latitude/ East longitude	Altitude (m)	Source	Type of sample	Status	Local name	Ethnic group name	Sowing	Harvest	Fruit characteristics, origin, etc.
46	293876	July. 15	*Capsicum frutescens*	Que Phong	Quang Phong	Pao	19-30-49.6/ 104-53-57.9	322	Farm field	fruit	landrace	Mac uot om	Thai	2	5-10	Light green flower. White immature fruit. Orange mature fruit. Young fruits grow upwards and as they matured turn downwards due to their own weight. Large fruit about 4.0 cm. Mostly eat with raw as a spice.
47	293877	July. 15	*Capsicum frutescens*	Que Phong	Quang Phong	Pao	19-30-49.6/ 104-53-57.9	322	Farm field	fruit	landrace	Mac uot hay	Thai	2	5-10	Light green flower. Light green immature fruit. Red mature fruit. No shedding of mature fruit. Mostly eat with raw as a spice.
48	293878	July. 15	*Capsicum annuum*	Que Phong	Quang Phong	Pao	19-30-49.6/ 104-53-57.9	322	Farm field	fruit	landrace	Mac uot om	Thai	2	5-10	Purple flower. Green immature fruit containing anthocyanin pigments. Red mature fruit. Used as a spice with fresh and dried fruits on powder.
49	293879	July. 15	*Solanum melongena*	Que Phong	Quang Phong	Pao	19-30-49.6/ 104-53-57.9	322	Farm field	fruit	landrace	Mac khua san	Thai	2	5-10	Purple flower. Slight thorns on the calyxs. Light green with green stripes immature fruit. Yellow mature fruit. Eat the fruit soaked in salt. The young fruits are eaten with fry or boil. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce for boiled bamboo shoots and rice cake.
50	293880	July. 15	*Vigna unguiculata*	Que Phong	Quang Phong	Pao	19-30-49.6/ 104-53-57.9	322	Farm field	fruit	landrace	Mac thua chang	Thai	2	4-6	The young fruits are eaten with fry or boil as a salad. Boiled young leaves are eaten with fry.
51	293881	July. 15	*Capsicum frutescens*	Que Phong	Quang Phong	Chieng Huong	19-29-58.9/ 104-52-29.9	376	Backyard	fruit	landrace	Mac uot hay	Thai	2	5-10	Green immature fruit. Red mature fruit. Used as a spice with fresh and dry fruits, dry powder.
52	293882	July. 15	*Capsicum frutescens*	Que Phong	Quang Phong	Chieng Huong	19-30-06.2/ 104-52-33.9	361	Backyard	fruit	landrace	Mac uot hay	Thai	2	5-10	Large tree over 2 meters long. How to use the harvest is unknown as owner of the house is absent.
53	293883	July. 16	*Capsicum frutescens*	Tuong Duong	Tam Thai	Cay Me	19-14-25.0/ 104-30-53.2	130	Backyard	fruit	landrace	Mac ot	Thai	3	6-10	Green immature fruit. Red mature fruit. No shedding of mature fruit. Used as a spice with fresh and dry fruits, dry powder. Mix with fish sauce.
54	293884	July. 16	*Solanum melongena*	Tuong Duong	Tam Thai	Cay Me	19-14-25.0/ 104-30-53.2	139	Backyard	fruit	landrace	Mac khua	Thai	3	5-7	Thornless. Purple flower. Ovoid fruit shape. Light green with green stripes immature fruit. Yellow mature fruit. The young fruits are eaten with fry and boil, or in soup.
55	293885	July. 16	*Solanum melongena*	Tuong Duong	Tam Thai	Cay Me	19-14-33.4/ 104-30-46.3	74	Backyard	fruit	landrace	Mac khua man mu	Thai	2	5-7	Thornless. White flower. White with green stripes immature fruit. Yellow mature fruit. Young fruits are eaten as a pickle.
56	293886	July. 16	*Solanum melongena*	Tuong Duong	Tam Thai	Cay Me	19-14-33.4/ 104-30-46.3	74	Backyard	fruit	landrace	Mac khua	Thai	2	5-7	Thornless. No flowers. Oval fruit shape. White with green stripes immature fruit. Yellow mature fruit. Young fruits are eaten as a pickle.
57	293887	July. 16	*Capsicum frutescens*	Tuong Duong	Tam Thai	Cay Me	19-14-33.4/ 104-30-46.3	74	Backyard	fruit	landrace	Mac uot hay	Thai	2	5-10	Green immature fruit. Red mature fruit. No shedding of mature fruit. Used as a spice with fresh and dry fruits, dry powder.
58	293888	July. 16	*Capsicum frutescens*	Tuong Duong	Tam Thai	Cay Me	19-14-30.0/ 104-30-51.8	84	Backyard	fruit	landrace	Mac uot hay	Thai	2	5-10	Green immature fruit. Red mature fruit. No shedding of mature fruit, but shedding of over mature fruit. Used as a spice with fresh and dry fruits.
59	293889	July. 17	*Solanum melongena*	Tuong Duong	Yen Na	Yen Son	19-19-37.3/ 104-30-57.0	172	Backyard	fruit	landrace	Um dang	Kho mu	UNK	UNK	Naturally growing. Thornless. White flower. No immature fruits. Yellow mature fruit. The young fruits are eaten with fry and boil, or in soup. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce, and Add to boiled cow skin and are eaten together.
60	293890	July. 17	*Solanum melongena*	Tuong Duong	Yen Na	Yen Son	19-19-32.9/ 104-31-10.4	184	Backyard	fruit	landrace	Um dang	Kho mu	3	5-7	Thornless. White flower. Light green with green stripes immature fruit. Yellow mature fruit. The young fruits are eaten with fry and boil, or in soup.
61	293891	July. 17	*Solanum melongena*	Tuong Duong	Yen Na	Yen Son	19-19-32.9/ 104-31-10.4	184	Backyard	fruit	landrace	Um dang	Kho mu	3	5-7	Purple flower. Slight thorns on the calyxs and stems. White with green stripes immature fruit. Yellow mature fruit. Oval fruit shape. The cooking method is the same as other Kho mu people.
62	293892	July. 17	*Capsicum frutescens*	Tuong Duong	Yen Na	Yen Son	19-19-27.9/ 104-31-41.2	216	farm field	fruit	landrace	Blic	Kho mu	3	6-12	Yellowish white immature fruit. Orange mature fruit. Red over mature fruit. Eat fresh for home use. No. 62 and No. 63 were cultivated in the same field, and the samples were separated by immature fruit color.
63	293893	July. 17	*Capsicum frutescens*	Tuong Duong	Yen Na	Yen Son	19-19-27.9/ 104-31-41.2	216	farm field	fruit	landrace	Blic	Kho mu	3	6-12	Light green immature fruit. Red mature fruit. Eat fresh for home use. No. 62 and No. 63 were cultivated in the same field, and the samples were separated by immature fruit color.
64	293894	July. 17	*Capsicum annuum*	Tuong Duong	Yen Na	Yen Son	19-19-27.9/ 104-31-41.2	216	farm field	fruit	landrace	Blic	Kho mu	3	6-12	White flower. Green immature fruit. Red mature fruit. Eat fresh for home use.

Table 3. (Continued).

Coll. No.	JP No.	Date	Genus & Species	District	Commune	Village	North latitude/ East longitude	Altitude (m)	Source	Type of sample	Status	Local name	Ethnic group name	Sowing	Harvest	Fruit characteristics, origin, etc.
65	293895	July. 17	*Solanum melongena*	Tuong Duong	Yen Na	Yen Son	19-19-27.9/ 104-31-41.2	216	storage and farm field	fruit	landrace	Lum dong	Kho mu	2	5-7	The cooking method is the same as other Kho mu people. Thornless. Purple flower. White with green stripes immature fruit. Yellow mature fruit. Large round fruit. The cooking method is the same as other Kho mu people.
66	293896	July. 17	*Capsicum annuum*	Tuong Duong	Yen Na	Yen Son	19-19-27.9/ 104-31-41.2	216	storage and farm field	Dry fruit	landrace	Blic	Kho mu	3	6-12	Purple flower. Green immature fruit. Red mature fruit. Eat fresh for home use. In this field, the harvest is shipped to the market, so there are almost no fully mature fruits.
67	293897	July. 17	*Solanum melongena*	Tuong Duong	Yen Na	Sieng Nua	19-18-39.0/ 104-34-39.8	154	farm field	Dry seeds, Fresh fruit	landrace	Mac khua	Thai	2	5-8	Thornless. Purple flower. Ovoid fruit shape. White with light green stripes immature fruit. Yellow mature fruit. The young fruits are eaten with fry and boil, or in soup. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce.
68	293898	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Vang mon	19-16-44.1/ 104-45-29.4	136	Backyard	fruit	landrace	Plac pray	O du	4	6-11	Light green flower. Yellowish white immature fruit. Orange mature fruit. No shedding of mature fruit. Very spicy chili pepper. Used as a spice with fresh and dry fruits, dry powder. Eat the fruit soaked in salt. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce for boiled bamboo shoots.
69	293899	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Vang mon	19-16-44.1/ 104-45-29.4	136	Backyard	fruit	landrace	Plac pray	O du	4	6-11	Light green flower. Green immature fruit. Orange mature fruit. No shedding of mature fruit. Very spicy chili pepper. Usage is the same as number 68.
70	293900	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Vang mon	19-16-44.1/ 104-45-29.4	136	Backyard	fruit	landrace	Plac pray	O du	4	6-11	Light green flower. Yellowish white immature fruit. Orange mature fruit. No shedding of mature fruit. Very spicy chili pepper. Usage is the same as number 68.
71	293901	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Vang mon	19-16-41.4/ 104-45-33.3	147	Farm field	fruit	landrace	Plac pray	O du	3	6-11	Light green flower. Yellowish white immature fruit. Orange mature fruit. No shedding of mature fruit. The harvest is shipped to the market. Usage is the same as number 68.
72	293902	July. 18	*Solanum melongena*	Tuong Duong	Nga My	Vang mon	19-16-41.4/ 104-45-33.3	147	Backyard	fruit	landrace	Mac khua khun	O du	UNK	UNK	Naturally growing. Thornless. No flowers and immature fruits. Yellow round mature fruit. Usage is the same as number 68.
73	293903	July. 18	*Solanum melongena*	Tuong Duong	Nga My	Bay	19-16-34.1/ 104-47-18.7	178	Backyard	fruit	landrace	Mac khua dao	Thai	9	2-7	Thornless. Purple flower. Round fruit shape. Purple immature fruit. Yellow mature fruit. Usage is the same as number 68.
74	293904	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Bay	19-16-34.1/ 104-47-18.7	178	Backyard	Storage fresh fruit	landrace	Mac uot hay din	Thai	2	5-10	Light green flower. Green immature fruit. Red mature fruit. No shedding of mature fruit. Very spicy chili pepper compared to number 75. Used as a spice with fresh and dry fruits, dry powder. Make sour sauce or add to fish sauce with garlic.
75	293905	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Bay	19-16-34.1/ 104-47-18.7	178	Backyard	Storage fresh fruit	landrace	Mac uot	Thai	2	5-10	Light green flower. Yellowish white immature fruit. Orange mature fruit. No shedding of mature fruit. Usage is the same as number 74.
76	293906	July. 18	*Capsicum annuum*	Tuong Duong	Nga My	Bay	19-16-34.1/ 104-47-18.7	178	Backyard	Storage fresh fruit	landrace	Mac uot tap	Thai	2	5-10	Green immature fruit. Red mature fruit. Mature fruit has horizontal cracks on the pericarp. Usage is the same as number 74.
77	293907	July. 18	*Capsicum annuum*	Tuong Duong	Nga My	Bay	19-16-34.1/ 104-47-18.7	178	Backyard	Storage fresh fruit	landrace	Mac uot	Thai	2	5-10	Green immature fruit. Red mature fruit. Anthocyanin pigments are expressed in the pedicel. Upwards and clustered fruits. Usage is the same as number 74.
78	293908	July. 18	*Solanum melongena*	Tuong Duong	Nga My	Bay	19-16-34.1/ 104-47-18.7	178	Backyard	fruit	landrace	Mac khua	Thai	9	2-8	Neighboring house with collection numbers 73 to 77. Thornless. White flower. Flat fruit shape. No immature fruits. Yellow mature fruit. Usage is the same as number 68.
79	293909	July. 18	*Capsicum annuum*	Tuong Duong	Nga My	Bay	19-16-32.9/ 104-47-18.2	176	Backyard	fruit	landrace	Mac uot tap	Thai	2	6-10	Green immature fruit. Red mature fruit. Fruit about 5cm long. The bottom of the mature fruit becomes soft. Usage is the same as number 74.
80	293910	July. 18	*Solanum melongena*	Tuong Duong	Nga My	Bay	19-16-32.8/ 104-47-17.5	176	Backyard	fruit	landrace	Mac khua khun	Thai	UNK	UNK	Naturally growing. Thorns on the stems, calyxs and leaves. White with green stripes immature fruit. Yellow mature fruit. Light purple flower. Usage is the same as number 68.
81	293911	July. 18	*Cucurbita moschata*	Tuong Duong	Nga My	Bay	19-16-31.8/ 104-47-17.3	183	Farm field	Storage fresh fruit	landrace	Mac uc	Thai	11	4	Harvested for sale at the village general store. Spherical fruit shape. Immature and mature fruits are eaten with fried, boiled, or in soup.

Table 3. (Continued).

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82	293912	July. 18	*Solanum melongena*	Tuong Duong	Nga My	Bay	19-16-33.4/ 104-47-28.7	167	Backyard	fruit	landrace	Mac khua ham pe	Thai	3	4-7	Thornless. Purple flower. Long ovoid fruit shape. Green immature fruit. Yellow mature fruit. Usage is the same as number 68.
83	293913	July. 18	*Capsicum frutescens*	Tuong Duong	Nga My	Bay	19-16-33.4/ 104-47-28.7	167	Backyard	fruit	landrace	Mac uot	Thai	3	6-10	Light green flower. Yellowish white immature fruit. Orange mature fruit. No shedding of mature fruit. Symptom-free individual next to virus-affected plant. Fruits grow upwards. Usage is the same as number 74. The trees of frutescens in this field were cultivated for at least three years.
84	293914	July. 19	*Capsicum annuum*	Tuong Duong	Luu kien	Luu Thong	19-17-21.4/ 104-18-42.7	248	Backyard	fruit	landrace	Cua cho lu	Mong du	2-3	5-10	Purple flower. Green immature fruit. Red mature fruit. Most fruits grow upwards. Anthocyanin pigments are strongly expressed. Roast the harvested fruit and make it into chili powder. Most of the Mong du people live in one-story houses.
85	293915	July. 19	*Solanum sanitwongsei*	Tuong Duong	Luu kien	Luu Thong	19-17-21.4/ 104-18-42.7	248	Backyard	fruit	landrace	Lu ia	Mong du	3	5-10	Thornless. No flowers. It has small, round and downwards fruits within 1 cm. Light green with green stripes immature fruit. Orange mature fruit. Eat young fruits with boil, or in soup. The taste is bitter. It is used as a medicinal plant to treat diabetes and increase appetite.
86	293916	July. 19	*Solanum melongena*	Tuong Duong	Luu kien	Luu Thong	19-17-21.4/ 104-18-42.7	248	Backyard	fruit	landrace	Lu tau	Mong du	3	5-10	Thornless. Purple flower. Round fruit shape. White with green stripes immature fruit. Yellow mature fruit. The young fruits are eaten with fry and boil, or in soup. Mix and grind the boiled chili peppers and eggplant, lemon juice to make sour sauce.
87	293917	July. 19	*Solanum melongena*	Tuong Duong	Luu kien	Luu Thong	19-17-21.2/ 104-18-47.1	226	Backyard	fruit	landrace	Lu	Mong du	3	6-10	Thornless. No flowers and mature fruits (Over-mature fruit only). Purple immature fruit. Usage is the same as number 86.
88	293918	July. 19	*Capsicum frutescens*	Tuong Duong	Luu kien	Luu Thong	19-17-21.2/ 104-18-47.1	226	Backyard	fruit	landrace	Cua cho lia	Mong du	3	6-10	No immature fruits. Red mature fruit. Small fruit within 1 cm. Fruits grow upwards. Usage is the same as number 74.
89	293919	July. 19	*Capsicum frutescens*	Tuong Duong	Luu kien	Luu Thong	19-17-21.2/ 104-18-47.1	226	Backyard	fruit	landrace	Cua cho lia	Mong du	3	6-10	Green immature fruit. Red mature fruit. Small fruit about 2 cm. Fruits grow upwards. Usage is the same as number 74.
90	293920	July. 19	*Solanum melongena*	Tuong Duong	Luu kien	Luu Thong	19-17-20.2/ 104-18-52.3	216	Backyard	fruit	landrace	Lu tau	Mong du	3	6-10	Thornless. Purple flower. Small pear shaped fruit. Purple immature fruit. Yellow mature fruit. Usage is the same as number 86.
91	293921	July. 19	*Solanum melongena*	Tuong Duong	Luu kien	Luu Khe	19-16-31.9/ 104-21-13.7	99	Backyard	fruit	landrace	Mac khua	Thai	3	6-10	Thornless. Light purple flower. Flat fruit shape. White with green stripes immature fruit. Yellow mature fruit. Usage is the same as number 86.
92	293922	July. 19	*Solanum melongena*	Tuong Duong	Luu kien	Luu Khe	19-16-31.9/ 104-21-13.7	99	Backyard	fruit	landrace	Mac khua	Thai	3	6-10	Thornless. Light purple flower. Light purple immature fruit. Yellow mature fruit. Usage is the same as number 86.
93	293923	July. 19	*Solanum sanitwongsei*	Tuong Duong	Luu kien	Luu Khe	19-16-31.9/ 104-21-13.7	99	Backyard	fruit	landrace	Mac khua	Thai	UNK	UNK	Naturally growing. Thornless. No flowers. Small fruit of about 1 cm. Light green (No stripes) immature fruit. Orange mature fruit. Usage is the same as number 68. Local name does not distinguish from other melongena species.
94	293924	July. 19	*Capsicum frutescens*	Tuong Duong	Luu kien	Khe Kien	19-16-24.8/ 104-21-25.4	122	Backyard	fruit	landrace	Mac uot	Thai	3	5-10	Yellowish white immature fruit. Red mature fruit. Salted with bamboo shoots.

Photos of collected samples

Sample Photo 1.
JP293831 (No. 1),
Solanum torvum

Sample Photo 2.
JP293832 (No. 2),
Solanum melongena

Sample Photo 3.
JP293833 (No. 3),
Trichosanthes cochinchinensis

Sample Photo 4.
JP293834 (No. 4),
Cucumis sativus

Sample Photo 5.
JP293835 (No. 5),
Cucumis sativus

Sample Photo 6.
JP293836 (No. 6),
Capsicum frutescens

Sample Photo 7.
JP293837 (No. 7),
Solanum melongena

Sample Photo 8.
JP293838 (No. 8),
Solanum melongena

Sample Photo 9.
JP293839 (No. 9),
Solanum melongena

Sample Photo 10.
JP293840 (No. 10),
Capsicum frutescens

Sample Photo 11.
JP293841 (No. 11),
Solanum aethiopicum

Sample Photo 12.
JP293842 (No. 12),
Solanum melongena

Photos of collected samples

Sample Photo 13.
JP293843 (No. 13),
Capsicum annuum

Sample Photo 14.
JP293844 (No. 14),
Cucumis sativus

Sample Photo 15.
JP293845 (No. 15),
Cucumis sativus

Sample Photo 16.
JP293846 (No. 16),
Cucurbita moschata

Sample Photo 17.
JP293847 (No. 17),
Capsicum frutescens

Sample Photo 18.
JP293848 (No. 18),
Capsicum frutescens

Sample Photo 19.
JP293849 (No. 19),
Solanum torvum

Sample Photo 20.
JP293850 (No. 20),
Solanum violaceum

Sample Photo 21.
JP293851 (No. 21),
Vigna unguiculata

Sample Photo 22.
JP293852 (No. 22),
Solanum aethiopicum

Sample Photo 23.
JP293853 (No. 23),
Cucurbita moschata

Sample Photo 24.
JP293854 (No. 24),
Capsicum frutescens

Photos of collected samples

Sample Photo 25.
JP293855 (No. 25),
Capsicum frutescens

Sample Photo 26.
JP293856 (No. 26),
Solanum melongena

Sample Photo 27.
JP293857 (No. 27),
Capsicum annuum

Sample Photo 28.
JP293858 (No. 28),
Capsicum annuum

Sample Photo 29.
JP293859 (No. 29),
Solanum melongena

Sample Photo 30.
JP293860 (No. 30),
Solanum melongena

Sample Photo 31.
JP293861 (No. 31),
Capsicum frutescens

Sample Photo 32.
JP293862 (No. 32),
Vigna unguiculata

Sample Photo 33.
JP293863 (No. 33),
Capsicum annuum

Sample Photo 34.
JP293864 (No. 34),
Cucumis melo

Sample Photo 35.
JP293865 (No. 35),
Cucumis sativus

Sample Photo 36.
JP293866 (No. 36),
Cucurbita sp.

Photos of collected samples

Sample Photo 37.
JP293867 (No. 37),
Cucurbita sp.

Sample Photo 38.
JP293868 (No. 38),
Capsicum frutescens

Sample Photo 39.
JP293869 (No. 39),
Solanum melongena

Sample Photo 40.
JP293870 (No. 40),
Capsicum annuum

Sample Photo 41.
JP293871 (No. 41),
Capsicum frutescens

Sample Photo 42.
JP293872 (No. 42),
Vigna unguiculata

Sample Photo 43.
JP293873 (No. 43),
Capsicum frutescens

Sample Photo 44.
JP293874 (No. 44),
Capsicum frutescens

Sample Photo 45.
JP293875 (No. 45),
Solanum melongena

Sample Photo 46.
JP293876 (No. 46),
Capsicum frutescens

Sample Photo 47.
JP293877 (No. 47),
Capsicum frutescens

Sample Photo 48.
JP293878 (No. 48),
Capsicum annuum

Photos of collected samples

Sample Photo 49.
JP293879 (No. 49),
Solanum melongena

Sample Photo 50.
JP293880 (No. 50),
Vigna unguiculata

Sample Photo 51.
JP293881 (No. 51),
Capsicum frutescens

Sample Photo 52.
JP293882 (No. 52),
Capsicum frutescens

Sample Photo 53.
JP293883 (No. 53),
Capsicum frutescens

Sample Photo 54.
JP293884 (No. 54),
Solanum melongena

Sample Photo 55.
JP293885 (No. 55),
Solanum melongena

Sample Photo 56.
JP293886 (No. 56),
Solanum melongena

Sample Photo 57.
JP293887 (No. 57),
Capsicum frutescens

Sample Photo 58.
JP293888 (No. 58),
Capsicum frutescens

Sample Photo 59.
JP293889 (No. 59),
Solanum melongena

Sample Photo 60.
JP293890 (No. 60),
Solanum melongena

Photos of collected samples

Sample Photo 61.
JP293891 (No. 61),
Solanum melongena

Sample Photo 62.
JP293892 (No. 62),
Capsicum freutescens

Sample Photo 63.
JP293893 (No. 63),
Capsicum freutescens

Sample Photo 64.
JP293894 (No. 64),
Capsicum annuum

Sample Photo 65.
JP293895 (No. 65),
Solanum melongena

Sample Photo 66.
JP293896 (No. 66),
Capsicum annuum

Sample Photo 67.
JP293897 (No. 67),
Solanum melongena

Sample Photo 68.
JP293898 (No. 68),
Capsicum freutescens

Sample Photo 69.
JP293899 (No. 69),
Capsicum freutescens

Sample Photo 70.
JP293900 (No. 70),
Capsicum freutescens

Sample Photo 71.
JP293901 (No. 71),
Capsicum freutescens

Sample Photo 72.
JP293902 (No. 72),
Solanum melongena

Photos of collected samples

Sample Photo 73.
JP293903 (No. 73),
Solanum melongena

Sample Photo 74.
JP293904 (No. 74),
Capsicum frutescens

Sample Photo 75.
JP293905 (No. 75),
Capsicum frutescens

Sample Photo 76.
JP293906 (No. 76),
Capsicum annuum

Sample Photo 77.
JP293907 (No. 77),
Capsicum annuum

Sample Photo 78.
JP293908 (No. 78),
Solanum melongena

Sample Photo 79.
JP293909 (No. 79),
Capsicum annuum

Sample Photo 80.
JP293910 (No. 80),
Solanum melongena

Sample Photo 81.
JP293911 (No. 81),
Cucurbita moschaata

Sample Photo 82.
JP293912 (No. 82),
Solanum melongena

Sample Photo 83.
JP293913 (No. 83),
Capsicum frutescens

Sample Photo 84.
JP293914 (No. 84),
Capsicum annuum

Photos of collected samples

Sample Photo 85.
JP293915 (No. 85),
Solanum sanitwongsei

Sample Photo 86.
JP293916 (No. 86),
Solanum melongena

Sample Photo 87.
JP293917 (No. 87),
Solanum melongena

Sample Photo 88.
JP293918 (No. 88),
Capsicum frutescens

Sample Photo 89.
JP293919 (No. 89),
Capsicum frutescens

Sample Photo 90.
JP293920 (No. 90),
Solanum melongena

Sample Photo 91.
JP293921 (No. 91),
Solanum melongena

Sample Photo 92.
JP293922 (No. 92),
Solanum melongena

Sample Photo 93.
JP293923 (No. 93),
Solanum sanitwongsei

Sample Photo 94.
JP293924 (No. 94),
Capsicum frutescens