

ラオスにおける野菜遺伝資源の共同探索, 2009 年

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Collaborative Exploration of the Vegetable Genetic Resources in Laos, 2009

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Summary

Japan's National Institute of Agrobiological Sciences and the Rice and Cash Crop Research Center, National Agriculture and Forestry Research Institute, of the Lao People's Democratic Republic have collaborated since 2006 to survey the genetic resources of vegetables in Laos. The third collaborative mission to explore and collect vegetable genetic resources in Laos was conducted from 25 October to 12 November 2009. The main objectives were to collect accessions of *Cucumis hystrix* Chark., cucumber (*Cucumis sativus* L.), and other target Cucurbitaceae and Solanaceae (crop species). During this mission, we surveyed Luang Namtha, Bokeo, Houaphan, Luang Prabang, and Xieng Khouang provinces and Vientiane capital. A total of 116 samples were collected: 6 of *C. hystrix*, 40 of *C. sativus*, 37 of *Cucumis melo*, 6 of *Cucurbita moschata*, 1 of *Citrullus lanatus*, 1 of *Luffa cylindrica*, 8 of unknown Cucurbitaceae, 7 of *Solanum melongena*, 4 of *Solanum* spp. and 6 of *Capsicum* spp.

Introduction

Japan's National Institute of Agrobiological Sciences and the Rice and Cash Crop Research Center (RCCRC), National Agriculture and Forestry Research Institute, of the Lao People's Democratic Republic (Laos) have collaborated since 2006 to survey plant genetic resources in Laos. This report describes the third survey to collect vegetable accessions. The

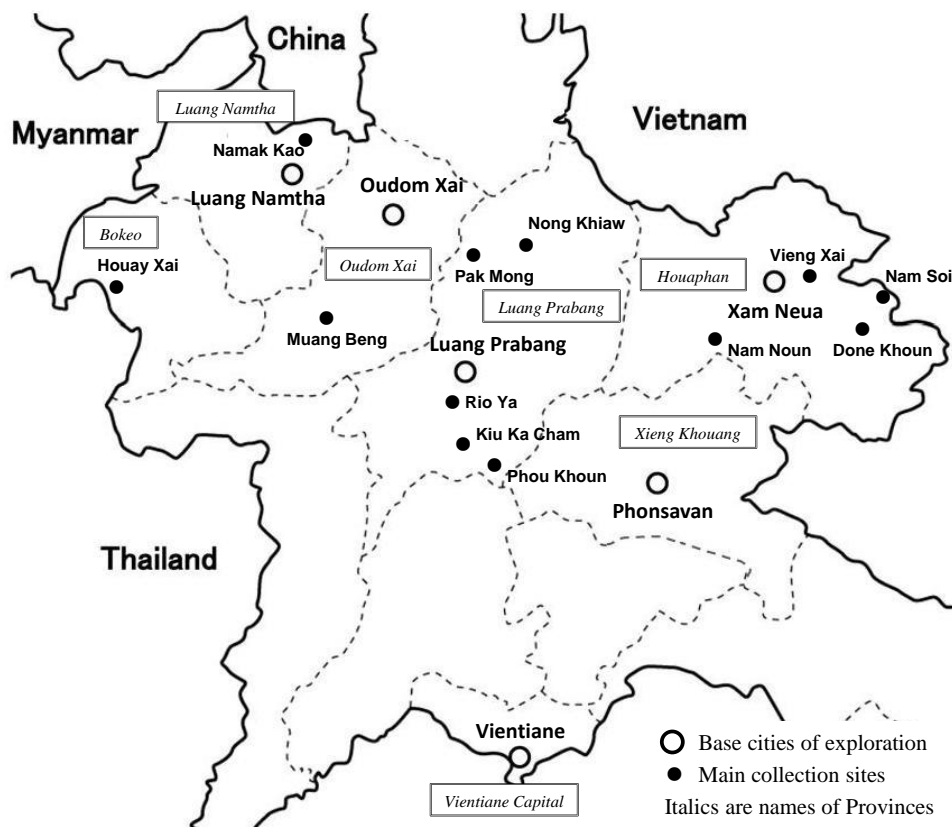


Fig. 1. Main sites visited during the 2009 survey in northern Laos.

trip reports for the 2007 and 2008 surveys have been published previously^{1), 2)}. In the previous missions, 35 samples of cucumber (*Cucumis sativus* L.), 115 samples of melon (*Cucumis melo* L.), 111 samples of eggplant (*Solanum* spp., including wild relatives), 67 samples of chili pepper (*Capsicum* spp., including relatives), and 47 samples of other crops were collected. We believed that this represented an adequate sample of eggplant, and *Capsicum* species, but that cucumber species were under-represented. And melon species were also collected an adequate sample in northern part of Laos, but there were a small number of samples derived from southern part of Laos. We also obtained some information about *Cucumis hystrix* Chakr. in northern part of Laos in the previous surveys, but we could not collect any samples, because season of former explorations were too early to collect them. This species can cross with *C. sativus*, even though the two species have different chromosome numbers³⁾. Few samples of *C. hystrix* have been collected around the world, so *C. hystrix* represents a rare and precious genetic resource. Therefore, the main objective of this third mission was to collect *C. hystrix* and cucumber species in northern Laos, and to collect some samples of melon originated in southern part of Laos.

Methods

Before our survey, we asked RCCRC to collect some samples of Cucurbitaceae and Solanaceae crops, mainly melon originated in southern part of Laos, because we could not collect enough number of melons originated from southern Laos. Consequently, RCCRC staff collected some samples (No.1 to 45) from markets in Vientiane capital.

We looked for new accessions in Luang Namtha, Bokeo, Houaphan, Luang Prabang, and Xieng Khouang provinces of northern Laos and Vientiane capital from 25 October to November

Table 1. Itinerary followed during the 2009 survey in northern Laos.

Date	Day	Itinerary	Stay
25 Oct	Sun.	Chubu 11:00 (TG645) -- 15:45 Bangkok 19:55 (TG574) -- 21:05 Vientiane Kanku 11:00 (TG623) -- 15:30 Bangkok	Vientiane
26 Oct	Mon.	Markets in Vientiane, visit Rice and Cash Crop Research Center (RCCRC), explain and discuss the survey	Vientiane
27 Oct	Tue.	Vientiane 11:50 (QV101) -- 12:30 Luang Prabang,	Luang Prabang
28 Oct	Wed.	Luang Prabang -- Kiu Ka Cham -- Luang Prabang	Luang Prabang
29 Oct	Thu.	Luang Prabang -- Nong Khiaw -- Oudom Xai	Oudom Xai
30 Oct	Fri.	Oudom Xai -- Muang Beng -- Oudom Xai -- Luang Namtha	Luang Namtha
31 Oct	Sat.	Luang Namtha -- Houay Xai -- Luang Namtha	Luang Namtha
1 Nov	Sun.	Luang Namtha -- Namak Kao -- Luang Namtha -- Oudom Xai	Oudom Xai
2 Nov	Mon.	Oudom Xai -- Luang Prabang -- Rio Ya -- Luang Prabang	Luang Prabang
3 Nov	Tue.	Data arrangement	Luang Prabang
4 Nov	Wed.	Luang Prabang -- Phou Khoun -- Phonsavan	Phonsavan
5 Nov	Thu.	Phonsavan -- Nam Noun -- Xam Neua	Xam Neua
6 Nov	Fri.	Xam Neua -- Vieng Xai -- Nam Soi -- Done Khoun -- Xam Neua	Xam Neua
7 Nov	Sat.	Xam Neua -- Nam Noun -- Phonsavan	Phonsavan
8 Nov	Sun.	Phonsavan 14:40 (QV402) -- 15:10 Vientiane	Vientiane
9 Nov	Mon.	Data arrangement	Vientiane
10 Nov	Tue.	Vientiane, visit RCCRC and report the preliminary results of survey	Vientiane
11 Nov	Wed.	Vientiane 13:50 (TG571) -- 14:55 Bangkok 23:00 (TG622)	on flight
12 Nov	Thu.	-- 6:20 Kanku Bangkok 00:05 (TG644) -- 7:30 Chubu	

12 November 2009 (Table 1, Fig. 1). We rented a car to travel to survey sites, where we visited local markets, farmer's stores, and houses and fields to obtain samples of fruits of the Cucurbitaceae. After confirming the site location using global positioning system, we gathered samples and collected information about the samples such as local name, sowing and harvesting times, usage, and cultivated area through interviews. During the interviews, we also asked farmers and others to collect samples of *C. hystrix*. And after a few days, we returned to see whether it had been possible to obtain samples.

On 25th October, we visited RCCRC and explained the objectives and plan of our survey to staff members. On 10th November, we returned to RCCRC and reported our preliminary results.

Results

Daily sample collection

We collected a total of 116 samples, including pre-exploration samples (Table 2). We collected 6 of *Cucumis hystrix*, 40 of *C. sativus*, 37 of *C. melo*, 6 of *Cucurbita moschata*, 1 of *Luffa cylindrica*, 1 of *Citrullus lanatus*, 8 of unknown Cucurbitaceae, 7 of *Solanum melongena*, 4 of *Solanum* spp., and 6 of *Capsicum* spp. at 35 survey points in northern Laos and at 16 sites in Vientiane capital. Table 3 provides details of these samples. We could not obtain seeds from two samples of *C. sativus* (No. 65 and 75) because the fruits were too young. The number of seed collections was therefore only 114. We shared the seed collection equally with RCCRC.

The remainder of this section presents details of our survey:

26th October: We obtained 45 seed samples from RCCRC that constitute our pre-survey samples (No. 1 to 45 in Table 3).

27th October: We went to Luang Prabang by airplane. We visited a Phousy market in Luang Prabang, and collected two cucumber samples (No. 46, 47).

28th October: We surveyed along the way to Kiu Ka Chan village in the southern part of Luang Prabang. First we visited Kiutalon Ne (Kham) village, and asked a Kham farmer to collect fruits of *C. hystrix*. Subsequently we visited Kiutalon Ne (Hmong) village, and collected one cucumber sample (No. 48), one eggplant sample (No. 49), and mixed seed samples from several crops (No. 50 to 53). We also asked for samples of *C. hystrix*. On the way back to Luang Prabang, we visited a farmer's store in Kiutalon Ne (Kham), and collected one pumpkin sample (No. 54).

29th October: In the morning, it was rainy, which was unusual in this season. However, the clouds disappeared by about 9 AM. Around noon, we arrived at local market at Nong Kiaw village in the northern part of Luang Prabang, but the market was open only in the morning. We found a wild eggplant growing in the yard of a restaurant, and collected its fruit as a sample (No. 55). We then started to go to Oudom Xai, but the road condition from Pak Mong to Oudom Xai was very bad (asphalt was missing in places and most parts of the road were uneven). Nevertheless, we collected one chili pepper sample (No. 56) at a market in Nam Bak village, and one cucumber sample (No. 57) at a farmer's store in Xong Ja village. In addition, we asked a farmer to collect *C. hystrix* in KM 32 village. After we arrived at Oudom Xai, we also asked two merchant farmers at a market in Oudom Xai to collect *C. hystrix*.

30th October: We traveled to Muang Beng, Oudom Xai Province. On the way, we collected one cucumber sample (No. 58) at farmer's store in Napa village. The market in Muang Beng was closed, so we returned to Oudom Xai. On the way back, we collected two wild Cucurbitaceae samples (No. 59, 60) at road side ; No. 59 is called Kadom (Photo 1) in Laos. We also collected two cucumber samples (No. 61, 62) and one chili pepper sample (No. 63) at a farmer's store in Phia Houa Nam village. Next, we went through Oudom Xai to Luang Namtha. On the way, the road condition was as rough as it was on the way to Pak Mong. We collected three cucumber samples (No. 64 to 66) at two farmer's stores in Houay Ta village, and at the second store we asked the merchant farmer to collect *C. hystrix*. Next, we saw a long (about 50 m) street of stores (Photo 2) in Kio Chep village. There, local farmers sold mostly landraces of cucumbers and pumpkins, which showed much diversity. This was a treasurehouse of genetic resources

Table 2. Samples collected during the 2009 survey in northern Laos.

Collection Site (Province)	<i>Cucumis hystrix</i>	<i>Cucumis sativus</i>	<i>Cucumis melo</i>	<i>Cucurbita moschata</i>	<i>Solanum</i> spp.	<i>Capsicum</i> spp.	Others	Total
Luang Namtha	0	4	1	1	0	0	2	8
Oudom Xai	2	12	1	1	0	2	2	20
Bokeo	0	2	0	0	0	0	0	2
Houaphan	0	6	2	0	1	1	3	13
Luang Prabang	2	7	0	3	2	1	2	17
Xieng Khouang	2	6	0	1	2	0	0	11
Vientiane Capital	0	3	33	0	6	2	1	45
Total	6	40	37	6	11	6	10	116

for these crops. We collected one pumpkin sample (No. 67) and one cucumber sample (No. 68) there, and asked some merchants to collect *C. hystrix*.

31st October: We went to a market in Luang Namtha, and collected one cucumber sample (No. 69) and one pumpkin sample (No. 70) there. Subsequently, we went to Houay Xai in Bokeo Province. On the way, we collected one sample of weedy Cucurbitaceae plants (No. 71) from a field in Chareunsouk village, and one sponge gourd sample (No. 72) from a field outside Nam Ha village. After we arrived at Houay Xai, we collected one cucumber sample (No. 73) at the market. On the way back to Luang Namtha, we collected one cucumber sample (No. 74) from a street vender in Ta Fa village.

1st November: First, we traveled in the direction of Muang Sing, in northern Luang Namtha. On the way, we collected two cucumber samples (No. 75, 76) from a farmer who was walking through Namak Kao village. On the way back to Luang Namtha, we collected one cucumber sample (No. 77) and one melon sample (No. 78) at a market in Na Toi village, and subsequently collected one cucumber sample (No. 79) from a street vender in Namo village. We arrived at a long street of stores in Kio Chep village, the same site we visited on 30 October, and collected three cucumber samples (No. 80, 82, 83), one melon sample (No. 81), and one chili pepper sample (No. 84). Although we had asked several local farmers to collect *C. hystrix*, they could not find its fruit because it was too early in the season. Subsequently, we arrived at Houay Ta village. We visited the farmer we had asked to collect *C. hystrix* on 30 October, and obtained one *C. hystrix* sample (No. 85). After we arrived at Oudom Xai, we collected one cucumber sample (No. 86) in the market. We also visited the farmer merchant we had asked to collect *C. hystrix* on 29 October, but she could not find any fruit.

2nd November: We went to KM 32 village in Oudom Xai Province and collected *C. hystrix* (No. 87) from the farmer we had asked to gather samples. After we arrived at Luang Prabang, we traveled south and asked a farmer to collect *C. hystrix* around Houay Kouk village. We collected one cucumber sample (No. 88) and one pumpkin sample (No. 89) at a farmer's store in Kio Ya village. In addition, we asked the farmer to collect *C. hystrix*.

3rd November: We spent the day arranging our samples.

4th November: We traveled towards Phou Khoun. On the way, we stopped at Houay Kouk village, and received a *C. hystrix* sample (No. 90) from the farmer we asked to collect samples

on 2nd November. We stopped at Kio Ya and Kiutalon Ne (Kham) villages to obtain *C. hystrix* that we had asked the farmers to collect previously, but they had found no fruit. We visited Kiutalon Ne (Hmong) village again, and collected one *C. hystrix* sample (No. 91) which we had asked for on 28th November. We also collected one sample of wild Cucurbitaceae fruits (No. 92) from the same person. On the way to Phonsavan, we collected one cucumber sample (No. 93) from a street vender at Phou Khoun. In Phonsavan, we collected one cucumber sample (No. 94) and one eggplant sample (No. 95) at a Siphoxay market and two cucumber samples (No. 96, 97) and one eggplant sample (No. 98) at a Kasikam market.

5th November: We traveled to Xam Neua. On the way, we collected two cucumber samples (No. 99, 100), and asked a farmer to collect *C. hystrix* at Phu San village. We stopped at Nam Chak village and Phieng Khong village because we had recognized *C. hystrix* at the latter village in our previous study²⁾, and asked farmers to collect samples. We collected one cucumber sample (No. 101) at a market in Nam Noun village, and also asked local people to collect *C. hystrix*. We collected one cucumber sample (No. 102) at farmer's store in Done village. After we arrived at Xam Neua, we collected one cucumber sample (No. 103) and one chili pepper sample (No. 104) at a market.

6th November: We traveled to Nam Soi. On the way, we collected one cucumber sample (No. 105) and one eggplant sample (No. 106) at a market in Vieng Xai city. We stopped at Poy Sang village and collected cucumber, melon, other Cucurbitaceae crop and *Citrullus lanatus* seeds (No. 107 to 110), and asked a farmer to collect *C. hystrix*. We arrived at Done Khoun village, near the southern border of Vietnam, and collected cucumber and melon seeds (No. 111, 112) from a farmer. We returned to Poy Sang village after about 3 hours, but the farmer had not been able to collect *C. hystrix* samples. We returned to Xam Neua.

7th November: On the way back to Phonsavan, we collected one *C. hystrix* sample (No. 113) and pumpkin seeds (No. 114) at Phieng Khong village from a farmer we had asked to collect *C. hystrix* samples on 5th November. Also, at Nam Chak village, we collected one *C. hystrix* sample (No. 115) and one cucumber seed sample (No. 116).

8th November: We returned to Vientiane by airplane.

9th November: We spent the day arranging our samples and data.

10th November: We returned to RCCRC, and reported the preliminary results of our survey. At this time, we shared our samples under the Materials Transfer Agreement between Laos and Japan.

Discussion

a) *Cucumis hystrix*

Cucumis hystrix is a rare species and is therefore important for conservation and study of genetic resources and as taxonomic material for genus *Cucumis*; it is cross-compatible with cucumber even though the chromosome number differs between the species³⁾. According to De Wilde and Duyfjes (2007)⁴⁾, *C. hystrix* occurs in northeastern India (Assam), in Myanmar, in southwestern China (Yunnan), and in northern and western Thailand, but it had not previously been found in Laos. However, our previous survey²⁾ provided information about the habitat of *C. hystrix* in northern Laos, although we could not collect samples during that survey. Therefore,

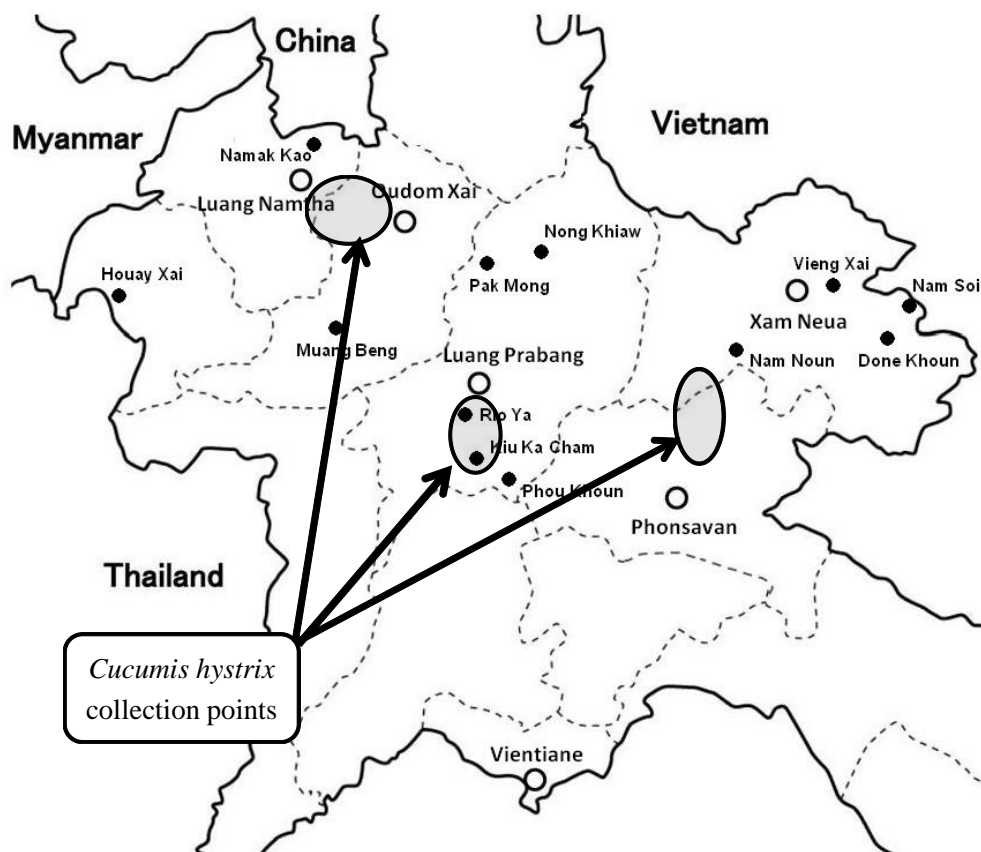


Fig. 2. Areas in which we collected *Cucumis hystrix* samples.

we prioritized the collection of *C. hystrix* in the present survey.

To collect *C. hystrix* in Laos, we asked local farmers about this species using photos (Photos 3 and 4). If someone claimed to know where this species grew, we asked them to collect its fruits. After a few days, we returned to see whether it had been possible to obtain samples. Of the 14 sites where we asked farmers to collect samples, we obtained *C. hystrix* samples (Photo 5 and 6) at six sites (two each in Oudom Xai, Luang Prabang, and Xieng Khouang provinces; Fig. 2). All sample sites were in mountainous areas. Based on interviews with local people, *C. hystrix* appears to grow in the forest, areas populated by bushes, and areas surrounding fields managed by slash-and-burn agriculture. The people ate its fruits as a snack, but did not cultivate the species in fields. The local people had good knowledge of its habitat, thus it was more efficient to ask them to collect samples than to perform this collection ourselves. Fortunately, we saw some *C. hystrix* plants and immature fruit in the field at Houay Ta village on 1st November (Photos 7 to 9). However, to propagate this species efficiently, we will need to develop cultivation methods. We will also need to survey its natural habitat continuously to obtain additional samples.

The 69 fruits of *C. hystrix* collected from six sites showed much variation in weight (2.0 to 19.0 g), length (3.0 to 6.5 cm), and diameter (1.5 to 2.5 cm). Fruit skin color was yellow in mature fruit, but was green in immature fruit. Immature fruit had spines on the skin similar to those of cucumber, but the spines were big and sharp. On the mature fruit, the spines were small. Although we observed many seeds in the fruit, local people ate the whole fruit (including the seeds), and the taste was similar to that of cucumber (sweet to sour). Some of these mature fruits had good fragrance and skin that was easy to peel. These results suggest that *C. hystrix* has considerable genetic diversity. To select breeding material for crossing with cucumber, we will analyze the phylogenetic relationships between other *Cucumis* spp. and the *C. hystrix* accessions we collected in this survey.

b) Cucumbers

We collected 40 cucumber samples from seven provinces. Most samples were similar in appearance (Photo 10), so the diversity of the cucumbers appeared to be lower rather than that of the melons collected in our 2008 survey²). The main characteristics of the collected cucumbers were their oval shape, white or light-green skin color in mature fruit, and orange placenta color in mature fruit (Photo 11). A few samples were round or elongated in shape, with white or light-brown skin color in mature fruit and with a light-green placenta color in mature fruit (Photo 12).

In northern Laos, cucumber seeds are sown with upland rice after the start of the rainy season, as is done for melon²). However, the seasons when the two crops mature are different, with melon maturing earlier than cucumber. As the present survey focused on cucumber, we observed few melons but many cucumbers.

In this survey, we also saw some interesting scenes, such as a long row of farmers selling cucumbers (Photo 2) in Kio Chep village, between Oudom Xai and Pak Mong. We observed wide diversity of cucumbers there (Photo 13), and this size diversity was probably similar to that in the northern Laos. We will be able to collect many kinds of cucumbers there.

c) Other Cucurbitaceae crops

We also observed some pumpkins (Photos 14 and 15). Samples with shapes ranging from elongated to flattened could be collected. This variation suggests that pumpkins could also be interesting subjects for future surveys.

We collected many melon samples during the past year, but we could not collect them from southern parts of Laos. Therefore, we asked RCCRC to collect melon from the southern part of Laos (in Vientiane capital) before our survey. We collected few melon samples during the survey because our trip occurred during the wrong season to collect mature melons.

We found several kinds of weedy Cucurbitaceae. One (Photo 1) is called 'Kadom' in Laos. Kadom is edible, and we often found it in markets (Photo 16).

d) Eggplant

There was large eggplant diversity in Laos. The landraces of eggplants have diverse fruit characteristics such as shape (elongated, round, and slightly flattened), size, and color (purple, green, white, and yellow). Most eggplants sold in markets or farmer's shops were immature fruits, but occasionally mature fruits were sold (Photo 17). Mature fruits were eaten after boiling the whole fruit (Photo 18).

We saw some plants that resemble eggplant growing as a weed at the side of the road in many northern parts of Laos (Photo 19). They are likely to be *Solanum khasianum*, which is called "Mak Khoua Ba" by local people; the name means "fool eggplant", and they are rarely eaten in Laos. In a market, we found a kind of eggplants, whose fruit shapes and immature fruit colors were resembled to "Mak Khoua Ba" (Photo 20). However, they were different fruits of "Mak Khoua Ba".

We also observed *Solanum torvum* throughout northern Laos. This species is used for medicine and is also edible. The people of Laos sometimes eat the raw fruits of *S. torvum*, so we

tried to eat the raw fruits, but we found them too bitter.

e) *Chili peppers*

Wherever we traveled, we found many kinds of chili pepper. Most chili peppers were cultivated in farmers' back yards, but some were cultivated in fields. Most chili peppers sold in markets or farmer's shops were a mixture of several different landraces. Among them, there were mixtures of different species, including *Capsicum annuum* and *C. frutescens* (Photo 21). The main species of chili pepper were *C. annuum*, *C. frutescens*, and *C. chinense*, but some plants appear to be a hybrid between *C. annuum* and *C. frutescens* or *C. chinense*.

Acknowledgments

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和文摘要

本報告は、独立行政法人農業生物資源研究所ジーンバンクとラオス農業森林省・稲・商品作物研究センターの間で2006年に締結した共同研究協定(MOU)に基づいて行われたラオス国における2009年度ジーンバンク事業・野菜遺伝資源の調査報告である。調査は、2009年10月25日～11月12日にかけて、キュウリ近縁種(*Cucumis hystrix* Chakr.)およびキュウリを中心としたウリ科およびナス科野菜を調査対象とした。今回は、ラオス国北部地域であるルアンナムタ県、ウドムサイ県、ボケオ県、ファパン県、ルアンパバン県、シェンクワン県および首都ビエンチャンを調査した。*C. hystrix*を6点、キュウリを40点、メロンを37点、カボチャを点、スイカを1点、ヘチマを1点、その他のウリ科植物を8点、ナスを7点、ナス近縁種を4点、トウガラシを6点の合計116点の種子サンプルを収集した。これらの遺伝資源は、材料移転協定(MTA)

に基づいてラオスと日本（農業生物資源遺伝バンク）で保存する.

Table 3. List of material collected in northern Laos during the 2009 survey.

No.	Collection No.	Passport No.	J P No.	JP Name	Date	Genus and species	Province/State	District	Village	North latitude/ East longitude	Height (m)	Source (Market name)	Status	Local name	Fruit characters, origin, etc.
1	1	30039736	235978	COL/LAOS/2009/NIVTS/001	July 25	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Somsavanh					Makteng Lai	Borikhamsay
2	2	30039737	235979	COL/LAOS/2009/NIVTS/002	July 25	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Somsavanh					Makteng Lai	Borikhamsay
3	3	30039738	235980	COL/LAOS/2009/NIVTS/003	July 25	<i>Cucumis melo</i>	Vientiane Cap.	Pak Ngum	Hay					Makteng Lai	Vientiane Cap.
4	4	30039739	235981	COL/LAOS/2009/NIVTS/004	July 25	<i>Cucumis melo</i>	Vientiane Cap.	Pak Ngum	Don Hay			Farmer's store		Makteng Lai	Vientiane Cap.
5	5	30039740	235982	COL/LAOS/2009/NIVTS/005	July 25	<i>Cucumis melo</i>	Vientiane Cap.	Pak Ngum	Don Hay			Farmer's store		Makteng Lai	Vientiane Cap.
6	6	30039741	235983	COL/LAOS/2009/NIVTS/006	July 25	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Nongsonghong					Makteng Meuyay	Phoukhone
7	7	30039742	235984	COL/LAOS/2009/NIVTS/007	July 26	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Nongsonghong					Makteng Meuyay	Phoukhone
8	8	30039743	235985	COL/LAOS/2009/NIVTS/008	July 26	<i>Cucumis melo</i>	Vientiane Cap.	Hatsayfong	Nong Heo					Makteng Vane	Vientiane Cap.
9	9	30039744	235986	COL/LAOS/2009/NIVTS/009	July 26	<i>Cucumis melo</i>	Vientiane Cap.	Saysettha	Houakhoua					Makteng Lai	Luang Prabang
10	10	30039745	235987	COL/LAOS/2009/NIVTS/010	July 26	<i>Cucumis melo</i>	Vientiane Cap.	Sikhottabong	Sikhay					Makteng Meuyay	Luang Prabang
11	11	30039746	235988	COL/LAOS/2009/NIVTS/011	July 26	<i>Cucumis melo</i>	Vientiane Cap.	Sikhottabong	Sikhay					Makteng Lai	Luang Prabang
12	12	30039747	235989	COL/LAOS/2009/NIVTS/012	July 26	<i>Cucumis melo</i>	Vientiane Cap.	Sikhottabong	Sikhay					Makteng Meuyay	Luang Prabang
13	13	30039748	235990	COL/LAOS/2009/NIVTS/013	Aug. 1	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Champassak
14	14	30039749	235991	COL/LAOS/2009/NIVTS/014	Aug. 1	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Champassak
15	15	30039750	235992	COL/LAOS/2009/NIVTS/015	Aug. 1	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Champassak
16	16	30039751	235993	COL/LAOS/2009/NIVTS/016	Aug. 1	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Champassak
17	17	30039752	235994	COL/LAOS/2009/NIVTS/017	Aug. 2	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Donnounge			Market		Makteng Meuyay	Borikhamsay
18	18	30039753	235995	COL/LAOS/2009/NIVTS/018	Aug. 2	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Donnounge			Market		Makteng Meuyay	Borikhamsay
19	19	30039754	235996	COL/LAOS/2009/NIVTS/019	Aug. 2	<i>Cucumis sativus</i>	Vientiane Cap.	Saythany	Donnounge			Market		Makteng Khao	Borikhamsay
20	20	30039755	235997	COL/LAOS/2009/NIVTS/020	Aug. 2	<i>Cucumis sativus</i>	Vientiane Cap.	Saythany	Donnounge			Market		Makteng Khao	Borikhamsay
21	21	30039756	235998	COL/LAOS/2009/NIVTS/021	Aug. 2	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Donnounge			Market		Makteng Lai	Borikhamsay
22	22	30040577	236614	COL/LAOS/2009/NIVTS/022	Aug. 3	<i>Solanum melongena</i>	Vientiane Cap.	Saythany	Phonetong			House		Kheukheune	Vientiane Cap.
23	23	30039757	235999	COL/LAOS/2009/NIVTS/023	Aug. 3	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Houakhoua					Makteng Lai	Champassak
24	24	30039758	236000	COL/LAOS/2009/NIVTS/024	Aug. 3	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Houakhoua					Makteng Vane	Champassak
25	25	30039759	236001	COL/LAOS/2009/NIVTS/025	Aug. 3	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Dongbang					Makteng Lai	Champassak
26	26	30039760	236002	COL/LAOS/2009/NIVTS/026	Aug. 3	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Dongbang					Makteng Lai	Champassak
27	27	30039761	236003	COL/LAOS/2009/NIVTS/027	Aug. 5	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Nongsonghong					Makteng Lai	Phoukhone
28	28	30039762	236004	COL/LAOS/2009/NIVTS/028	Aug. 5	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Nongsonghong					Makteng Lai	Phoukhone
29	29	30040571	236608	COL/LAOS/2009/NIVTS/029	Aug. 5	<i>Capsicum</i> spp.	Vientiane Cap.	Saythany	Paksap May			Market		Makphet	Vientiane Cap.
30	30	30040572	236609	COL/LAOS/2009/NIVTS/030	Aug. 5	<i>Capsicum</i> spp.	Vientiane Cap.	Saythany	Paksap May			Market		Makphet	Vientiane Cap.

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31	31	'30039763	236005	COL/LAOS/2009/NIVTS/031	Aug. 5	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Paksap May			Market		Makteng Lai	Champassak
32	32	30039764	236006	COL/LAOS/2009/NIVTS/032	Aug. 5	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Paksap May			Market		Makteng Lai	Champassak
33	33	30039765	236007	COL/LAOS/2009/NIVTS/033	Aug. 5	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Paksap May			Market		Makteng Lai	Champassak
34	34	30039766	236008	COL/LAOS/2009/NIVTS/034	Aug. 5	<i>Cucumis melo</i>	Vientiane Cap.	Saythany	Paksap May			Market		Makteng Lai	Champassak
35	35	30039767	236009	COL/LAOS/2009/NIVTS/035	Aug. 7	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Luang Prabang
36	36	30039768	236010	COL/LAOS/2009/NIVTS/036	Aug. 7	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Luang Prabang
37	37	30040580	236615	COL/LAOS/2009/NIVTS/037	Aug. 7	<i>Solanum melongena</i>	Vientiane Cap.	Saythany	Phone Ngam 1			House		Khengkhom	Vientiane Cap.
38	38	30040581	236616	COL/LAOS/2009/NIVTS/038	Aug. 27	<i>Solanum spp</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Mak Euk	Vientiane Cap.
39	39	30040582	236617	COL/LAOS/2009/NIVTS/039	Aug. 27	<i>Solanum spp</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Mak Euk	Vientiane Cap.
40	40	30039769	236011	COL/LAOS/2009/NIVTS/040	Aug. 27	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Vientiane Cap.
41	41	30039770	236012	COL/LAOS/2009/NIVTS/041	Aug. 27	<i>Cucumis melo</i>	Vientiane Cap.	Chanthaboury	Nongchan			Market		Makteng Lai	Vientiane Cap.
42	42	30039771	236013	COL/LAOS/2009/NIVTS/042	Sep. 6	Cucurbitaceae	Vientiane Cap.	Saysettha	Thatluang			Market		Kadom	Vientiane Pro.
43	43	30040581	236618	COL/LAOS/2009/NIVTS/043	Sep. 18	<i>Solanum melongena</i>	Vientiane Cap.	Saythany	Phone Ngam 2			Farmer's store		Kheukhom	Phoukhone
44	44	30039772	236014	COL/LAOS/2009/NIVTS/044	Sep. 20	<i>Cucumis sativus</i>	Vientiane Cap.	Saythany	Thadindeng			Market		Tenghay	Phoukhone
45	45	30040582	236619	COL/LAOS/2009/NIVTS/045	Oct. 20	<i>Solanum torvum</i>	Vientiane Cap.	Saythany	Phone Ngam 1			House		Khengpa	Phoukhone
46	46	30039773	236015	COL/LAOS/2009/NIVTS/046	Oct. 27	<i>Cucumis sativus</i>	Luang Prabang	Luang Prabang	Luang Prabang	19-52-37.3/ 102-07-25.0	193	Market (Phousy)	Lan-drace	Makteng Hai	23 cm (long), 13 cm (wide), oval shape, white skin, orange placenta
47	47	30039774	236016	COL/LAOS/2009/NIVTS/047	Oct. 27	<i>Cucumis sativus</i>	Luang Prabang	Luang Prabang	Luang Prabang	19-52-37.3/ 102-07-25.0	193	Market (Phousy)	Lan-drace	Makteng Hai	18 cm (long), 8 cm (wide), oval shape, white skin, lightgreen placenta
48	48	30039775	236017	COL/LAOS/2009/NIVTS/048	Oct. 28	<i>Cucumis sativus</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Lan-drace	Makteng Hai	24 cm (long), 11 cm (wide), oval shape, lightgreen skin, orange placenta
49	49	30040583	236620	COL/LAOS/2009/NIVTS/049	Oct. 28	<i>Solanum melongena</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Lan-drace	Mak Kheua Hamma	17.0 cm (long), 4.5 cm (wide), elongated shape
50	50-1	30039776	236018	COL/LAOS/2009/NIVTS/050-1	Oct. 28	<i>Cucurbita moschata</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Lan-drace	Mak Eu	seeds
51	50-2	30039777	236019	COL/LAOS/2009/NIVTS/050-2	Oct. 28	<i>Momordica spp.</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Lan-drace	Mak Phak Sai	seeds
52	50-3	30039778	236020	COL/LAOS/2009/NIVTS/050-3	Oct. 28	Cucurbitaceae	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Lan-drace		seeds
53	50-4	30039779	236021	COL/LAOS/2009/NIVTS/050-4	Oct. 28	<i>Cucumis sativus</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Lan-drace	Makteng Hai	seeds
54	51	30039780	236022	COL/LAOS/2009/NIVTS/051	Oct. 28	<i>Cucurbita moschata</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Kham)	19-37-6.5/ 102-12-22.3	812	Farmer's store	Lan-drace	Mak Eu	11 cm (long), 17 cm (wide), flattened shape, brown skin, orange flesh
55	52	30040584	236621	COL/LAOS/2009/NIVTS/052	Oct. 29	<i>Solanum torvum</i>	Luang Prabang	Xieng Ngeun	Nong Khiaw	20-34-19.1/ 102-36-54.6	342	Yard of restaurant	Wild	Khengkhom	yard of restaurant
56	53	30040573	236610	COL/LAOS/2009/NIVTS/053	Oct. 29	<i>Capsicum frutescens</i>	Luang Prabang	Nam Bak	Nam Bak	20-37-53.6/ 102-27-47.2	341	Market (Nam-bak)	Lan-drace	Makphet	backyard plant, orange color
57	54	30039781	236023	COL/LAOS/2009/NIVTS/054	Oct. 29	<i>Cucumis sativus</i>	Luang Prabang	Nam Bak	Xong Ja	20-33-49.8/ 102-14-12.0	1286	Farmer's store	Lan-drace	Makteng Hai	15 cm (long), 12 cm (wide), oval shape, lightgreen skin, orange placenta
58	55	30039782	236024	COL/LAOS/2009/NIVTS/055	Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Muang Beng	Napa	20-27-46.3/ 101-50-17.3	655	Farmer's store	Lan-drace	Makteng Hai	27 cm (long), 15 cm (wide), oval shape, lightbrown skin
59	56	30039783	236025	COL/LAOS/2009/NIVTS/056	Oct. 30	Cucurbitaceae	Oudom Xai	Muang Beng	Yor	20-21-18.9/ 101-41-35.0	582	wild	Wild	Kadom	6 cm (long), 2.5 cm (wide), red skin, black seed
60	57	30039784	236026	COL/LAOS/2009/NIVTS/057	Oct. 30	Cucurbitaceae	Oudom Xai	Muang Beng	Yor	20-21-18.9/ 101-41-35.0	582	wild	Wild	Makteng Hai	2 cm (long), 1 cm (wide), red skin

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61	58	30039785	236027	COL/LAOS/2009/NIVTS/058	Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Xay	Phia Houa Nam	20-29-37.8/ 101-51-41.0	723	Farmer's store	Lan-drace	Makteng Hai	13 cm (long), 13 cm (wide), round shape, lightbrown skin
62	59	30039786	236028	COL/LAOS/2009/NIVTS/059	Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Xay	Phia Houa Nam	20-30-7.6/ 101-51-59.3	735	Farmer's store	Lan-drace	Makteng Hai	20 cm (long), 17 cm (wide), oval shape, white skin, orange placenta
63	60	30040574	236611	COL/LAOS/2009/NIVTS/060	Oct. 30	<i>Capsicum chinense</i>	Oudom Xai	Xay	Phia Houa Nam	20-30-7.6/ 101-51-59.3	735	Farmer's store	Lan-drace	Makphet	backyard plant
64	61	30039787	236029	COL/LAOS/2009/NIVTS/061	Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Xay	Houay Ta	20-47-49.8/ 101-53-37.1	900	Farmer's store	Lan-drace	Makteng Hai	22 cm (long), 15 cm (wide), oval shape, white skin, orange placenta
65	62				Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Xay	Houay Ta	20-47-49.8/ 101-53-37.1	900	Farmer's store	Lan-drace	Makteng Hai	no seed samples
66	63	30039788	236030	COL/LAOS/2009/NIVTS/063	Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Xay	Houay Ta	20-47-49.8/ 101-53-37.1	900	Farmer's store	Lan-drace	Makteng Hai	30 cm (long), 17 cm (wide), oval shape, white skin, high green placenta
67	64	30039789	236031	COL/LAOS/2009/NIVTS/064	Oct. 30	<i>Cucurbita moschata</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Mak Eu	27 cm (long), 18 cm (wide), cylindrical shape, brown skin
68	65	30039790	236032	COL/LAOS/2009/NIVTS/065	Oct. 30	<i>Cucumis sativus</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Makteng Hai	12 cm (long), 11 cm (wide), round shape, brown skin, orange placenta
69	66	30039791	236033	COL/LAOS/2009/NIVTS/066	Oct. 31	<i>Cucumis sativus</i>	Luang Namtha	Namtha	Luang Namtha	20-59-52.9/ 101-24-18.9	549	Market	Lan-drace	Makteng Hai	17 cm (long), 8 cm (wide), oval shape, light-green skin, orange placenta
70	67	30039792	236034	COL/LAOS/2009/NIVTS/067	Oct. 31	<i>Cucurbita moschata</i>	Luang Namtha	Namtha	Luang Namtha	20-59-52.9/ 101-24-18.9	549	Market	Lan-drace	Mak Eu	brown skin
71	68	30039793	236035	COL/LAOS/2009/NIVTS/068	Oct. 31	<i>Cucurbitaceae</i>	Luang Namtha	Namtha	Chareunsouk	20-52-53.2/ 101-20-13.7	674	Back yard	Weedy	Makteng Pet	small, red mature fruit color
72	69	30039794	236036	COL/LAOS/2009/NIVTS/069	Oct. 31	<i>Luffa cylindrica</i>	Luang Namtha	Namtha	Nam Ha	20-49-31.7/ 101-16-54.3	605	Back yard	Weedy	Mak Bouap	round shape
73	70	30039795	236037	COL/LAOS/2009/NIVTS/070	Oct. 31	<i>Cucumis sativus</i>	Bokeo	Houay Xai	Houay Xai	20-16-18.1/ 100-23-2.9	361	Market	Lan-drace	Makteng Hai	21 cm (long), 12 cm (wide), oval shape, lightgreen skin, orange placenta
74	71	30039796	236038	COL/LAOS/2009/NIVTS/071	Oct. 31	<i>Cucumis sativus</i>	Bokeo	Houay Xai	Ta Fa	20-27-51.0/ 100-54-9.4	858	Farmer's store	Lan-drace	Makteng Hai	oval shape, brown skin, orange placenta
75	72				Nov. 1	<i>Cucumis sativus</i>	Luang Namtha	Namtha	Namak Kao	21-7-53.1/ 101-21-2.3	746	Walking farmer	Lan-drace	Makteng Hai	no seed samples
76	73	30039797	236039	COL/LAOS/2009/NIVTS/073	Nov. 1	<i>Cucumis sativus</i>	Luang Namtha	Namtha	Namak Kao	21-7-53.1/ 101-21-2.3	746	Walking farmer	Lan-drace	Makteng Hai	25 cm (long), 15 cm (wide), oval shape, light green skin, orange placenta
77	74	30039798	236040	COL/LAOS/2009/NIVTS/074	Nov. 1	<i>Cucumis sativus</i>	Luang Namtha	Namtha	Na Toi	21-00-45.1/ 101-24-50.9	567	Market (Talat loi)	Lan-drace	Makteng Hai	14 cm (long), 14 cm (wide), round shape, brown skin, orange placenta
78	75	30039799	236041	COL/LAOS/2009/NIVTS/075	Nov. 1	<i>Cucumis melo</i>	Luang Namtha	Namtha	Na Toi	21-00-45.1/ 101-24-50.9	567	Market (Talat loi)	Lan-drace	Makteng Hai	
79	76	30039800	236042	COL/LAOS/2009/NIVTS/076	Nov. 1	<i>Cucumis sativus</i>	Oudom Xai	Namo	Namo	20-56-46.6/ 101-43-24.5	645	Farmer's store	Lan-drace	Makteng Hai	26 cm (long), 12 cm (wide), elongated shape, lightgreen skin, orange placenta
80	77	30039801	236043	COL/LAOS/2009/NIVTS/077	Nov. 1	<i>Cucumis sativus</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Makteng Hai	15 cm (long), 14 cm (wide), round shape, green skin, orange placenta
81	78	30039802	236044	COL/LAOS/2009/NIVTS/078	Nov. 1	<i>Cucumis melo</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Makteng Hai	14 cm (long), 14 cm (wide), round shape, white skin, orange placenta
82	79	30039803	236045	COL/LAOS/2009/NIVTS/079	Nov. 1	<i>Cucumis sativus</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Makteng Hai	Shape like melon
83	80	30039804	236046	COL/LAOS/2009/NIVTS/080	Nov. 1	<i>Cucumis sativus</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Makteng Hai	17 cm (long), 16 cm (wide), round shape, white skin, orange placenta
84	81	30040575	236612	COL/LAOS/2009/NIVTS/081	Nov. 1	<i>Capsicum annuum</i>	Oudom Xai	Namo	Kio Chep	20-51-34.9/ 101-48-14.7	830	Farmer's store	Lan-drace	Makphet	
85	82	30039805	236047	COL/LAOS/2009/NIVTS/082	Nov. 1	<i>Cucumis hystrix</i>	Oudom Xai	Xai	Houay Ta	20-47-49.8/ 101-53-37.1	900	Farmer's store	Wild	Makteng Nou	
86	83	30039806	236048	COL/LAOS/2009/NIVTS/083	Nov. 1	<i>Cucumis sativus</i>	Oudom Xai	Xai	Oudom Xai	20-41-27.8/ 101-53-5.2	643	Market	Lan-drace	Makteng Hai	29 cm (long), 14 cm (wide), elongated shape, brown skin, orange placenta
87	84	30039807	236049	COL/LAOS/2009/NIVTS/084	Nov. 2	<i>Cucumis hystrix</i>	Oudom Xai	Xai	KM32	20-34-16.6/ 102-08-26.8	883	Farmer's house	Wild	Makteng Nou	
88	85-1	30039808	236050	COL/LAOS/2009/NIVTS/085-1	Nov. 2	<i>Cucumis sativus</i>	Luang Prabang	Xieng Ngeun	Kiu Ya	19-42-41.9/ 102-11-26.5	955	Farmer's store	Lan-drace	Makteng Hai	seeds
89	85-2	30039809	236051	COL/LAOS/2009/NIVTS/085-2	Nov. 2	<i>Cucurbita moschata</i>	Luang Prabang	Xieng Ngeun	Kiu Ya	19-42-41.9/ 102-11-26.5	955	Farmer's house	Lan-drace	Mak Eu	seeds
90	86	30039810	236052	COL/LAOS/2009/NIVTS/086	Nov. 4	<i>Cucumis hystrix</i>	Luang Prabang	Xieng Ngeun	Houay Kouk	19-43-26.4/ 102-11-44.7	840	Farmer's house	Wild	Makteng Nou	

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91	87-1	30039811	236053	COL/LAOS/2009/NIVTS/087-1	Nov. 4	<i>Cucumis hystrix</i>	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Wild	Makteng Nou Li Da Pang	
92	87-2	30039812	236054	COL/LAOS/2009/NIVTS/087-2	Nov. 4	Cucurbitaceae	Luang Prabang	Xieng Ngeun	Kiutalon Ne (Hmong)	19-35-31/ 102-13-31.4	1383	Farmer's house	Wild		
93	88	30039813	236055	COL/LAOS/2009/NIVTS/088	Nov. 4	<i>Cucumis sativus</i>	Luang Prabang	Phou Khone	Phou Khoun	19-26-23.4/ 102-25-31.5	1352	Farmer's store	Landrace	Makteng Hai	20 cm (long), 11 cm (wide), elongated shape, white skin, orange placenta
94	89	30039814	236056	COL/LAOS/2009/NIVTS/089	Nov. 4	<i>Cucumis sativus</i>	Xieng Khouang	Pek	Phonsavan	19-26-58.7/ 103-11-22.2	1097	Market (Si-phoxay)	Landrace	Makteng Hai	32 cm (long), 11 cm (wide), elongated shape, lightgreen skin, orange placenta
95	90	30040585	236622	COL/LAOS/2009/NIVTS/090	Nov. 4	<i>Solanum melongena</i>	Xieng Khouang	Pek	Phonsavan	19-26-58.7/ 103-11-22.2	1097	Market (Si-phoxay)	Landrace	Mak Kheua Pom	4-5 cm (long), 2-3 cm (wide) oval shape, white color
96	91	30039815	236057	COL/LAOS/2009/NIVTS/091	Nov. 4	<i>Cucumis sativus</i>	Xieng Khouang	Pek	Phonsavan	19-26-59.5/ 103-12-50.5	1105	Market (Kasikam)	Landrace	Makteng Hai	30 cm (long), 12 cm (wide), elongated shape, brown skin, orange placenta
97	92	30039816	236058	COL/LAOS/2009/NIVTS/092	Nov. 4	<i>Cucumis sativus</i>	Xieng Khouang	Pek	Phonsavan	19-26-59.5/ 103-12-50.5	1105	Market (Kasikam)	Landrace	Makteng Hai	28 cm (long), 13 cm (wide), elongated shape, white skin, orange placenta
98	93	30040586	236623	COL/LAOS/2009/NIVTS/093	Nov. 4	<i>Solanum melongena</i>	Xieng Khouang	Pek	Phonsavan	19-26-59.5/ 103-12-50.5	1105	Market (Kasikam)	Landrace	Mak Kheua Pom	13.0 cm (long), 8.5 cm (wide) flattened shape
99	94	30039817	236059	COL/LAOS/2009/NIVTS/094	Nov. 5	<i>Cucumis sativus</i>	Xieng Khouang	Pek	Phu San	19-35-26.6/ 103-26-07.3	1071	Farmer's House	Landrace	Makteng Hai	30 cm (long), 13 cm (wide), elongated shape, lightgreen skin, orange placenta
100	95	30039818	236060	COL/LAOS/2009/NIVTS/095	Nov. 5	<i>Cucumis sativus</i>	Xieng Khouang	Pek	Phu San	19-35-26.6/ 103-26-07.3	1071	Farmer's House	Landrace	Makteng Hai	25 cm (long), 12 cm (wide), elongated shape, lightgreen skin, orange placenta
101	96	30039819	236061	COL/LAOS/2009/NIVTS/096	Nov. 5	<i>Cucumis sativus</i>	Houaphan	Xam Neua	Nam Noun	20-01-54.6/ 103-42-59.9	508	Market (Sabla)	Landrace	Makteng Hai	26 cm (long), 16 cm (wide), slightly elongated shape, white skin, orange placenta
102	97	30039820	236062	COL/LAOS/2009/NIVTS/097	Nov. 5	<i>Cucumis sativus</i>	Houaphan	Xam Neua	Done	20-16-33.6/ 104-02-37.6	1117	Farmer's store	Landrace	Makteng Hai	16 cm (long), 11 cm (wide), oval shape, lightgreen skin, orange placenta
103	98	30039821	236063	COL/LAOS/2009/NIVTS/098	Nov. 5	<i>Cucumis sativus</i>	Houaphan	Xam Neua	Xam Neua	20-24-59.9/ 104-02-58.7	945	Market (Nathongchong)	Landrace	Makteng Hai	24 cm (long), 12 cm (wide), elongated shape, lightgreen skin, orange placenta
104	99	30040576	236613	COL/LAOS/2009/NIVTS/099	Nov. 5	<i>Capsicum frutescens</i>	Houaphan	Xam Neua	Xam Neua	20-24-59.9/ 104-02-58.7	945	Market (Nathongchong)	Landrace	Makphet	backyard
105	100	30039822	236064	COL/LAOS/2009/NIVTS/100	Nov. 6	<i>Cucumis sativus</i>	Houaphan	Vieng Xai	Vieng Xai	20-24-36.6/ 104-13-36.1	887	Market (Vieng Xai)	Landrace	Makteng Hai	19 cm (long), 13 cm (wide), slightly elongated shape, lightgreen skin, orange placenta
106	101	30040587	236624	COL/LAOS/2009/NIVTS/101	Nov. 6	<i>Solanum melongena</i>	Houaphan	Vieng Xai	Vieng Xai	20-24-36.6/ 104-13-36.1	887	Market (Vieng Xai)	Landrace	Mak Kheua Pom	9.4 cm (long), 7.0 cm (wide), oval shape
107	102-1	30039823	236065	COL/LAOS/2009/NIVTS/102-1	Nov. 6	<i>Cucumis sativus</i>	Houaphan	Vieng Xai	Poy Song	20-19-03.0/ 104-27-52.3	917	Farmer's house	Landrace	Makteng Hai	seeds
108	102-2	30039824	236066	COL/LAOS/2009/NIVTS/102-2	Nov. 6	<i>Cucumis melo</i>	Houaphan	Vieng Xai	Poy Song	20-19-03.0/ 104-27-52.3	917	Farmer's house	Landrace		seeds
109	102-3	30039825	236067	COL/LAOS/2009/NIVTS/102-3	Nov. 6	Cucurbitaceae	Houaphan	Vieng Xai	Poy Song	20-19-03.0/ 104-27-52.3	917	Farmer's house	Landrace		seeds
110	102-4	30039826	236068	COL/LAOS/2009/NIVTS/102-4	Nov. 6	<i>Citrullus lanatus</i>	Houaphan	Vieng Xai	Poy Song	20-19-03.0/ 104-27-52.3	917	Farmer's house	Landrace	Makmo	seeds
111	103-1	30039827	236069	COL/LAOS/2009/NIVTS/103-1	Nov. 6	<i>Cucumis sativus</i>	Houaphan	Vieng Xai	Done Khoun	20-16-00.8/ 104-31-48.7	406	Farmer's house	Landrace	Makteng Hai	seeds
112	103-2	30039828	236070	COL/LAOS/2009/NIVTS/103-2	Nov. 6	<i>Cucumis melo</i>	Houaphan	Vieng Xai	Done Khoun	20-16-00.8/ 104-31-48.7	406	Farmer's house	Landrace		seeds
113	104	30039829	236071	COL/LAOS/2009/NIVTS/104	Nov. 7	<i>Cucumis hystrix</i>	Xieng Khouang	Kham	Phieng Khong	19-59-46.3/ 103-42-04.5	652	Farmer's house	Wild	Makteng Nou	
114	105	30039830	236072	COL/LAOS/2009/NIVTS/105	Nov. 7	<i>Cucurbita moschata</i>	Xieng Khouang	Kham	Phieng Khong	19-59-46.3/ 103-42-04.5	652	Farmer's house	Landrace	Mak Eu	seeds
115	106	30039831	236073	COL/LAOS/2009/NIVTS/106	Nov. 7	<i>Cucumis hystrix</i>	Xieng Khouang	Kham	Nam Chak	19-43-30.6/ 103-36-46.3	1388	Farmer's house	Wild	Makteng Nou	
116	107	30039832	236074	COL/LAOS/2009/NIVTS/107	Nov. 7	<i>Cucumis sativus</i>	Xieng Khouang	Kham	Nam Chak	19-43-30.6/ 103-36-46.3	1388	Farmer's house	Landrace	Makteng Hai	seeds



Photo 1. Fruits of Kadom (No. 59).



Photo 2. A long street of stores in Kio Chep village.



Photo 3. Interviewing local people using photos to learn about the presence of *C. hystrix* in Luang Prabang.



Photo 4. Interviewing local people using photos to learn about the presence of *C. hystrix* in Nam Noun.



Photo 5. Samples of *C. hystrix* collected at KM 32 village (No. 87).



Photo 6. Samples of *C. hystrix* collected at Phieng Khong village (No. 113).



Photo 7. Vegetation surrounding the place where *C. hystrix* was found. The species was found in the bush at the right side of the photo. At the left side is a field of upland rice.



Photo 8. A plant of *C. hystrix* growing at Houay Ta village.



Photo 9. Close-up of an immature fruit of *C. hystrix* growing at Houay Ta village.



Photo 10. Typical Laotian cucumbers collected at Nam Noun village.

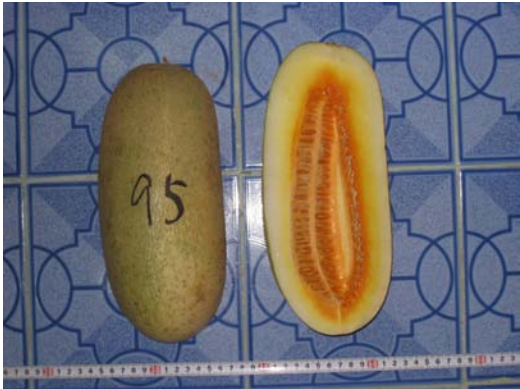


Photo 11. Typical Laotian cucumbers collected at Phu San village (No. 100). (95 means its collection number)



Photo 12. Laotian cucumbers with a light-green placenta color (No. 58). (55 means its collection number)



Photo 13. A variety of Laotian cucumbers at Kio Chep village.



Photo 14. Pumpkins at Kiotalon Ne village.



Photo 15. Pumpkins at Houay Kouk village.



Photo 16. Kadom (upper left) in a market at Luang Namtha.



Photo 17. Various colors of eggplants at a farmer's store in Kiotalon Ne village.



Photo 18. Boiled vegetables, including eggplant (upper right) and *S. torvum* (upper left).



Photo 19. Wild plants that resemble eggplants, called "Mak Khoua Ba" by local people.



Photo 20. Fruits of eggplant in a market at Muang Kham village, near Phonsavan.



Photo 21. A range of shapes of chili peppers sold in a market at Pia Houa Nam village.