

Collaborative Exploration and Collection of Plant Genetic Resources in Cambodia in December 2016

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Summary

Collection of plant genetic resources was carried out in northwestern Cambodia from December 4 to 18, 2016. In this survey, 146 genetic resources were collected, including 19 Poaceae accessions, 59 Cucurbitaceae accessions, 26 Solanaceae accessions, 13 Brassicaceae accessions, 18 Fabaceae accessions and 11 other crop accessions.

KEY WORDS: Cambodia, Poaceae, Cucurbitaceae, Solanaceae, Brassicaceae, Fabaceae

Introduction

Naeem *et al.* (2016) proposed that the link between biodiversity and human well-being is essential for sustainable development. This reminds us of the importance of biodiverse for our sustainability. Biodiversity is intimately related to genetic resources.

The mission of the Genetic Resources Center, NARO, includes the collection and conservation of genetic resources for crop improvements, such as increase of yields, stress tolerance, etc., not only domestically, but also overseas. Till date we have only scarce sorghum resources coming from Cambodia. Thus, we conducted a collection trip to Cambodia under the Letter of Agreement (LOA) between the National Institute of Agrobiological Sciences (NIAS) and the Cambodian Agricultural Research and Development Institute (CARDI) (Tomooka *et al.* 2012, 2013; Takahashi *et al.* 2014, 2015). The objective of our collection trip was to sample a wider diversity and use it in the near future for DNA analysis to document the genetic diversity found. Here we present the data of collected landraces of some crops, in Cambodia.

Five previous surveys have been conducted in Cambodia, which targeted leguminous crops. Additionally, under the Plant Genetic Resources in Asia Project (PGRAsia Project), based on the Joint Research Agreement (JRA) between NIAS and CARDI, four surveys were carried out in northwestern and eastern Cambodia in 2014 and 2015 (Matsunaga *et al.* 2015; Tanaka K. *et al.* 2016; Tanaka Y. *et al.* 2016; Sreynech *et al.* 2016). The present survey, also conducted under the PGRAsia Project, was planned to target vegetable and cereal crop genetic resources in northwestern Cambodia. Because of the merger of NARO and NIAS in April 2016, all obligations and rights of NIAS under the JRA have been assumed by NARO.

Methods

The survey was conducted from December 5 to 14, 2016 (Table 1). We collected 146 samples from 23 sites (Fig. 1, Table 2). We used a rental car for the journey. The survey group consisted in a NARO researcher, a Japanese company researcher, a CARDI researcher, and a Cambodian driver. Samples were obtained from villages, markets, or fields. We recorded the location information by using GPS (GARMIN, foretrex301), as well as data (e.g., plant height, panicle length, and local name) and photographs of the collected plant samples. These were sorted out into two categories, (1) Cereal and industrial crops (Collection number 2016-12-C1 - C21, Photographs 1 - 21), and (2) Vegetable and other crops (Collection number C101 - C225, Photographs 22 - 146).

Results

(1) December 5 : Phnom Penh - Kandal - Kampong Chhnang - Pursat

The survey started on December 5 in Phnom Penh and continued further toward the western region. In Klaing Tbaeng village, Kandal province, Jae Tea (Cham tribe) provided us with a wax gourd sample as collection number 2016-12-C101 (hereafter C101, Photograph 22), a melon sample (C102, Photograph 23), a pumpkin sample (C103, Photograph 24), an okra sample (C104, Photograph 25), and two eggplant samples (C105 and C106, Photographs 26 and 27). At the market in Kampong Chhnang we gathered two cowpea samples (C107 and C108, Photographs 28 and 29), a chili pepper sample (C109, Photograph 30), a wax gourd sample (C110, Photograph 31), and a pumpkin sample (C111, Photograph 32). At the market in Pursat, a cowpea sample (C112, Photograph 33), two pumpkin samples (C113 and C114, Photographs 34 and 35), and two chili pepper samples (C115 and C116, Photographs 36 and 37) were collected.

Table 1. Itinerary of the survey in Cambodia

Date	Day	Itinerary	Collection
5-Dec	Mon	Phnom Penh Capital - Kandal Prov. - Kampong Chhnang Prov. - Pursat Prov.	C101 - C116
6-Dec	Tue	Battambang Prov.	C1, C117 - C121
7-Dec	Wed	Battambang Prov.- Pailin Prov.	C2 - C7, C122 - C146
8-Dec	Thu	Pailin Prov.	C8 - C11, C147 - C164
9-Dec	Fri	Banteay Meanchey Prov.	C165 - C180
10-Dec	Sat	Otdar Meanchey Prov.	C12, C13, C181 - C192
11-Dec	Sun	Siem Reap Prov.	C14, C15, C193 - C210
12-Dec	Mon	Otdar Meanchey Prov.	C16
13-Dec	Tue	Otdar Meanchey Prov. - Siem Reap Prov.	C17 - C19, C211 - C220
14-Dec	Wed	Siem Reap Prov.	C20, C21, C221 - C225

samples (C122 - C124, Photographs 43 - 45), a water melon sample (C125, Photograph 46), and three melon samples (C126 - C128, Photographs 47 - 49). At the Rong Lakhon market we collected a maize sample (C2, Photograph 2), a cowpea sample (C129, Photograph 50), a soybean sample (C130, Photograph 51), a luffa sample (C131, Photograph 52), a water melon sample (C132, Photograph 53), a pumpkin sample (C133, Photograph 54), a wax gourd sample (C134, Photograph 55), a cucumber sample (C135, Photograph 56), a melon sample (C136, Photograph 57), two pak choi samples (C137 and C139, Photographs 58 and 60), a Chinese cabbage sample (C138, Photograph 59), a *Brassica juncea* sample (C140, Photograph 61), and a kale (pointed leaf) sample (C141, Photograph 62). In Boribo village, Yim Hoeun (Khmer) provided us with four sorghum samples (C3 - C6, Photographs 3 - 6) and on the roadside, an okra (weedy) sample (C142, Photograph 63) was collected. According to Yim Hoeun, they planted sorghum in the fields of 10 by 30 m and feed leaves and grains to cows and chicken, respectively. In Cher Neng village, an *Erianthus* sample (C7, Photograph 7) was collected, while in Veal Vong village, Pailin, Srey Neang (Khmer) provided us with a chili pepper sample (C143, Photograph 64), a winged bean sample (C144, Photograph 65), an eggplant sample (C145, Photograph 66), and an okra sample (C146, Photograph 67).

(4) December 8: Palin

At the Pailin market, we collected a tomato sample (C147, Photograph 68), a chili pepper sample (C148, Photograph 69), three pumpkin samples (C149 - C151, Photographs 70 - 72), a *Brassica rapa* sample (C152, Photograph 73), a leaf mustard sample (C153, Photograph 74), and a lettuce sample (C154, Photograph 75). At Bos Sroum village, Pailin, an *Erianthus* sample (C8, Photograph 8), a maize sample (C9, Photograph 9), a sorghum sample (C10, Photograph 10), an okra sample (C155, Photograph 76), a luffa sample (C156, Photograph 77), a sacha inchi sample (C157, Photograph 78), a pumpkin sample (C158, Photograph 79), and a melon sample (C159, Photograph 80) were collected. Additionally, we found two sorghum samples; one by the roadside, and the other between a maize and a cassava field. However, they were too young to collect. In Tro Nob village, Yay Chhourm (Khmer) provided us with a melon sample (C160, Photograph 81), a pumpkin sample (C161, Photograph 82), two chili pepper samples (C162 and C163, Photographs 83 and 84), and a cowpea sample (C164, Photograph 85). Along the road to Kamrieng village, a sorghum sample (C11, Photograph 11) was collected. Despite herbicide spray on the sorghum plants along the road some time ago, plants apparently remained alive.

(5) December 9: Banteay Meanchey

Two melon samples (C165 and C166, Photographs 86 and 87), two cucumber samples (C167 and C168, Photographs 88 and 89), two leaf mustard samples (C169 and C174, Photographs 90 and 95), a kale (pointed leaf) sample (C170, Photograph 91), a eryngium (foetid) sample (C171, Photograph 92), a *Brassica rapa* sample (C172, Photograph 93), a Chinese cabbage sample (C173, Photograph 94), a bunching onion sample (C175, Photograph 96), and a cauliflower sample (C176, Photograph 97) were collected at the Poy Peat market. In Ondoung Thor village, Ya Ry (Khmer) provided us with a star-shaped sacha inchi sample (C177, Photograph 98). In Snay Don Kout village (Khmer), Kao Kour provided us with a luffa sample (C178, Photograph 99), a wax gourd sample (C179, Photograph 100), and a bottle gourd sample (C180, Photograph 101).

(6) December 10: Otder Meanchey

We visited the community deputy in Sisophon village; he did not know sorghum. According to him, the main local products in the village were rice, melon, and herb. He told us that in this region, they can harvest 5 ton/ha of paddy rice and 1.5 to 3 ton/ha of floating rice in dry and rainy seasons, respectively. In Thnol Dack village, To Thy (Khmer) provided us with a melon sample (C181, Photograph 102), a water melon sample (C182, Photograph 103), and a pumpkin sample (C183, Photograph 104). According to the residents, some 10 years ago they used to eat sorghum and to feed the leaves to cattles. However, there seem to be no sorghums now. In Somlong village, a maize sample (C12, Photograph 12) was collected. In Prey Veng village, Kim Heurb (Khmer) provided us with a tomato sample (C184, Photograph 105), an eggplant sample (C185, Photograph 106), a melon sample (C186, Photograph 107), and a water melon sample (C187, Photograph 108). Many people planted sorghum 40 years ago. They used to eat white grain sorghum as a snack and called sorghum 'Tapo.' In Preal village, Lin Hes (Khmer) provided us with a cotton sample (C13, Photograph 13), a melon sample (C188, Photograph 109), a pumpkin sample (C189, Photograph 110), a cowpea sample (C190, Photograph 111), a chili pepper sample (C191, Photograph 112), and an eggplant sample (C192, Photograph 113).

(7) December 11: Siem Reap

In Knar village, Siem Reap, Chanthy (Khmer) provided us with a pumpkin sample (C193, Photograph 114), an eggplant sample (C194, Photograph 115), a wild cucurbit sample (C195, Photograph 116), two cowpea samples (C196 and C197, Photographs 117 and 118), and a luffa sample (C198, Photograph 119). According someone in the village, sorghums were discarded 3 years ago. These sorghums had black grains and their stems were sweet. In Koh Chrum Thney village, Ven Kean (Khmer) provided us with a sorghum sample (C14, Photograph 14), an eggplant sample (C199, Photograph 120), a pumpkin sample (C200, Photograph 121), a melon sample (C201, Photograph 122), and a water melon sample (C202, Photograph 123). Sorghums were discarded around the region 2 years ago. One person told us that they had planted black-grain and white-grain sorghum a few years ago. In Trop Kha village, Srenoy, Ngim Thon (Khmer) provided us with a sorghum sample (C15, Photograph 15), two eggplant samples (C203 and C204, Photographs 124 and 125), a melon sample (C205, Photograph 126), four pumpkin samples (C206, C208 - C210, Photographs 127, 129 - 131), and a bottle gourd sample (C207, Photograph 128). Someone told us that foxtail millet has not been seen in the last 5 years.

(8) December 12:

In the middle of survey, we visited some villages and interviewed people. In one village, they said they planted sorghum as parrots feed to prevent parrots eating rice six years ago. They had two kind of foxtail millets three years ago. In the another village they had planted white-grain sorghums around maize fields two years ago, and ate sorghum as a snack. In the next village, people had planted sorghum around paddy field before 1980. On the main road, an *Erianthus* sample (C16, Photograph 16) was collected. In a village inhabited by a minority established in 1993, some people planted black-grain sorghum in the rainy season. However, it was discarded.

(9) December 13: Otder Meanchey - Siem Reap

In Sray Chek village, Otder Meanchey district, Khek Kheang (Khmer) provided us with a sesame

sample (C17, Photograph 17), a melon sample (C211, Photograph 132), a pumpkin sample (C212, Photograph 133), a water melon sample (C213, Photograph 134), six cowpea samples (C214 - C219, Photographs 135 - 140), and a luffa sample (C220, Photograph 141). In Apivath village, Chhun Chantrea (Khmer) provided us with a 'Job's tears' sample (C18, Photograph 18). In Sre Noy village, Siem Reap, Chhem Chep (Khmer) provided us with a sorghum sample (C19, Photograph 19). We interviewed a staff member of the community office about sorghum and foxtail millet. He told us that farmers in this region planted cash crops, but neither sorghum nor foxtail millet. However the minorities in the northeast region had sorghum.

(10) December 14: Siem Reap

In Wat village, Siem Reap district, an aged lady provided us with two eggplant samples (C221 and C222, Photographs 142 and 143), a cowpea sample (C223, Photograph 144), and a sword bean sample (C224, Photograph 145). In Kam Prom village, Cheu Khan provided us with two sorghum samples (C20 and C21, Photographs 20 and 21) and an eggplant sample (C225, Photograph 146).

Discussion

In all, 146 accessions of genetic resources were collected in the present survey, including 22 pumpkin (*Cucurbita moschata* Duch.) accessions, 15 cowpea (*Vigna unguiculata* (L.) Walp) accessions, 15 melon (*Cucumis melo* L.) accessions, 13 eggplant (*Solanum melongena* L.) accessions, 11 sorghum (*Sorghum bicolor* (L.) Moench) accessions, 11 chili pepper (*Capsicum annuum* L.) accessions, six water melon (*Citrullus lanatus* (Thunb.) Matsum. & Nakai) accessions, six luffa (*Luffa cylindrica* M. Roem) accessions, six *Brassica rapa* (*Brassica rapa* L.) accessions, four maize (*Zea mays* L.) accessions, four wax gourd (*Benincasa hispida* (Thunb.) Cogn.) accessions, four okra (*Hibiscus esculentus* L.) accessions, four *Brassica juncea* (*Brassica juncea* (L.) Czerniak) accessions, three *Erianthus* (*Erianthus procerus* (Roxb.) Raizada) accessions, three cucumber (*Cucumis sativus* L.) accessions, three *Brassica oleracea* (*Brassica oleracea* L.) accessions, two bottle gourd (*Lagenaria siceraria* Molina) accessions, two tomato (*Solanum lycopersicum* L.) accessions, two sacha inchi (*Plukenetia volubilis* L.) accessions, one 'Job's tears' (*Coix lacryma-jobi* L.) accession, one sesame (*Sesamum indicum* L.) accession, one cotton (*Gossypium* sp.) accession, one winged bean (*Psophocarpus tetragonolobus* (L.) DC.) accession, one soybean (*Glycine max* Merrill) accession, one curly green lettuce (*Lactuca sativa* L.) accession, one bunching onion (*Allium fistulosum* L.) accession, one eryngium (foetid) (*Eryngium foetidum* L.) accession, one sword bean (*Canavalia gladiata* (Jacq.) DC.) accession, and one wild cucurbit (*Trichosanthes cucumeroides* Maxim.) accession (Tables 2 and 3). The collected genetic resources will be used for characterization and evaluation at both, CARDI and Genetic Resources Center, NARO.

(1) Cereal and industrial crops

1) *Sorghum bicolor*

A total of 11 accessions of sorghum were collected in this survey. Sorghum were locally called 'Pot Baraing' in Battambang, 'Kantream' and 'Spor' in Siem Reap, and 'Sapov' in Otdar Meanchey. Plant height and panicle length ranged from 1.6 to 3.0 m, and from 18 cm to 37 cm, respectively. Three of the collected sorghums had black grains, while the rest had white or brown grains. In many villages, sorghums were discarded 2 to 10 years ago. Khmer people used to eat sorghum grains as a snack before, but they did

Table 2. Number of collected genetic resources

Species Name	Number
<i>Sorghum bicolor</i>	11
<i>Erianthus procerus</i>	3
<i>Zea Mays</i>	4
<i>Coix lacryma-jobi</i>	1
<i>Sesamum indicum</i>	1
<i>Gossypium spp.</i>	1
<i>Cucurbita moschata</i>	22
<i>Cucumis melo</i>	15
<i>Citrullus lanatus</i>	6
<i>Luffa cylindrica</i>	6
<i>Benincasa hispida</i>	4
<i>Cucumis sativa</i>	3
<i>Lagenaria siceraria</i>	2
<i>Trichosanthes cucumeroides</i>	1
<i>Solanum melongena</i>	13
<i>Capsicum annum</i>	11
<i>Lycopersicum esculentum</i>	2
<i>Brassica rapa</i>	6
<i>Brassica juncea</i>	4
<i>Brassica oleracea</i>	3
<i>Vigna unguiculata</i>	15
<i>Glycine max</i>	1
<i>Psophocarpus tetragonolobus</i>	1
<i>Canavalia gladiata</i>	1
<i>Hibiscus esculentus</i>	4
<i>Plukenetia volubilis</i>	2
<i>Allium fistulosum</i>	1
<i>Lactuca sativa</i>	1
<i>Eryngium fortidum</i>	1
Total	146

not use sorghum any more in recent years.

2) *Erianthus procerus*

Erianthus were locally called 'Treang.' Their plant heights and panicle lengths were 4.5, 5.8 and 4 m, and 81, 70 and 62 cm respectively. In Cambodia, *Erianthus* is recognized as a weed.

3) *Zea mays*

Maize was called 'Pot Domnearb' or 'Pot.' Plant height ranged from 1.5 to 2.0 m, and cob length was 9 to 18 cm in length. In Battambang, maize was planted twice a year, in March and July.

4) *Coix lacryma-jobi*

One 'Job's tears' accession was collected which was called 'Skyv' in the collection area. It had all three colors; black, gray, and yellow grains, all on the same individual.

5) Sesame (*Sesamum indicum*)

The sesame accession was called 'La-ngor Kadek.' The seed pods of this accession were 4 cm long and 2 cm in diameter.

6) Cotton (*Gossypium spp.*)

The cotton accession was called 'Kabas' in Preal village. Plant height was 1.5 m.

(2) Vegetable and other crops

1) *Cucurbitaceae*

A total of 59 *Cucurbitaceae* samples were collected, including 22 pumpkin accessions, 15 melon accessions, six water melon accessions, six luffa accessions, four wax gourd accessions, three cucumber accessions, two bottle gourd accessions, and one wild cucurbit accession. Pumpkin accessions were called 'La Pov' or 'La Pov' with the words such as 'Kluang' and 'King.' 'La Pov' indicates pumpkin in the survey area. Pumpkin were used for soups or desserts. Melon accessions were called 'Tra Sork Srov' in most villages we visited. Other local names were 'Trop Roluy,' 'Trop Kha,' and 'Trop Pong Lolok.' Locals ate melon flesh as a dessert. Water melon accessions were commonly called 'Ov Lek' in this area. Mature and young fruits were consumed as a dessert and soup, respectively. The local generic name for the luffa accessions was 'Nonong.' Cambodian people used luffa for soup and fries. Wax gourd accessions were called 'Tro Laeh,' 'Troleah Treung,' and 'Tro Leah Srov' in the region. They were used for soup. Bottle gourd accessions were called 'Klov' or 'Klov Veng.' They were also used for soup. A wild cucurbit accession was the same as the species Japanese snake gourd 'KARASUURI.' People thought, "it is not edible, and could be toxic." A wild cucurbit was called 'Tro Sork Kaek' in Knar village.

2) *Solanaceae*

A total of 26 *Solanaceae* samples were collected, including 13 eggplant accessions, 11 chili pepper accessions, and two tomato accessions. Eggplant accessions had various names in the area, 'Trop Moal,' 'Trop Sruy,' 'Trop Veng,' 'Trop Kha,' and 'Trop Roluy.' 'Trop' was commonly used for almost all types of eggplants. Cambodian people ate eggplants raw or used it for soup. C203 was collected at Sre Noy village, its fruits were covered with hair. Chili pepper accessions were called 'Mates Dai Neang,' 'Mates Ach Sath,' 'Mates Dai Neang Thoch,' 'Mates Dai Nrang Taem,' 'Mates Thom,' and 'Mates Sor.' It is suggested that 'Mates' indicates chili pepper in this region. Chili pepper were used as a condiment. Tomato accessions were called 'Peng Pos' in the surveyed area. They were used for soup.

3) *Brassicaceae*

Thirteen *Brassicaceae* samples were collected, including six *B. rapa*, four *B. juncea*, and three *B. oleracea* accessions. *Brassica rapa* included two pak choi accessions, two Chinese cabbage accessions, and two *B. rapa* accessions. Pak choi accessions were called 'Spai Chai Sem' and 'Spai Tour.' Chinese cabbage accessions were called 'Spai Kro Gnagn,' and are used for fries, soup or fresh salads. Other *B. rapa* accessions were called 'Spai Chang Kors.' *Brassica juncea* included three leaf mustard accessions and another *B. juncea* accession. Leaf mustard accessions were called 'Spai Kmao,' 'Spai Chang Kers,' and 'Spai Kdorb.' Another *B. juncea* accession was called 'Spai Kmao' the same as leaf mustard. *Brassica oleracea* included two kale (pointed leaf) accessions and one cauliflower accession. Kale (pointed leaf) accessions were called 'Kat Na,' and cauliflower was called 'Kat Na Phuka.' 'Spai' was commonly used for all accession names of *B. rapa* and *B. juncea*.

4) *Fabaceae*

Fifteen cowpea, one soybean, one winged bean, and one sword bean accession were collected. Cowpea accessions were named 'Sandek Maw,' 'Sorndek Korng,' 'Sondek Ong Koy,' 'Sondek Taon,' 'Sandek Chhou,' 'Sandek Meas,' or 'Sandek Buy.' 'Sandek' and 'Sondek' are the main words for referring to cowpea. Six of them were black beans, three were pale yellow, two were red, two were red and black, one was green, and one was yellowish green. Cambodian people in this region usually eat cowpea as a sweet with boiled beans. A soybean accession was called 'Sandek Maw.' People eat soybean as a sweet.

A winged bean accession and a sword bean accession were called 'Poh Peay' and 'Popeay Baraing,' respectively. Winged bean was used for soup.

5) Okra (*Hibiscus esculentus*)

Okra accessions are called 'Pot Baraing' in the collection area. Okra is used for soup or boiled.

6) Sacha inchi (*Plukenetia volubilis*)

Sacha inchi accessions are called 'Sandek Pkay.' Their mature seeds are used for fries, and leaves and seeds are used for tea, respectively.

7) Bunching onion (*Allium fistulosum*)

A bunching onion accession is called 'Ktam Sleuk' and is used for fries.

8) Lettuce (*Lactuca sativa*)

A lettuce accession is called 'Salad' and is used as salad.

9) Eryngium (*Eryngium foetidum*)

Eryngium (foetid) is a herb. This is called 'Chi Rona' in the collection area, and is used for soup or is eaten raw.

(3) Local plant genetic resources in northwestern Cambodia

In northwestern Cambodia, some old villages were lost because of a civil war. It is suggested that the local plant genetic resources were also lost with those villages. Thus, the plant genetic resources might have been mixed up with the ones brought by the people relocated from other area of Cambodia during the war. Additionally, it is suggested that Khmer people in this area had not used vegetable genetic resources before. However, people in the cities, including Siem Reap have planted a variety of vegetables upon request from tourists. Considering these circumstances, careful collection of landraces is required in the region.

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カンボジアにおける植物遺伝資源の探索・収集, 2016年12月

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和文摘要

本研究は、農林水産省委託事業「海外植物遺伝資源の収集・提供強化」(PGRAsia プロジェクト)の研究の一環として、カンボジアにおける海外植物遺伝資源の探索・収集に関して2016年12月に行われた。本探索では、カンボジア北西部の村を対象に、雑穀類および野菜遺伝資源の探索・収集および情報収集を行った。その結果、イネ科19点、ウリ科59点、ナス科26点、アブラナ科13点、マメ科18点、その他11点の合計146点の遺伝資源を収集した。収集した遺伝資源は、カンボジア農業開発研究所および農研機構遺伝資源センターで特性評価を行う予定である。

Table 3. Passport data of collected materials

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Village)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
1	2016-12-C1	258991	Dec 6	<i>Zea mays</i> L	maize	Seed	Pot Domnearb	Landrace	Battambang, Kampong Seyma	Farmland	N13-03-30 8	E103-11-43 2	11	Plain level - Level - None - Clay - Moderate	Oun Rahy (Khmer) Plant hight 2m, Cob length 12cm	1/865
2	2016-12-C2	258992	Dec 7	<i>Zea mays</i> L	maize	Seed	Pot	Landrace	Battambang, Toul Ta Ek Market	Farmstore	N13-06-16 4	E103-11-33 6	17			2/923, 1044
3	2016-12-C3	258993	Dec 7	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Pot Baraing	Landrace	Battambang, Boribo	Farmland	N12-54-31 9	E102-55-05 1	88	Plain level - Level - Low - Clay - Poor	Yim Hoeun (Khmer) Plant hight 2 5m, Panicle length 29cm	3/947
4	2016-12-C4	258994	Dec 7	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Pot Baraing	Landrace	Battambang, Boribo	Farmland	N12-54-31 9	E102-55-05 1	88	Plain level - Level - Low - Clay - Poor	Yim Hoeun (Khmer) Plant hight 2 5m, Panicle length 30cm	4/950
5	2016-12-C5	258995	Dec 7	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Pot Baraing	Landrace	Battambang, Boribo	Farmland	N12-54-31 9	E102-55-05 1	88	Plain level - Level - Low - Clay - Poor	Yim Hoeun (Khmer) Plant hight 2 5m, Panicle length 37cm	5/951
6	2016-12-C6	258996	Dec 7	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Pot Baraing	Landrace	Battambang, Boribo	Farmland	N12-54-31 9	E102-55-05 1	88	Plain level - Level - Low - Clay - Poor	Yim Hoeun (Khmer) Plant hight 2 5m	6/952
7	2016-12-C7	258997	Dec 7	<i>Erianthus procerus</i> (Roxb) Raizada	erianthus	Vegetative and Seed	Treang	Wild	Battambang, Cher Neng	Wild	N12-50-58 2	E102-47-17 3	81	Plain level - Slope - Low - Clay - Good	Plant hight 4 5m, Panicle length 81cm	7/962
8	2016-12-C8	258998	Dec 8	<i>Erianthus procerus</i> (Roxb) Raizada	erianthus	Vegetative and Seed	Treang	Wild	Pailin, Bos Sroum	Wild	N12-53-57 5	E102-35-25 9	149	Hilly - Slope - Low - Clay - Moderate	Plant hight 5 8m, Panicle length 70cm	8/1082
9	2016-12-C9	258999	Dec 8	<i>Zea mays</i> L	maize	Seed	Pot Domnearb	Landrace	Pailin, Bos Sroum	Farmland	N12-55-01 0	E102-35-32 8	124	Hilly - Slope - None - Clay - Moderate	Plant hight 1 5m, Cob length 18cm	9/1094
10	2016-12-C10	259000	Dec 8	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed		Weedy	Pailin, Bos Sroum	Farmland	N12-57-01 0	E102-35-21 5	108	Hilly - Level - None - Clay - Moderate	Plant hight 2 0m, Panicle length 30cm	10/1101
11	2016-12-C11	259001	Dec 8	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed		Weedy	Pailin, Komurie	Farmland	N13-02-23 0	E102-31-22 4	88	Plain level - Level - No data - Clay - Moderate	Plant hight 2 0m, Panicle length 32cm	11/1113
12	2016-12-C12	259002	Dec 10	<i>Zea mays</i> L	maize	Seed	Pot	Landrace	Otdar Meanchey, Somlong	Farmland	N14-15-19 1	E103-16-14 6	66	Plain level - Level - None - Clay - Poor	Plant hight 1 7m, Cob length 9cm	12/1197
13	2016-12-C13	259003	Dec 10	<i>Gossypium</i> spp	cotton	Seed	Kabas	Landrace	Otdar Meanchey, Preal	Farmland	N14-10-39 5	E103-24-23 2	36	Plain level - Level - None - Clay - Poor	Lin Hes (Khmer) Plant hight 1 5m	13/1249
14	2016-12-C14	259004	Dec 11	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Kantream	Landrace	Siem Reap, Koh Chrum Thney	Farmland	N13-34-31 8	E103-57-08 6	43	Plain level - Level - None - Loam - Moderate	Van Kean (Khmer) Plant hight 3m, Panicle length 30cm	14/1305, 1306
15	2016-12-C15	259005	Dec 11	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Kantream	Landrace	Siem Reap, Sre Noy	Farmland	N13-47-48 1	E104-01-50 1	60	Plain level - Level - None - Loam - Moderate	Ngin Tong (Khmer) Plant hight 2 8m, Panicle length 27cm	15/1329
16	2016-12-C16	259006	Dec 12	<i>Erianthus procerus</i> (Roxb) Raizada	erianthus	Vegetative and Seed	Treang	Wild	Otdar Meanchey	Wild	N14-09-47 9	E104-21-05 1	107	Plain level - Level - Low - Loam - Moderate	Plant hight 4m, Panicle length 62cm	16/1371
17	2016-12-C17	259007	Dec 13	<i>Sesamum indicum</i> L	sesame	Seed	La-ngor Kadek	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51	Plain level - Level - No data - Loam - Moderate	Khek Kheang (Kuy) Plant hight 1 2m, Seed pod 4cm, φ2cm	17/1387
18	2016-12-C18	259008	Dec 13	<i>Coix lacryma-jobi</i> L var <i>lacryma-jobi</i>	job's tears	Seed	Skvy	Landrace	Otdar Meanchey, Apivath		N14-14-41 3	E104-04-33 2	48	Plain level - Level - Low - Loam - Moderate	Chhun Chantrea (Khmer) Plant hight 2m	18/1417
19	2016-12-C19	259009	Dec 13	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Spor	Landrace	Siem Reap, Sre Noy	Farmland	N13-48-08 7	E104-01-15 3	64	Plain level - Level - None - Loam - Moderate	Chhem Chep (Khmer) Plant hight 3m, Panicle length 30cm	19/1435
20	2016-12-C20	259010	Dec 14	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Kantream	Landrace	Siem Reap, Kamprom	Farmland	N13-37-53 5	E104-00-05 0	57	Plain level - Level - No data - Loam - Poor	Chea Khan (Khmer) Plant hight 1 6m, Panicle length 18cm	20/1485
21	2016-12-C21	259011	Dec 14	<i>Sorghum bicolor</i> (L.) Moench ssp <i>bicolor</i>	sorghum	Seed	Sapov	Landrace	Siem Reap, Kamprom						Chea Khan (Khmer)	21/
22	2016-12-C101	259012	Dec 5	<i>Benincasa hispida</i> Cogn	wax gourd	Seed	Tro Laeh	Landrace	Kandal, Klaing Tbaeng	Farmstore	N11-48-07 9	E104-48-38 3	6	Plain level - Level - None - Nodata - No data	Jae Tea (Cham) used for soup	22/7523
23	2016-12-C102	259013	Dec 5	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Kandal, Klaing Tbaeng	Farmstore	N11-48-07 9	E104-48-38 3	6	Plain level - Level - None - Nodata - No data	Jae Tea (Cham) used for dessert	23/7524

Table 3. (Continued).

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Village)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
24	2016-12-C103	259014	Dec 5	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	Lapov	Landrace	Kandal, Klaing Tbaeng	Farmstore	N11-48-07 9	E104-48-38 3	6	Plain level - Level - No data - No data - No data	Jae Tea (Cham) used for soup	24/7529
25	2016-12-C104	259015	Dec 5	<i>Hibiscus esculentus</i> L	okra	Seed	Pot Baraing	Landrace	Kandal, Klaing Tbaeng	Backyard	N11-48-07 9	E104-48-38 3	6	Plain level - Level - Low - Clay - Poor	Jae Tea (Cham) used by boiling	25/7530
26	2016-12-C105	259016	Dec 5	<i>Solanum melongena</i> L	eggplant	Seed	Trop Moal	Landrace	Kandal, Klaing Tbaeng	Backyard	N11-48-07 9	E104-48-38 3	6	Plain level - Level - Low - Clay - Moderate	Jae Tea (Cham) used fresh or for soup	26/7535
27	2016-12-C106	259017	Dec 5	<i>Solanum melongena</i> L	eggplant	0	Trop Sruey	Landrace	Kandal, Klaing Tbaeng	Backyard	N11-48-07 9	E104-48-38 3	6	Plain level - Level - Low - Clay - Moderate	Jae Tea (Cham) used fresh or for soup	27/7536
28	2016-12-C107	259018	Dec 5	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Sondek Ong Koy		Kampong Chhnang	Village market	N12-15-16 2	E104-40-09 1	22		K-Chhnang Market used for sweets	28/7563
29	2016-12-C108	259019	Dec 5	<i>Vigna unguiculata</i> (L.) Walp.	cowpea	Seed	Sondek Krohorm		Kampong Chhnang	Village market	N12-15-16 2	E104-40-09 1	22		K-Chhnang Market used for sweets	29/7564
30	2016-12-C109	259020	Dec 5	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Dai Neang		Kampong Chhnang	Village market	N12-15-16 2	E104-40-09 1	22		K-Chhnang Market used for condiment	30/7566
31	2016-12-C110	259021	Dec 5	<i>Benincasa hispida</i> Cogn	wax gourd	Seed	Trolaeh Treung	Landrace	Kampong Chhnang	Village market	N12-15-16 2	E104-40-09 1	22		K-Chhnang Market used for soup, long and big fruits	31/7572
32	2016-12-C111	259022	Dec 5	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Kluang	Landrace	Kampong Chhnang	Village market	N12-15-16 2	E104-40-09 1	22		K-Chhnang Market / sticky fruit	32/7570
33	2016-12-C112	259023	Dec 5	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Songdek Kmiao	Landrace	Pursat	Village market	N12-32-20 0	E103-55-13 4	21		Market used for sweets	33/7565
34	2016-12-C113	259024	Dec 5	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Klauk	Landrace	Pursat	Village market	N12-32-20 0	E103-55-13 4	21		Market used for soup	34/7550
35	2016-12-C114	259025	Dec 5	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Krong	Landrace	Pursat	Village market	N12-32-20 0	E103-55-13 4	21		Market / big fruits used for soup	35/7553
36	2016-12-C115	259026	Dec 5	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Ach Sath	Landrace	Pursat	Village market	N12-32-20 0	E103-55-13 4	21		Market used for condiment	36/7567
37	2016-12-C116	259027	Dec 5	<i>Capsicum annuum</i> L.	chili pepper	Seed	Mates Dai Neang	Landrace	Pursat	Village market	N12-32-20 0	E103-55-13 4	21		Market used for condiment	37/7568
38	2016-12-C117	259028	Dec 6	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Dai Neang Thoch	Landrace	Battambang, Kampong Seyma	Farmland	N13-03-30 8	E103-11-43 2	11	Plain level - Level - None - Clay - Moderate	Oun Rany (Khmer) used for condiment	37/75778
39	2016-12-C118	259029	Dec 6	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Dai Neang Taem	Landrace	Battambang, Kampong Seyma	Farmland	N13-03-30 8	E103-11-43 2	11	Plain level - Level - None - Clay - Moderate	Oun Rany (Khmer) / very spicy used for condiment	39/7578
40	2016-12-C119	259030	Dec 6	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Ach Sath	Landrace	Battambang, Kampong Seyma	Farmland	N13-03-30 8	E103-11-43 2	11	Plain level - Level - None - Clay - Moderate	Oun Rany (Khmer) used for condiment	40/7580
41	2016-12-C120	259031	Dec 6	<i>Solanum melongena</i> L	eggplant	Seed	Trop Sruey	Landrace	Battambang, Kampong Seyma	Farmland	N13-03-30 8	E103-11-43 2	11	Plain level - Level - None - Clay - Moderate	Oun Rany (Khmer) used for soup	41/7581
42	2016-12-C121	259032	Dec 6	<i>Luffa cylindrica</i> M Roem	luffa	Seed	Nonong Proher	Landrace	Battambang, Khsaeh Poy	Backyard	N13-02-53 4	E103-11-32 7	27	Plain level - Level - None - Clay - Poor	In Penh (Khmer) used for soup	42/7586
43	2016-12-C122	259033	Dec 7	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Pime	Landrace	Battambang, Boung Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market / sweet used for soup	43/7591
44	2016-12-C123	259034	Dec 7	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov	Landrace	Battambang, Boung Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market used for soup	44/7593
45	2016-12-C124	259035	Dec 7	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Krong	Landrace	Battambang, Boung Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market/ rough skin used for soup	45/7594
46	2016-12-C125	259036	Dec 7	<i>Citrullus lanatus</i> (Thunb) Matsum et Nakai	water melon	Seed	Ov Lek	Landrace	Battambang, Boung Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market used for dessert	46/7600

Table 3. (Continued).

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Village)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
47	2016-12-C126	259037	Dec 7	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Battambang, Boun Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market used for dessert	47/7602
48	2016-12-C127	259038	Dec 7	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Battambang, Boun Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market used for dessert	48/7647
49	2016-12-C128	259039	Dec 7	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Battambang, Boun Chouk	Village market	N13-06-18 9	E103-11-44 1	16		Boung Chouk Market used for dessert	49/7650
50	2016-12-C129	259040	Dec 7	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Sandek Maw	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market used for sweets At market, sold boiled young fruits	50/7652
51	2016-12-C130	259041	Dec 7	<i>Glycine max</i> Merrill	soybean	Seed	Sandek Siang	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market used for sweets Sow July → harvest October	51/7654
52	2016-12-C131	259042	Dec 7	<i>Luffa cylindrica</i> M Roem	luffa	Seed	Nou Nong Proher	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market good smell	52/7655
53	2016-12-C132	259043	Dec 7	<i>Citrullus lanatus</i> (Thunb.) Matsum et Nakai	water melon	Seed	Ov Lek	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market used for soup (young fruits)	53/7656
54	2016-12-C133	259044	Dec 7	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov King Kouk	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market / big fruits used for soup	54/7657
55	2016-12-C134	259045	Dec 7	<i>Benincasa hispida</i> Cogn	wax gourd	Seed	Tro Laeh Srov	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market / small fruits used for soup	55/7658
56	2016-12-C135	259046	Dec 7	<i>Cucumis sativus</i> L	cucumber	Seed	Tro Soh Phrow	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market / small (short) fruits used for soup	56/7659
57	2016-12-C136	259047	Dec 7	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market / big fruits used for dessert	57/8039
58	2016-12-C137	259048	Dec 7	<i>Brassica rapa</i> L Chinensis Group	pak choi	Seed	Spai Chai Sem	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market	58/8107
59	2016-12-C138	259049	Dec 7	<i>Brassica rapa</i> L Pekinensis Group	chinese cabbage	Seed	Spai Kro Gnagn	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market used for soup, fry, fresh	59/8108
60	2016-12-C139	259050	Dec 7	<i>Brassica rapa</i> L Chinensis Group	pak choi	Seed	Spai Tour	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market used for fry	60/8109
61	2016-12-C140	259051	Dec 7	<i>Brassica juncea</i> (L.) Czern Cernua Group	<i>Brassica juncea</i>	Seed	Spai Kmao	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market used for fry	61/8110
62	2016-12-C141	259052	Dec 7	<i>Brassica oleracea</i> L Alboglabra Group	ponted leaf kale	Seed	Kat Na	Landrace	Battambang, Rong Lakhon	Village market	N13-06-16 4	E103-11-33 6	17		Rong Lakhon Market	62/8111
63	2016-12-C142	259053	Dec 7	<i>Hibiscus esculentus</i> L	okra	Seed	Pot Baraing	Weedy	Battambang, Ta Krouk	Wild	N12-50-49 4	E102-46-00 7	97	Plain level - Level - None - Clay - Poor	roadside used for soup	63/7666
64	2016-12-C143	259054	Dec 7	<i>Capsicum annum</i> L	chili pepper	Seed	Mates Ach Sath	Landrace	Pailin, Veal Vong	Farmland	N12-51-14 1	E102-35-15 1	189	Plain level - Level - None - Clay - Good	Srey Neang (Khmer) / vigorous used for condiment	64/7667
65	2016-12-C144	259055	Dec 7	<i>Psophocarpus tetragonolobus</i> (L.) DC	winged bean	Seed	Poh Peay	Landrace	Pailin, Veal Vong	Farmland	N12-51-14 1	E102-35-15 1	189	Plain level - Level - None - Clay - Good	Srey Neang (Khmer) / vigorous used for soup, boiled	65/7668
66	2016-12-C145	259056	Dec 7	<i>Solanum melongena</i> L	eggplant	Seed	Trop Sruey	Landrace	Pailin, Veal Vong	Farmland	N12-51-14 1	E102-35-15 1	189	Plain level - Level - None - Clay - Good	Srey Neang (Khmer) / vigorous used for soup, fresh	66/7669
67	2016-12-C146	259057	Dec 7	<i>Hibiscus esculentus</i> L	okra	Seed	Pot Baraing	Landrace	Pailin, Veal Vong	Farmland	N12-51-14 1	E102-35-15 1	189	Plain level - Level - None - Clay - Good	Srey Neang (Khmer) / vigorous used for soup	67/7670

Table 3. (Continued).

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Village)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
68	2016-12-C147	259058	Dec 8	<i>Lycopersicon esculentum</i> Mill	tomato	Seed	Peng Pos	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market used for soup	68/7709
69	2016-12-C148	259059	Dec 8	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates thom	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market / dry material used for condiment	69/7977
70	2016-12-C149	259060	Dec 8	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov King Kouk	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market / sweet, rough skin, big used for soup	70/7682
71	2016-12-C150	259061	Dec 8	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Trou	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market / orange pumpkin used for soup	71/7685
72	2016-12-C151	259062	Dec 8	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Trou	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market / dark green skin used for soup	72/7687
73	2016-12-C152	259063	Dec 8	<i>Brassica rapa</i> L Oleifera Group	Brassica rapa	Seed	Spai Chang Kors	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market used for boil, fry	73/8112
74	2016-12-C153	259064	Dec 8	<i>Brassica juncea</i> (L.) Czern Cernua Group	leaf mustard	Seed	Spai Kdorob	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market used for fry	74/8113
75	2016-12-C154	259065	Dec 8	<i>Lactuca sativa</i> L	curly green lettuce	Seed	Salad	Landrace	Pailin, Pailin	Village market	N12-51-36 7	E102-36-11 7	167		Pailin Market used for salad (fresh)	75/8114
76	2016-12-C155	259066	Dec 8	<i>Hibiscus esculentus</i> L	okra	Seed	Pot Baraing	Landrace	Pailin, Bob Sorm	Backyard	N12-55-01 0	E102-35-32 8	124	Plain level - Level - None - Clay - No data		76/7983
77	2016-12-C156	259067	Dec 8	<i>Luffa cylindrica</i> M Roem	luffa	Seed	No Nonng	Landrace	Pailin, Bob Sorm	Farmstore	N12-55-01 0	E102-35-32 8	124	No data - No data - No data - Clay - Poor	used for soup	77/7691
78	2016-12-C157	259068	Dec 8	<i>Plukenetia volubilis</i> L	star shaped sacha inchi	Seed	Sandek Pkay	Landrace	Pailin, Bob Sorm	Backyard	N12-55-01 0	E102-35-32 8	124	Plain level - Level - None - Clay - No data	used for boil, fry fry matured seed	78/7693
79	2016-12-C158	259069	Dec 8	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Trou	Landrace	Pailin, Bob Sorm		N12-55-01 0	E102-35-32 8	124		small, sweet	79/8069
80	2016-12-C159	259070	Dec 8	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Pailin, Bob Sorm	Backyard	N12-55-01 0	E102-35-32 8	124	No data - No data - No data - Clay - No data	big fruits	80/8070
81	2016-12-C160	259071	Dec 8	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Pailin, Tro Nob	Farmland	N12-59-35 7	E102-37-41 2	72		Yay Chhourm (Khmer) / long shape used for dessert	81/7696
82	2016-12-C161	259072	Dec 8	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Khmer	Landrace	Pailin, Tro Nob	Farmland	N12-59-35 7	E102-37-41 2	72		Yay Chhourm (Khmer) / small used for soup	82/7697
83	2016-12-C162	259073	Dec 8	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Ach Sath	Landrace	Pailin, Tro Nob	Farmland	N12-59-35 7	E102-37-41 2	72	Plain level - Level - None - Clay - Good	Yay Chhourm (Khmer) / small used for condiment	83/7698
84	2016-12-C163	259074	Dec 8	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Dai Neang	Landrace	Pailin, Tro Nob	Farmland	N12-59-35 7	E102-37-41 2	72	Plain level - Level - None - Clay - No data	Yay Chhourm (Khmer) used for condiment	84/7699
85	2016-12-C164	259075	Dec 8	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Sorndek Korng	Landrace	Pailin, Tro Nob	Farmland	N12-59-35 7	E102-37-41 2	72		Yay Chhourm (Khmer) used for sweets	85/7700
86	2016-12-C165	259076	Dec 9	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for dessert	86/8115
87	2016-12-C166	259077	Dec 9	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for dessert	87/8116
88	2016-12-C167	259078	Dec 9	<i>Cucumis sativus</i> L	cucumber	Seed	Tro Soh Phrow	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fresh	88/8117
89	2016-12-C168	259079	Dec 9	<i>Cucumis sativus</i> L	cucumber	Seed	Tro Soh Phrow	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fresh	89/8118
90	2016-12-C169	259080	Dec 9	<i>Brassica juncea</i> (L.) Czern Cernua Group	leaf mustard	Seed	Spai Chang Kers	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fry	90/8119

Table 3. (Continued).

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Village)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
91	2016-12-C170	259081	Dec 9	<i>Brassica oleracea</i> L Alboglabra Group	pointed leaf kale	Seed	Kat Na		Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fry	91/8120
92	2016-12-C171	259082	Dec 9	<i>Eryngium foetidum</i> L	foetid eryngium	Seed	Chi Rona	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fresh, soup	92/81219
93	2016-12-C172	259083	Dec 9	<i>Brassica rapa</i> L Oleifera Group	<i>Brassica rapa</i>	Seed	Spai Chang Kors	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for boil, fry	93/8122
94	2016-12-C173	259084	Dec 9	<i>Brassica rapa</i> L Pekinensis Group	chinese cabbage	Seed	Spai Kro Gnagn	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for soup, fry, fresh	94/8123
95	2016-12-C174	259085	Dec 9	<i>Brassica juncea</i> (L.) Czern Cernua Group	leaf mustard	Seed	Spai Kdorb	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fry	95/8124
96	2016-12-C175	259086	Dec 9	<i>Allium fistulosum</i> L	bunching onion	Seed	Ktam Sleuk	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for fry	96/8125
97	2016-12-C176	259087	Dec 9	<i>Brassica oleracea</i> L Botrytis Group	couliflower	Seed	Kat Na Phka	Landrace	Banteay Meanchey, Poy Peat	Village market	N13-39-24 9	E102-33-49 1	45		Poy Peat Market used for boil, fry	97/8126
98	2016-12-C177	259088	Dec 9	<i>Plukenetia volubilis</i> L.	star shaped sacha inchi	Seed	Sandek Pkay	Landrace	Banteay Meanchey, Ondoung Thor	Farmland	N13-38 34 7	E102-38-10 9	33	Plain level - Level - None - Loam - Poor	Ya Ry (Khmer) used for boil, consume as tea (leaf, seed)	98/7726
99	2016-12-C178	259089	Dec 9	<i>Luffa cylindrica</i> M Roem	luffa	Seed	No Nonng	Landrace	Banteay Meanchey, Snay Don Kout	Farmland	N13-34-46 8	E103-02-20 7	1	Flood plain - Level - None - Clay - Good	Kao Kour (Khmer) used for soup	99/7749
100	2016-12-C179	259090	Dec 9	<i>Benincasa hispida</i> Cogn	wax gourd	Seed	Tro Laeh	Landrace	Banteay Meanchey, Snay Don Kout	Farmland	N13-34-46 8	E103-02-20 7	1	No data - No data - No data - Clay - Good	Kao Kour (Khmer) used for soup	100/7745
101	2016-12-C180	259091	Dec 9	<i>Lagenaria leucantha</i> Rusby var. <i>gourda</i> Makino	bottle gourd	Seed	Klov	Landrace	Banteay Meanchey, Snay Don Kout	Farmland	N13-34-46 8	E103-02-20 7	1		Kao Kour (Khmer) used for soup, fry	101/7746
102	2016-12-C181	259092	Dec 10	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Otdar Meanchey, Thnol Dack	Farmland	N14-14-54 3	E103-16-37 8	58	No data - No data - No data - Clay - No data	To Thy (Khmer) used for dessert	102/7762
103	2016-12-C182	259093	Dec 10	<i>Citrullus lanatus</i> (Thunb) Matsum et Nakai	water melon	Seed	Ov Lek	Landrace	Otdar Meanchey, Thnol Dack	Farmland	N14-14-54 3	E103-16-37 8	58		To Thy (Khmer) / small dark green rind used for fresh	103/7763
104	2016-12-C183	259094	Dec 10	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov	Landrace	Otdar Meanchey, Thnol Dack	Farmland	N14-14-54 3	E103-16-37 8	58		To Thy (Khmer) / rough skin used for soup, fry, sweets	104/7764
105	2016-12-C184	259095	Dec 10	<i>Lycopersicon esculentum</i> Mill	tomato	Seed	Peng Pos	Landrace	Otdar Meanchey, Prey Veng	Farmland	N14-15-19 1	E103-16-14 6	66	Plain level - Level - None - Clay - Good	Kim Heurb (Khmer) used for soup	105/7933
106	2016-12-C185	259096	Dec 10	<i>Solanum melongena</i> L	eggplant	Seed	Trop Veng	Landrace	Otdar Meanchey, Prey Veng	Farmland	N14-15-19 1	E103-16-14 6	66	No data - No data - No data - Clay - Good	Kim Heurb (Khmer) used for soup	106/8038
107	2016-12-C186	259097	Dec 10	<i>Cucumis melo</i> L.	melon	Seed	Tra Sork Srov	Landrace	Otdar Meanchey, Prey Veng	Farmland	N14-15-19 1	E103-16-14 6	66		Kim Heurb (Khmer) used for dessert, fresh (young fruits) / mix two kind of melon seeds	107/8104
108	2016-12-C187	259098	Dec 10	<i>Citrullus lanatus</i> (Thunb) Matsum et Nakai	water melon	Seed	Ov Lek	Landrace	Otdar Meanchey, Prey Veng	Farmland	N14-15-19 1	E103-16-14 6	66		Kim Heurb (Khmer) used for fresh	108/8105
109	2016-12-C188	259099	Dec 10	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Otdar Meanchey	Farmland	N14-10-39 5	E103-24-23 2	36		used for dessert / striped	109/7801
110	2016-12-C189	259100	Dec 10	<i>Cucurbita moschata</i> Duch.	pumpkin	Seed	La Pov	Landrace	Otdar Meanchey	Farmland	N14-10-39 5	E103-24-23 2	36		used for soup / small (1kg), yellow-orange skin	110/7802

Table 3. (Continued).

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Village)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
111	2016-12-C190	259101	Dec 10	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Sondek Ong Koy	Landrace	Otdar Meanchey	Farmland	N14-10-39 5	E103-24-23 2	36	Plain level - Level - None - Clay - Moderate	used for sweets	111/7803
112	2016-12-C191	259102	Dec 10	<i>Capsicum annuum</i> L	chili pepper	Seed	Mates Sor	Landrace	Otdar Meanchey	Farmland	N14-10-39 5	E103-24-23 2	36	Plain level - Level - None - Clay - Moderate	used for condiment / small, white, very spicy	112/7805
113	2016-12-C192	259103	Dec 10	<i>Solanum melongena</i> L	eggplant	Seed	Trop Kha	Landrace	Otdar Meanchey	Farmland	N14-10-39 5	E103-24-23 2	36	Plain level - Level - None - No data - Moderate	used for soup, boil / small	113/7806
114	2016-12-C193	259104	Dec 11	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov	Landrace	Siem Reap, Knar	Farmland	N13-32-06 5	E103-56-38 2	42		Chanthy (Khmer) / medium (1 5kg), sweet used for sweets	114/7818
115	2016-12-C194	259105	Dec 11	<i>Solanum melongena</i> L	eggplant	Seed	Trop Sruy	Landrace	Siem Reap, Knar	Farmland	N13-32-06 5	E103-56-38 2	42	Flood plain - Level - None - Loam - Moderate	Chanthy (Khmer) / spineless used for soup, boil	115/7819
116	2016-12-C195	259106	Dec 11	<i>Trichosanthes cucumeroides</i> L	wild cucurbit	Seed	Tro Sork Kaek	Weedy	Siem Reap, Knar	Farmland	N13-32-06 5	E103-56-38 2	42	Flood plain - Level - None - Loam - No data	Chanthy (Khmer) no use (toxic)	116/7820
117	2016-12-C196	259107	Dec 11	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Sandek Taon	Landrace	Siem Reap, Knar	Farmland	N13-32-06 5	E103-56-38 2	42	Plain level - Level - None - Loam - Moderate	Chanthy (Khmer) used for boil, sweets	117/7821
118	2016-12-C197	259108	Dec 11	<i>Vigna unguiculata</i> (L.) Walp	cowpea	Seed	Sandek Chhou	Landrace	Siem Reap, Knar	Farmland	N13-32-06 5	E103-56-38 2	42	Plain level - Level - No data - Loam - Moderate	Chanthy (Khmer) used for boil, sweets	118/7823
119	2016-12-C198	259109	Dec 11	<i>Luffa cylindrica</i> M Roem	luffa	Seed	Nor Nong Sral	Landrace	Siem Reap, Knar	Farmland	N13-32-06 5	E103-56-38 2	42	Plain level - Level - None - Loam - Moderate	Chanthy (Khmer) used for boil, fry	119/7824
120	2016-12-C199	259110	Dec 11	<i>Solanum melongena</i> L	eggplant	Seed	Trop Sruy	Landrace	Siem Reap, Koh Chrum Thney	Backyard	N13-34-40 2	E103-52-51 3	41	Plain level - Level - None - Loam - No data	Ven Kean (Khmer) used for soup, boil	120/7827
121	2016-12-C200	259111	Dec 11	<i>Cucurbita moschata</i> Duch.	pumpkin	Seed	La Pov King	Landrace	Siem Reap, Koh Chrum Thney	Backyard	N13-34-40 2	E103-52-51 3	41		Ven Kean (Khmer) used for soup, sweets	121/7852
122	2016-12-C201	259112	Dec 11	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Siem Reap, Koh Chrum Thney		N13-34-40 2	E103-52-51 3	41		Ven Kean (Khmer) / striped used for dessert	122/7853
123	2016-12-C202	259113	Dec 11	<i>Citrullus lanatus</i> (Thunb.) Matsum et Nakai	water melon	Seed	Ov Lek	Landrace	Siem Reap, Koh Chrum Thney	Farmland	N13-34-40 2	E103-52-51 3	41		Ven Kean (Khmer) / narrow striped skin used for fresh, edible seed	123/7854
124	2016-12-C203	259114	Dec 11	<i>Solanum melongena</i> L	eggplant	Seed	Trop Roluy	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63	Flood plain - Level - None - Loam - Moderate	Ngin Thon (Khmer) / fruits with hair, sour used for fresh	124/7862
125	2016-12-C204	259115	Dec 11	<i>Solanum melongena</i> L	eggplant	Seed	Trop Kha	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63	Flood plain - Level - None - Loam - Moderate	Ngin Thon (Khmer) / bitter taste, small used for soup	125/7863
126	2016-12-C205	259116	Dec 11	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63		Ngin Thon (Khmer) / striped used for sweets	126/7864
127	2016-12-C206	259117	Dec 11	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov King	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63		Ngin Thon (Khmer) / big (3-4kg), purple skin used for soup, sweets	127/7865
128	2016-12-C207	259118	Dec 11	<i>Lagenaria leucantha</i> Rusby var <i>gourda</i> Makino	bottle gourd	Seed	Klov Veng	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63		Ngin Thon (Khmer) / long shape (60cm) used for soup	128/7866
129	2016-12-C208	259119	Dec 11	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Trou	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63		Ngin Thon (Khmer) / elongated shape Thicker fruit / used for soup, sweets	129/7867
130	2016-12-C209	259120	Dec 11	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Dong	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63		Ngin Thon (Khmer) / coconut shape (3kg) used for soup, sweets	130/7868
131	2016-12-C210	259121	Dec 11	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov Roy	Landrace	Siem Reap, Sre Noy	Backyard	N13-47-40 2	E104-01-38 0	63		Ngin Thon (Khmer) / prolific, small (1 2kg) used for soup, sweets	131/7869

Table 3. (Continued).

No	Coll No	JP No	Coll Date	Species name	English common name	Type of Sample	Local name	Status	Locality (Province, Villege)	Source	Latitude	Longitude	Altitude (m)	Condition*	Remarks	Photo No / image
132	2016-12-C211	259122	Dec 13	<i>Cucumis melo</i> L	melon	Seed	Tra Sork Srov	Landrace	Otdar Meanchey, Sray Chek	Backyard	N14-14-56 1	E104-07-43 6	51	No data - No data - No data - Loam - No data	Khek Kheang (Khmer) / 2 kinds mixed used for pickles	132/7899
133	2016-12-C212	259123	Dec 13	<i>Cucurbita moschata</i> Duch	pumpkin	Seed	La Pov, La Pov King Kua (mix)	Landrace	Otdar Meanchey, Sray Chek	Farmland/ Farmstore	N14-14-56 1	E104-07-43 6	51	No data - No data - No data - Loam - Moderate	Khek Kheang (Khmer) / 2 kinds mixed used for sweets, soup, fry	133/7893
134	2016-12-C213	259124	Dec 13	<i>Citrullus lanatus</i> (Thunb) Matsum et Nakai	water melon	Seed	Ov Lek	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) / small (2kg), sweet, dark green skin / used for fresh	134/7900
135	2016-12-C214	259125	Dec 13	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek meas	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51	Plain level - Level - None - Loam - No data	Khek Kheang (Khmer) / short used for sweets (matured), boil (young)	135/7901
136	2016-12-C215	259126	Dec 13	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek buy	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) / short 15 0g / used for sweets, boil	136/7903
137	2016-12-C216	259127	Dec 13	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek meas	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) / short used for sweets, boil	137/7905
138	2016-12-C217	259128	Dec 13	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek meas	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) / short used for sweets, boil	138/7906
139	2016-12-C218	259129	Dec 13	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek meas	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) / short used for sweets, boil	139/7907
140	2016-12-C219	259130	Dec 13	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek meas	Landrace	Otdar Meanchey, Sray Chek	Farmland	N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) / short used for sweets, boil	140/8078
141	2016-12-C220	259131	Dec 13	<i>Luffa cylindrica</i> M Roem	luffa	Seed	Nonong Kodak	Landrace	Otdar Meanchey, Sray Chek		N14-14-56 1	E104-07-43 6	51		Khek Kheang (Khmer) used for soup /adapt cool season	141/7910
142	2016-12-C221	259132	Dec 14	<i>Solanum melongena</i> L	eggplant	Seed	Trop Roluy	Landrace	Siem Reap, Wat	Backyard	N13-48-03 0	E104-01-27 0	53	Flood plain - Level - None - Clay - Moderate	(Khmer) used for fresh, boil	142/7917
143	2016-12-C222	259133	Dec 14	<i>Solanum melongena</i> L	eggplant	Seed	Trop Kha	Landrace	Siem Reap, Wat	Backyard	N13-48-03 0	E104-01-27 0	53	Flood plain - Level - None - Clay - Moderate	(Old lady) (Khmer)	143/7918
144	2016-12-C223	259134	Dec 14	<i>Vigna unguiculata</i> (L) Walp	cowpea	Seed	Sandek meas	Landrace	Siem Reap, Wat	Backyard	N13-48-03 0	E104-01-27 0	53	Plain level - Level - None - Clay - poor	(Old lady) (Khmer)	144/7919
145	2016-12-C224	259135	Dec 14	<i>Canavalia gladiata</i> (Jacq) DC	sword bean	Seed	Popeay Baraing	Landrace	Siem Reap, Wat	Backyard	N13-48-03 0	E104-01-27 0	53	Plain level - Level - None - Loam - Poor	(Old lady) (Khmer)	145/8036
146	2016-12-C225	259136	Dec 14	<i>Solanum melongena</i> L	eggplant	Seed	Trop Pong Lolok	Landrace	Siem Reap, Kam Prom	Backyard	N13-37-53 6	E104-00-05 1	45	Flood plain - Level - None - Loam/Clay - Moderate	Cheu Khan (Khmer) used for soup	146/7977

* Topography-Site-Stoniness-Soil texture-Drainage



Photograph 1 C1-maize



Photograph 2 C2-maize



Photograph 3 C3-sorghum



Photograph 4 C4-sorghum



Photograph 5 C5-sorghum



Photograph 6 C6-sorghum



Photograph 7 C7-erianthus



Photograph 8 C8-erianthus



Photograph 9 C9-maize



Photograph 10 C10-sorghum



Photograph 11 C11-sorghum



Photograph 12 C12-maize



Photograph 13 C13-cotton



Photograph 14 C14-sorghum



Photograph 15 C15-sorghum



Photograph 16 C16-erianthus



Photograph 17 C17-sesame



Photograph 18 C18-job's tears



Photograph 19 C19-sorghum



Photograph 20 C20-sorghum



Photograph 21 C21-sorghum



Photograph 22 C101-wax gourd



Photograph 23 C102-melon



Photograph 24 C103-pumpkin



Photograph 25 C104-okra



Photograph 26 C105-eggplant



Photograph 27 C106-eggplant



Photograph 28 C107-cowpea



Photograph 29 C108-cowpea



Photograph 30 C109-chili pepper



Photograph 31 C110-wax gourd



Photograph 32 C111-pumpkin



Photograph 33 C112-cowpea



Photograph 34 C113-pumpkin



Photograph 35 C114-pumpkin



Photograph 36 C115-chili pepper



Photograph 37 C116-chili pepper



Photograph 38 C117-chili pepper



Photograph 39 C118-chili pepper



Photograph 40 C119-chili pepper



Photograph 41 C120-eggplant



Photograph 42 C121-luffa



Photograph 43 C122-pumpkin



Photograph 44 C123-pumpkin



Photograph 45 C124-pumpkin



Photograph 46 C125-water melon



Photograph 47 C126-melon



Photograph 48 C127-melon



Photograph 49 C128-melon



Photograph 50 C129-cowpea



Photograph 51 C130-soybean



Photograph 52 C131-luffa



Photograph 53 C132-water melon



Photograph 54 C133-pumpkin



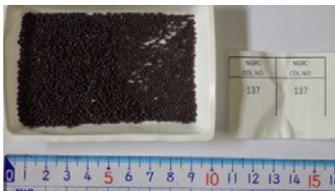
Photograph 55 C134-wax gourd



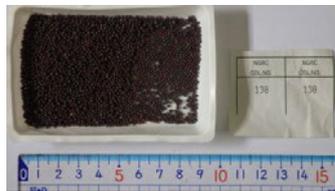
Photograph 56 C135-cucumber



Photograph 57 C136-melon



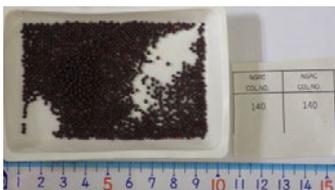
Photograph 58 C137-pak choi



Photograph 59 C138-Chinese cabbage



Photograph 60 C139-pak choi



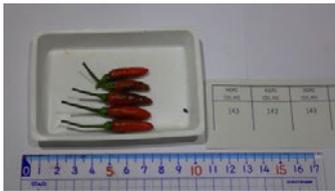
Photograph 61 C140-*B. juncea*



Photograph 62 C141-pointed leaf kale



Photograph 63 C142-okra



Photograph 64 C143-chili pepper



Photograph 65 C144-winged bean



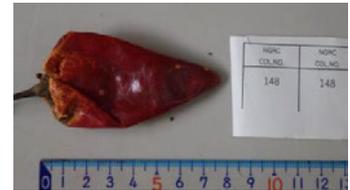
Photograph 66 C145-eggplant



Photograph 67 C146-okra



Photograph 68 C147-tomato



Photograph 69 C148-chili pepper



Photograph 70 C149-pumpkin



Photograph 71 C150-pumpkin



Photograph 72 C151-pumpkin



Photograph 73 C152-*B. rapa*



Photograph 74 C153-leaf mustard



Photograph 75 C154-lettuce



Photograph 76 C155-okra



Photograph 77 C156-luffa



Photograph 78 C157-sacha inchi



Photograph 79 C158-pumpkin



Photograph 80 C159-melon



Photograph 81 C160-melon



Photograph 82 C161-pumpkin



Photograph 83 C162-chili pepper



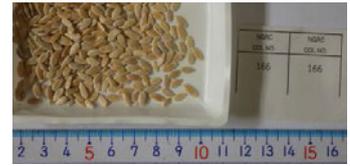
Photograph 84 C163-chili pepper



Photograph 85 C164-cowpea



Photograph 86 C165-melon



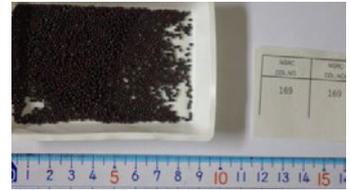
Photograph 87 C166-melon



Photograph 88 C167-cucumber



Photograph 89 C168-cucumber



Photograph 90 C169-leaf mustard



Photograph 91
C170- pointed leaf kale



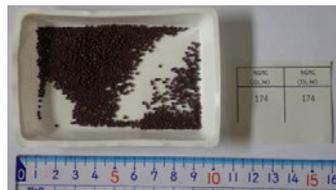
Photograph 92
C171-foetid eryngium



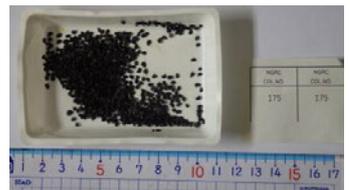
Photograph 93 C172-*B. rapa*



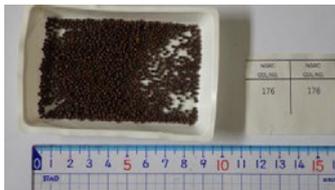
Photograph 94
C173-Chinese cabbage



Photograph 95 C174-leaf mustard



Photograph 96
C175-bunching onion



Photograph 97 C176-couiflower



Photograph 98 C177-sacha inchi



Photograph 99 C178-luffa



Photograph 100 C179-wax gourd



Photograph 101 C180-bottle gourd



Photograph 102 C181-melon



Photograph 103 C182-water melon



Photograph 104 C183-pumpkin



Photograph 105 C184-tomato



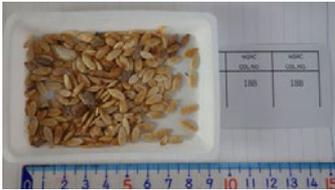
Photograph 106 C185-eggplant



Photograph 107 C186-melon



Photograph 108 C187-water melon



Photograph 109 C188-melon



Photograph 110 C189-pumpkin



Photograph 111 C190-cowpea



Photograph 112 C191-chili pepper



Photograph 113 C192-eggplant



Photograph 114 C193-pumpkin



Photograph 115 C194-eggplant



Photograph 116 C195-wild cucurbit



Photograph 117 C196-cowpea



Photograph 118 C197-cowpea



Photograph 119 C198-luffa



Photograph 120 C199-eggplant



Photograph 121 C200-pumpkin



Photograph 122 C201-melon



Photograph 123 C202-water melon



Photograph 124 C203-eggplant



Photograph 125 C204-eggplant



Photograph 126 C205-melon



Photograph 127 C206-pumpkin



Photograph 128 C207-bottle gourd



Photograph 129 C208-pumpkin



Photograph 130 C209-pumpkin



Photograph 131 C210-pumpkin



Photograph 132 C211-melon



Photograph 133 C212-pumpkin



Photograph 134 C213-water melon



Photograph 135 C214-cowpea



Photograph 136 C215-cowpea



Photograph 137 C216-cowpea



Photograph 138 C217-cowpea



Photograph 139 C218-cowpea



Photograph 140 C219-cowpea



Photograph 141 C220-luffa



Photograph 142 C221-eggplant



Photograph 143 C222-eggplant



Photograph 144 C223-cowpea



Photograph 145 C224-sword bean



Photograph 146 C225-eggplant