GLOBAL CROP CONSERVATION AND USE METRICS

SWEETPOTATO
(*Ipomoea* L.)

CROP TRUST

Cover photo: Michael Major for Crop Trust

Crop Trust
Platz der Vereinten Nationen 7
53113 Bonn, Germany

General Contact
+49 (0) 228 85427 118
info@croptrust.org

Suggested Citation
Khoury CK, Gora, S and Giovannini, P (2025) Global crop conservation and use metrics: Sweetpotato (*Ipomoea* L.). Bonn, Germany: Global Crop Diversity Trust.

Funding Source
The development of this document was funded by the German Federal Ministry of Agriculture, Food and Regional Identity (BMLEH) as part of the project *Mainstreaming Global Crop Conservation Strategies in Plant Treaty Processes* led by the Crop Trust.

Global crop conservation and use metrics

SWEETPOTATO
(*Ipomoea* L.)

With support from

CROP TRUST

International Treaty on Plant Genetic Resources for Food and Agriculture

Federal Ministry of Agriculture, Food and Regional Identity

Description

This report provides an up-to-date overview of the global status of *ex situ* conservation of genetic resources of sweetpotato and its wild relatives, including key metrics on:

- the identity and composition of genebank collections;
- the Multilateral System (MLS) status of accessions in these collections;
- storage, regeneration, and safety duplication status;
- documentation, information systems, and research resources;
- germplasm distribution; and
- varietal registrations and releases.

The report also includes global statistics on crop production, trade, and availability in food supplies, as well as information about crop networks and partnerships. It is meant to provide an update to some of the information presented in the Global Conservation Strategy for sweetpotato (Crop Trust, 2007), but is primarily based on publicly available datasets, rather than a new survey of genetic resource collections and expert consultations.

Introduction and background on sweetpotato

Sweetpotato [*Ipomoea batatas* (L.) Lam.] originated in Central and South America, where it was domesticated more than 4000 years ago (Montenegro *et al.*, 2008; Yan *et al.*, 2024). It was introduced into Oceania from South America in pre-Columbian times and later spread globally following European contact with the Americas (Roullier *et al.*, 2013; Muñoz-Rodríguez *et al.*, 2022). Papua New Guinea is considered a secondary centre of diversity. This versatile root crop serves multiple purposes: its enlarged storage roots are consumed as a staple food rich in carbohydrates, vitamins, and minerals; its young leaves and shoots are eaten as nutritious vegetables in many regions; and it provides animal feed in both fresh and processed forms (CIP, 2025; Woolfe, 1992). Sweetpotato ranks among the world's most important food crops, particularly crucial for food security in developing countries across sub-Saharan Africa, Asia, the Pacific, and Latin America, where it is productive in marginal soils and variable climates with relatively low input requirements (CIP, 2025). Its rapid growth cycle, drought tolerance, and high yield potential make it especially valuable for smallholder farmers, while its nutritional profile - particularly orange-fleshed varieties with high vitamin A content - has made it a key crop in addressing malnutrition and micronutrient deficiencies in vulnerable populations (Low *et al.*, 2007).

Based on the most recently available production statistics from FAOSTAT, reporting for the year 2023, sweetpotatoes are cultivated in at least 112 countries on over 7.5 million hectares worldwide, producing 93.6 million tonnes of tubers at a value of USD 53.5 billion (FAO, 2025a). The largest producers include China, Malawi, Tanzania, Nigeria, Angola, Uganda, Indonesia, Rwanda, Madagascar, Ethiopia, India, and the USA, each producing over 1 million tonnes per annum. Global average yield (per hectare) of sweetpotatoes is among the highest of root and tuber crops (FAO, 2025a).

International trade in sweetpotatoes amounts to over 870,000 tonnes per annum, with the USA, Egypt, Netherlands, Canada, China, Spain, Portugal, and Viet Nam reporting exporting over 20,000 tonnes each year (FAO, 2025a). Among the 159 countries reporting importing sweetpotatoes, the top recipients

Table 1. Global status of sweetpotato production, trade, availability in food supplies, and public interest. Production, trade, and food supply statistics from FAOSTAT (2015 to 2018 average). Number of countries refers to the count of countries where the crop is reported as within the top 95 percent of crops in terms of contribution to production, trade, or food supply. The evenness metric quantifies evenness of production, trade, or availability in food supplies across world regions, where 0 equals highly uneven and 1 equals completely even. The international interdependence metric quantifies degree of production, trade, or availability in food supplies outside of the primary region of diversity of the crop, where 0 equals low estimated international interdependence and 1 equals high estimated international interdependence. Wikipedia metric is public pageviews over one year (2019) of the taxon name of the crop. All values from Khoury *et al.* (2023).

Metric	Global value	Number of countries where significant contributor	Evenness of contribution across world regions	Estimated international interdependence
Harvested area (ha)	7,724,203	46.75	0.19	0.99
Total production (tonnes)	91,731,346	62.25	0.13	0.99
Gross production value (current thousand USD)	23,905,568	42.00	0.11	0.99
Export quantity (tonnes)	620,424	9.75	0.24	0.95
Export value (current thousand USD)	511,420	7.50	0.23	0.97
Import quantity (tonnes)	574,612	8.25	0.22	0.98
Import value (current thousand USD)	481,096	6.25	0.18	0.99
Contribution to calories in food supplies (kcal/capita/day)	18.75	50.50	0.31	1.00
Contribution to protein in food supplies (g/capita/day)	0.20	40.00	0.32	1.00
Contribution to fat in food supplies (g/capita/day)	0.05	13.25	0.29	1.00
Contribution to food weight in food supplies (g/capita/day)	6.97	76.00	0.32	1.00
Number of public pageviews on Wikipedia over one year	9,786			

include the Netherlands, UK, Canada, France, Germany, Belgium, USA, Vietnam, Italy, Saudi Arabia, and Malaysia, all importing over 20,000 tonnes each year.

Among root and tuber crops, sweetpotatoes are one of the most important contributors to calories and food weight, with significant contributions to the food supplies of 50 and 76 countries, respectively (Table 1). Production, trade, and food supply metrics all indicate that sweetpotatoes are widely utilized outside of their region of origin, implying significant international interdependence with regard to their genetic resources.

MICHAEL MAJOR

Identity and composition of *ex situ* collections

Based on the latest data in global genetic resource databases, germplasm collections of sweetpotato and wild relatives (i.e., genus *Ipomoea* L.) are present in at least 83 institutions worldwide, collectively maintaining 19,065 accessions (Table 2, Table 3; Supplementary Table 1). This is roughly the same as the number of accessions reported for the crop (19,171) in the major germplasm collections listed in *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture* (FAO, 2025b).

The institutions are well distributed across major production regions, including large collections in the Americas, Asia, and Africa. The International Potato Center (CIP), Centre for Pacific Crops and Trees (CePaCT), and the World Vegetable Center (with a leafy vegetable collection) maintain international collections for sweetpotatoes, while the largest national collections are in Japan, USA, Brazil, Cuba, Ecuador, Papua New Guinea, and Viet Nam; these collectively maintain over 80% of documented accessions worldwide. Reported information on the status of accessions under the Multilateral System of Access and Benefit Sharing (MLS) of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty), as recorded in the Global Information System (GLIS) and in pertinent fields in Genesys and FAO WIEWS (Table 2; Table 4), likely underestimate the full degree to which accessions are currently included in the MLS, as several of the sweetpotato collections without information on MLS status are in countries that are contracting parties to the Plant Treaty (such as Japan, USA, Cuba, and Argentina) and distribute samples using the Standard Material Transfer Agreement (SMTA).

Based on a genebank stakeholder survey and inventorying process, the 2007 Strategy identified 29,016 sweetpotato and wild relative accessions maintained in 36 collections worldwide (Crop Trust, 2007). While many of the largest collections are listed both in the Strategy and Genesys or FAO WIEWS, several collections listed in the 2007 Strategy are not currently reported in global genetic resource databases. These include large collections

Table 2. Major *ex situ* collections of sweetpotato genetic resources. Top 20 institutions listed in descending order by total number of accessions. Number of accessions and storage condition information from Genesys and FAO WIEWS (2024), with supplementary information as noted. Multilateral System (MLS) status from Plant Treaty GLIS (2025) and from Genesys and FAO WIEWS (2024).

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
PER001	International Potato Center / Centro Internacional de la Papa (CIP)	6,266	32.9%	32.9%	5,004	7,560	6,198
JPN183	NARO Genebank	3,505	18.4%	51.3%	0	377	378
USA016	Plant Genetic Resources Conservation Unit, Southern Regional Plant Introduction Station, University of Georgia, USDA-ARS	1,214	6.4%	57.6%	738	0	0

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
BRA012	Embrapa Hortaliças	957	5.0%	62.6%	0	0	953
CUB006	Instituto Nacional de Investigaciones en Viandas Tropicales	920	4.8%	67.5%	0	0	0
ECU023	Departamento Nacional de Recursos Fitogenéticos	876	4.6%	72.1%	25	0	674
PNG039	Highlands Regional Centre - Aiyura	855	4.5%	76.5%	0	0	855
VNM049	Plant Resources Center	719	3.8%	80.3%	0	0	11
FJI049	Centre for Pacific Crops and Trees (CePaCT)	363	1.9%	82.2%	363	327	0
ARG1342	Banco de Germoplasma, Centro Nacional de Investigaciones Agropecuarias, Instituto Nacional de Tecnología Agropecuaria	324	1.7%	83.9%	324	0	0
PRT102	Banco de Germoplasma - Universidade da Madeira	321	1.7%	85.6%	0	0	321
GHA091	Plant Genetic Resources Research Institute	283	1.5%	87.1%	260	282	282
LKA036	Plant Genetic Resources Centre	218	1.1%	88.2%	113	0	0
GBR004	Millennium Seed Bank - Royal Botanic Gardens Kew	201	1.1%	89.3%	8	0	27
ZMB048	National Plant Genetic Resources Centre	194	1.0%	90.3%	0	519	194
ZAF062	RSA National Plant Genetic Resources Centre	160	0.8%	91.1%	0	0	0
PNG041	Momase Regional Centre, Bubia	153	0.8%	91.9%	0	0	153
ESP172	Cabildo Insular de Tenerife. Centro de Conservación de la Biodiversidad Agrícola de Tenerife	151	0.8%	92.7%	0	0	151
GUY021	National Agricultural Research and Extension Institute	151	0.8%	93.5%	24	0	0
BRA003	Embrapa Recursos Genéticos e Biotecnologia	132	0.7%	94.2%	5	0	0
	Other institutions (n = 63)	1,102	5.9%	100%	85	99	320

*this is an overestimate, as CIP counts multiple samples of the same accession within the GLIS dataset. The more accurate comparable number would be around 6,198 accessions.

Table 3. Composition of *ex situ* collections of sweetpotato genetic resources. Main *ex situ* collections data from Genesys and FAO WIEWS (2024). Primary and secondary regions information from Khoury *et al.* (2023) and subsequent research for this summary. Botanic gardens data from BGCI PlantSearch (2024).

Metric	Number	Percentage
Total number of accessions in genebank collections	19,065	
Number of institutions holding genebank collections	83	
Number of distinct taxonomic names in genebank collections	154	
Number of accessions of crop wild relatives (CWR) in genebank collections	1,918	10.1%
Number of accessions of weedy materials in genebank collections	43	0.2%
Number of accessions of landraces in genebank collections	9,640	50.6%
Number of accessions of breeding materials in genebank collections	4,118	21.6%
Number of accessions of improved varieties in genebank collections	1,028	5.4%
Number of accessions of other materials in genebank collections	0	0%
Number of accessions not marked with an improvement type in genebank collections	2,318	12.2%
Number of countries where germplasm has been collected for genebank collections	90	
Number of accessions in genebank collections from the primary region(s) of diversity	897	4.7%
Number of accessions in genebank collections from the primary and secondary region(s) of diversity	4,176	21.9%
Number of taxa in botanic garden collections	181	
Number of botanic gardens holding collections of crop or its wild relatives	251	

such as the Central Tuber Crops Research Institute (India), the National Crops Resources Research Institute in Uganda, CIP/ESEAP and IABIOGRI collections in Indonesia, and Xuzhou Sweetpotato Research Center in China, and other collections in the People's Republic of Korea, Uganda, and Tanzania, among others. The numbers of accessions maintained per institute as listed in the Strategy, compared to global genetic resources databases, appears to have changed considerably for most collections, indicating growth in collections over the past two decades for some collections as well as the risk of loss of accessions for a crop which is mainly conserved in the field (Table 5).

Ipomoea L. (Convolvulaceae) is a large genus with over 600 species, distributed throughout tropical and subtropical regions of the world (USDA, 2025). *I.* series *Batatas* (Choisy) D. F. Austin, contains the crop and around 14 relatively close wild relatives (Khoury *et al.*, 2015). In the primary genepool, there are two main putative progenitors of sweetpotatoes: *Ipomoea trifida* (Kunth) G. Don is native to Mesoamerica and south to northern South America, as well as the Caribbean; *Ipomoea aequatoriensis* T. Wells & P. Muñoz is native to Ecuador (Muñoz-Rodríguez *et al.*, 2022). Other potential progenitors include *Ipomoea littoralis* Blume (widely distributed in the Indian Ocean, Southeast and East Asia, Australia, and Pacific islands), and *Ipomoea tenuissima* Choisy (Caribbean and Florida) (USDA, 2025).

The secondary genepool includes:
Ipomoea batatas (L.) Lam.
Ipomoea batatas (L.) Lam. var. *apiculata* (M. Martens & Galeotti) J. A. McDonald & D. F. Austin
Ipomoea littoralis Blume
Ipomoea tabascana J. A. McDonald & D. F. Austin
Ipomoea trifida (Kunth) G. Don

The tertiary genepool includes:
Ipomoea australis (O'Donell) J. R. I. Wood & P. Muñoz
Ipomoea cordatotriloba Dennst. and subspecies
Ipomoea cynanchifolia Meisn.
Ipomoea grandifolia (Dammer) O'Donell
Ipomoea lactifera J. R. I. Wood & Scotland
Ipomoea lacunosa L.
Ipomoea leucantha Jacq.
Ipomoea purpurea (L.) Roth
Ipomoea ramosissima (Poir.) Choisy
Ipomoea splendor-sylvae House
Ipomoea tenuissima Choisy
Ipomoea tiliacea (Willd.) Choisy
Ipomoea triloba L.

Data compilation for this report on sweetpotato genetic resources included all taxa in *Ipomoea*. Along with the crop, 152 taxa as well as accessions only identified to the genus level are present in germplasm collections (Supplementary Table 2). The largest collections are of the crop as well as of *I. trifida, I. aquatica, I. grandifolia, I. triloba, I. purpurea, I. cordatotriloba*, as well as accessions only identified at the genus level.

Landraces make up the largest proportion of collections (50.6%), followed by breeding materials (21.6%), and wild relatives (10.1%) (Table 3); these percentages are estimates based on available data, noting that 12.2% of accessions do not have biological status data. *Ipomoea* germplasm has been collected from at least 90 countries, with approximately 4.7% of accessions originating from the primary region of diversity of sweetpotatoes (i.e. Mesoamerica and tropical South America) and 21.9% from primary and secondary (i.e. Andean South America, Central and East Africa, Southeast Asia, and the Pacific) regions; these statistics are also estimates, as 10.7% of sweetpotato landrace accessions and 9.4% of wild relative accessions do not contain information even of the country where the accession was collected. Information on botanic garden collections from BGCI PlantSearch indicate that 251 botanic gardens collectively conserve 181 *Ipomoea* taxa; comparing these to genebank collections, 51 taxa are only present in botanic gardens.

Aside from the taxa that appear to be entirely missing from, or with very small representation in, germplasm collections, the global genetic resources databases do not offer insights on diversity gaps, but published research has indicated specific priority species and geographic regions for further collecting for conservation. Regarding wild relatives, Khoury *et al.* (2015), and Castañeda-Álvarez *et al.* (2016), both assessing 14 sweetpotato wild relatives (*I.* series *Batatas*), listed eleven (78.6%) as of high priority for further collecting, and two additional species as of medium priority. Further collecting priorities were centered in southern Mexico and the southern USA. Some progress has been made recently in filling sweetpotato wild relative gaps, including via the Adapting Agriculture to Climate Change: Collecting, Protecting and Preparing Crop Wild Relatives project (Crop Trust, 2025), which resulted in the collecting of 115 seed samples of 11 sweetpotato wild relative taxa from 11 countries (including 32 samples of *I. tiliacea*, 19 of *t*, and 16 of *I. ramosissima*, among others) as well as the development of new varieties with introgressions from wild germplasm (Eastwood *et al.*, 2022).

Ramirez-Villegas *et al.* (2022) identified geographic gaps for sweetpotato landrace groups in specific localities in Mesoamerica, the Caribbean, northern South America, and in Bolivia and southern Brazil.

MICHAEL MAJOR

Multilateral System status of accessions in *ex situ* collections

The genus *Ipomoea* is listed in Annex I of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty) and is thus included in its Multilateral System of Access and Benefit Sharing (MLS). Of the 19,065 accessions conserved globally, approximately 35.5% are held in international centers (i.e., CIP, CePaCT and the World Vegetable Center), and are included in the MLS under Article 15 (for CIP and CePaCT) or similar arrangements (for the World Vegetable Center) of the Plant Treaty, with the remainder maintained in national, regional, and other collections (Table 4).

As of 2025, 10,085 accessions are formally included in the MLS according to the Plant Treaty's GLIS database, and 10,778 accessions have been assigned Digital Object Identifiers (DOIs). Per the relevant fields in the global genetic resources databases, 10,517 accessions (55.2% of world total) are listed as included in the MLS as per the online germplasm databases; this may be an underestimate, noting that 17.7% of accessions do not have MLS status data.

Table 4. Representation of sweetpotato accessions in international and national institutions, number of accessions with DOIs, and representation of accessions in the Multilateral System of Access and Benefit Sharing of the International Treaty on Plant Genetic Resources for Food and Agriculture. Main *ex situ* collections data from Genesys and FAO WIEWS (2024). DOI and MLS data from Plant Treaty GLIS (2025).

Metric	Number	Percentage
Number of accessions in genebank collections in international institutions	6,758	35.5%
Number of accessions in genebank collections in national or other institutions	12,307	64.5%
Number of accessions in genebank collections in Annex I	19,065	100%
Number of accessions with DOI (Plant Treaty GLIS 2025)	10,778	
Number of accessions included in the Multilateral System (MLS) (Plant Treaty GLIS 2025)	10,085	
Number of accessions included in the Multilateral System (MLS) (genebank collections databases)	10,517	55.2%
Number of accessions included in the Multilateral System (MLS) that are in international collections (genebank collections databases)	6,284	33.0%
Number of accessions not included in the Multilateral System (MLS) (genebank collections databases)	5,178	27.2%
Number of accessions without information regarding inclusion in the Multilateral System (MLS) (genebank collections databases)	3,370	17.7%

Storage conditions, regeneration status, and safety duplication

Sweetpotato germplasm collections are mainly maintained in the field (58.3% of accessions), with a substantial degree of storage in *in vitro* conditions as well (36.4%) (Table 5). Seed collections comprise 16.1% of accessions, the great majority (83.5%) of which are conserved in long-term conditions. Only 2.6% of accessions are conserved in cryopreservation. Information on storage type is not available for 6.3% of accessions.

Current regeneration status and needs cannot be directly derived from the global germplasm databases. The 2007 Strategy documented that regeneration was needed in the majority of sweetpotato collections globally, including

Table 5. Storage conditions of sweetpotato *ex situ* collections, regeneration status, and safety duplication status. Main *ex situ* collections data from Genesys and FAO WIEWS (2024). Regeneration status information from FAO WIEWS (2024); data from 2012 to 2014. Safety duplication out of the country data based only on Genesys (2024) data. Svalbard Global Seed Vault data from SGSV portal (2024).

Metric	Number	Percentage
Number of accessions held in seed storage in genebank collections	3,060	16.1%
Number of accessions held in short-term seed storage in genebank collections	2	0.07%
Number of accessions held in medium-term seed storage in genebank collections	498	16.3%
Number of accessions held in long-term seed storage in genebank collections	2,555	83.5%
Number of accessions held in seed storage of undefined type in genebank collections	5	0.2%
Number of accessions held in field storage in genebank collections	11,112	58.3%
Number of accessions held in *in vitro* storage in genebank collections	6,941	36.4%
Number of accessions held in cryo storage in genebank collections	498	2.6%
Number of accessions held as DNA in genebank collections	7	0.04%
Number of accessions held in other storage in genebank collections	1	0.01%
Number of accessions not marked with a storage type in genebank collections	1,199	6.3%
Number of accessions in genebank collections regenerated 2014–2019	2,514	90.8%
Number of accessions in genebank collections in need of regeneration 2014–2019	1,369	49.4%
Number of accessions in genebank collections in need of regeneration without budget for regeneration 2014–2019	54	2.0%
Number of accessions safety duplicated out of the country in genebank collections	1,088	14.8%
Number of accessions in genebank collections safety duplicated in Svalbard	2,914	15.3%

field, *in vitro*, and seed collections (Crop Trust, 2007). FAO WIEWS reporting for the *Third State of the World's Plant Genetic Resources for Food and Agriculture* (FAO, 2025b) for the years 2014 to 2019, documented 2,514 sweetpotato accessions regenerated during this time by reporting institutions, with 1,369 accessions identified as needing regeneration and 54 of these lacking funds to conduct the regeneration.

Analysis of the location of safety duplication sites of sweetpotato germplasm, as listed in Genesys, indicates that 14.8% of accessions listed are safety duplicated in an active collection (i.e., apart from potentially being duplicated at the Svalbard Global Seed Vault [SGSV]) outside of the country of the main collection (Table 5). The actual extent of safety duplication of sweetpotato accessions worldwide, when also considering safety duplication within the same country, may be higher than this estimate, given that some national genebanks (such as the USA) typically provide safety backup their collections in a different location within the country. Information from the SGSV database from 2024 indicated that 2,914 (15.3% of total) accessions worldwide were duplicated in Svalbard; this represents over 95% of *Ipomoea* accessions conserved as seed worldwide.

The 2007 Strategy identified safety duplication in another genebank as a priority and an important constraint given available resources. The Strategy developed a specific proposal to fill gaps in regeneration, conservation, and safety duplication of sweetpotato genetic resources in Asia, Africa and Latin America, with the aim to have activities completed by 2012 (Crop Trust, 2007).

Documentation, information systems, and research resources

A descriptor list for sweetpotato was first published in 1991 (CIP, AVRDC, and IBPGR, 1991). A prioritized list of characterization and evaluation descriptors was published in 2010 (Bioversity International and CIP, 2010). The World Vegetable Center also published a descriptor in 2015 (WorldVeg, 2015).

The estimated completeness of passport information for sweetpotato accessions listed in Genesys was 6.7 on a scale of 0 (no data) to 10 (complete data), which indicates that much data is available, but also that there are gaps remaining that it would be valuable to fill. At least three sweetpotato characterization and evaluation datasets are available via Genesys, covering a total of 1,974 accessions. Four metrics of the current degree of digital sequence information (DSI) for sweetpotato (from the National Center for Biotechnology Information USA database), two metrics of published literature on the crop (Google Scholar and PubMed Central), and one metric of the degree of research resources such as herbarium specimens (from the Global Biodiversity Information Facility - GBIF), are listed in Table 6. Sweetpotatoes, along with potatoes and cassava, stands out compared to many other root and tuber crops in terms of the degree of DSI resources, published literature, and research resources in GBIF (Khoury *et al.*, 2023).

The 2007 Strategy identified that limited morphological and molecular characterization of sweetpotato collections was a constraint, mainly in African and Asian collections. The Strategy also prioritized the development of a global database for sweetpotato genetic resources. The Strategy developed a specific proposal to fill gaps in characterization and other information regarding sweetpotato genetic resources, including to be able to assess the status of collections and identify redundancies, with the aim to have activities completed by 2012 (Crop Trust, 2007).

Information management for crop genetic resources has evolved substantially since the 2007 Strategy. The current Genesys and FAO WIEWS databases offer some essential taxonomic, institutional, and passport data, and Genesys now holds some characterization data for the crop. This said, a dedicated online information system including complete accession-level characterization and evaluation data for sweetpotato germplasm collections remains a gap.

Table 6. Documentation, information systems, and research resources for sweetpotato. Passport data completeness index (PDCI) from Genesys (2024), based on the methods outlined in van Hintum *et al.* (2011). Global Biodiversity Information Facility data from GBIF (2025). All other metrics data from Khoury *et al.* (2023).

Metric	Number
Passport data completeness index (range 0-10) as a median value across accessions in genebank collections	6.65
Number of genes as recorded in NCBI's Entrez database as of 2022	14,108
Number of genomes as recorded in NCBI's Entrez database as of 2022	1
Number of nucleotides as recorded in NCBI's Entrez database as of 2022	464,652
Number of proteins as recorded in NCBI's Entrez database as of 2022	124,033
Number of publications listed in Google Scholar with taxon name in title published between 2009 and 2019	2,960
Number of publications listed in PubMed Central with taxon name in text as of 2022	3,744
Number of research materials as recorded in GBIF (2025)	566,162

Germplasm distributions and varietal registrations and releases

Germplasm distribution and varietal development statistics for sweetpotato are listed in Table 7. Germplasm distribution data from FAO WIEWS and the Plant Treaty Data Store reflect different reporting scopes: FAO WIEWS primarily reports distributions from national genebanks, while the Plant Treaty Data Store includes all transfers made under the SMTA, encompassing distributions made by genebanks as well as by breeding programs and other organizational types (Khoury *et al.*, 2025).

Sweetpotatoes, along with potatoes and cassava, are the most distributed root and tuber crops as well as the most active in terms of varieties registered or released (Khoury *et al.*, 2023) (Table 7).

Table 7. Sweetpotato germplasm distributions and varietal registrations and releases. FAO WIEWS distributions data is annual average over years 2014 to 2019. Plant Treaty Data Store distributions data is annual average over years 2015 to 2021. Evenness metric quantifies evenness of germplasm distributions across world regions, where 0 equals highly uneven and 1 equals completely even. International Union for the Protection of New Varieties of Plants (UPOV) PLUTO data is annual average over years 2014 to 2018. FAO WIEWS varietal releases data is annual average over years 2015 to 2019. All metrics data from Khoury *et al.* (2023), with Plant Treaty Data Store additions for more recent years (2019 to 2021).

Metric	Number
Average annual number of accessions distributed worldwide as recorded in FAO WIEWS	580.0
Average annual number of samples distributed worldwide as recorded in FAO WIEWS	2,718.9
Average annual number of samples distributed worldwide as recorded in the Plant Treaty Data Store	325.4
Number of countries receiving germplasm as recorded in the Plant Treaty Data Store	12.0
Evenness of distributions across world regions as recorded in the Plant Treaty Data Store	0.7
Average annual number of varietal registrations worldwide as recorded in UPOV's PLUTO	17.0
Average annual number of varietal releases worldwide as recorded in FAO WIEWS	13.4

Networks and partnerships

- CIP continues to play a critical role in sweetpotato germplasm conservation and varietal development, maintaining active partnerships with national agricultural research organizations, other international centers, and several academic and industry institutions.
- The 2007 Strategy listed several networks that have been important to sweetpotato genetic resources historically. These include the:
  - Asian Network for Sweetpotato Genetic Resources (ANSWER), founded in 1996 with the participation of 12 Asian countries.
  - Users Perspectives with Agricultural Research and Development (UPWARD), a CIP partnership program for regional networking in Asia around root and tuber crops.
  - In Latin America and the Caribbean, sweetpotato genetic resources activities were part of regional (e.g. Prociandino, Procitropicos) and international (International Society for Tropical Root Crops - ISTRC) networks.
- Crop networks relevant to sweetpotato have changed substantially since the 2007 Strategy. Currently active networks include:

- The Southern Africa Sweetpotato Breeding Network (SAF) and the Eastern Africa Sweetpotato Breeding Network (EAF) (CIP and CGIAR Initiative on Accelerated Breeding, 2025).
- The African Orphan Crops Consortium (as a leafy green vegetable)
- International Society for Tropical Root Crops - ISTRC.
- The USDA ARS Sweetpotato Sweetpotato Crop Germplasm Committee (also here).
- The Convolvulaceae Network, focused on ecology, evolution, taxonomy, conservation, genomics, genetics, crop improvement, pollination, reproductive biology, and plant-fungi interactions in the plant family.

■ Information on other networks active in sweetpotato conservation or use is not readily available online.

Conclusions

Sweetpotato continues to be an extremely important food crop in the tropics and subtropics and it is likely that it will grow in importance in future food systems. Sweetpotato genetic resources are bolstered by the activities taking place in CIP and other collections across Asia, Latin America, and Africa, although only a portion of these are currently listed in global genetic resources databases. Available data indicates that the degree of conservation in vitro as well as the proportion of accessions included under the MLS of the Plant Treaty have grown substantially over the past two decades. There are also considerable amounts of associated research resources, and there is significant activity in germplasm distributions and varietal development for the crop. It is likely that further efforts continue to be needed to strengthen existing collections, comprehensively include all unique sweetpotato germplasm collections under the MLS of the Plant Treaty, continue to make the information accompanying accessions more complete and/or more accessible in online databases, and to address regeneration and safety duplication backlogs, including through cryopreservation.

MICHAEL MAJOR

Methods and materials

Primary data sources for the metrics reported in this summary include: Genesys; World Information and Early Warning System on Plant Genetic Resources for Food and Agriculture of the Food and Agriculture Organization of the United Nations (FAO WIEWS); Botanic Gardens Conservation International PlantSearch database (BGCI PlantSearch); Global Information System of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty GLIS); Data Store of the International Treaty on Plant Genetic Resources for Food and Agriculture (Plant Treaty Data Store); Svalbard Global Seed Vault portal (SGSV portal); International Union for the Protection of New Varieties of Plants (UPOV) PLUTO database; FAOSTAT; National Center for Biotechnology Information's Entrez database (NCBI Entrez); Google Scholar; PubMed Central; Wikipedia; and the Global Biodiversity Information Facility (GBIF). Some of these data were acquired from literature/databases including Khoury et al. (2023) and Khoury et al. (2025). Data processing, metric calculation, and table generation were conducted in R, with code available on this GitLab repository. Extended methods are available here.

Acknowledgements

The development of this document was funded by the German Federal Ministry of Agriculture, Food and Regional Identity (BMLEH) as part of the project Mainstreaming Global Crop Conservation Strategies in Plant Treaty Processes led by the Crop Trust. The Crop Trust cooperated with the Secretariat of the International Treaty on Plant Genetic Resources for Food and Agriculture in the development of this document.

References

Bioversity International and International Potato Center (CIP) (2010) *Key access and utilization descriptors for sweet potato genetic resources*. 11 pp. https://hdl.handle.net/10568/73347

Castañeda-Álvarez NP, Khoury CK, Achicanoy HA, Bernau V, Dempewolf H, Eastwood RJ, Guarino L, Harker RH, Jarvis A, Maxted N, Mueller JV, Ramírez-Villegas J, Sosa CC, Struik PC, Vincent H, and Toll J (2016) Global conservation priorities for crop wild relatives. *Nature Plants* 2(4): 16022. https://doi.org/10.1038/nplants.2016.22

Crop Trust (2007) *Global Strategy for the Ex Situ Conservation of Sweetpotato Genetic Resources*. https://www.croptrust.org/fileadmin/uploads/croptrust/Documents/Ex_Situ_Crop_Conservation_Strategies/SweetPotato-Strategy-FINAL-12Dec07.pdf

Eastwood RJ, Tambam BB, Aboagye LM, Akparov ZI, Aladele SE, Allen R, *et al.* (2022) Adapting Agriculture to Climate Change: A Synopsis of Coordinated National Crop Wild Relative Seed Collecting Programs across Five Continents. *Plants* 11(14): 1840. https://doi.org/10.3390/plants11141840

FAO (2009) *The International Treaty on Plant Genetic Resources for Food and Agriculture*. Food and Agriculture Organization of the United Nations (FAO), Rome, Italy. https://openknowledge.fao.org/server/api/core/bitstreams/a9d0de2a-8e98-4f75-98a8-673078841030/content

FAO (2025a) FAOSTAT. https://www.fao.org/faostat/en/#data (accessed September 2025)

FAO (2025b) *The Third Report on The State of the World's Plant Genetic Resources for Food and Agriculture*. FAO: Rome. https://doi.org/10.4060/cd4711en

International Board for Plant Genetic Resources (IBPGR), Asian Vegetable Research and Development Center (AVRDC), and International Board for Plant Genetic Resources (IBPGR) (1991) *Descriptors for sweet potato*. International Board for Plant

Genetic Resources 52 pp. https://alliancebioversi-tyciat.org/publications-data/descriptors-sweet-potato

International Potato Center (CIP). Sweetpotato Facts and Figures. https://cipotato.org/sweetpotato/sweetpotato-facts-and-figures/ (assessed October 2025)

International Potato Center (CIP) and CGIAR Initiative on Accelerated Breeding (2025) Comprehensive report on Sweetpotato Breeding Network Meetings in East and Southern Africa 2024. International Potato Center. 14 pp. https://hdl.handle.net/10568/173883

Khoury CK, Heider B, Castañeda-Álvarez NP, Achicanoy HA, Sosa CC, Miller RE, Scotland RW, Wood JRI, Rossel G, Eserman LA, Jarret RL, Yencho GC, Bernau V, Juarez H, Sotelo S, de Haan S, and Struik PC (2015) Distributions, *ex situ* conservation priorities, and genetic resource potential of crop wild relatives of sweetpotato [*Ipomoea batatas* (L.) Lam., *I.* series *Batatas*]. *Frontiers in Plant Science* 6: 251. https://doi.org/10.3389/fpls.2015.00251

Khoury CK, Sotelo S, Amariles D, and Hawtin G (2023) *The Plants That Feed the World: baseline data and metrics to inform strategies for the conservation and use of plant genetic resources for food and agriculture*. International Treaty on Plant Genetic Resources for Food and Agriculture Rome: Food and Agricultural Organization of the United Nations. doi: 10.4060/cc6876en. https://www.fao.org/documents/card/en/c/cc6876en

Khoury CK, Sotelo S, Hawtin G, Halewood M, Lopez Noriega I, and Lusty C (2025) Germplasm exchange: Thematic Study for *The Third Report on the State of the World's Plant Genetic Resources for Food and Agriculture*. Rome: Food and Agricultural Organization of the United Nations. doi: 10.4060/cd4850en. https://doi.org/10.4060/cd4850en

Low JW, Arimond M, Osman N, Cungara B, Zano F, and Tschirley D (2007) A Food-Based Approach Introducing Orange-Fleshed Sweet Potatoes Increased Vitamin A Intake and Serum Retinol Concentrations in Young Children in Rural Mozambique. *The Journal of Nutrition* 137(5): 1320–1327 https://doi.org/10.1093/jn/137.5.1320

Montenegro Á, Avis C, and Weaver A (2008) Modeling the prehistoric arrival of the sweet potato in Polynesia. *Journal of Archaeological Science* 35(2): 355–367. https://doi.org/10.1016/j.jas.2007.04.004

Muñoz-Rodríguez P, Wells T, Wood JRI, Carruthers T, Anglin NL, Jarret RL, and Scotland RW (2022) Discovery and characterization of sweetpotato's closest tetraploid relative. *New Phytologist* 234(4): 1185–1194. https://doi.org/10.1111/nph.17991

Ramirez-Villegas J, Khoury CK, Achicanoy H, Diaz MV, Mendez A, Sosa CC, Kehel Z, Guarino L, Abberton M, Aunario J, Al Awar B, Alarcon JC, Amri A, Anglin NL, Azevedo V, Aziz K, Capilit GL, Chavez O, Chebotarov D, Costich DE, Debouck DG, Ellis D, Falalou H, Fiu A, Ghanem ME, Giovannini P, Goungoulou AJ, Gueye B, Ibn El Hobyb A, Jamnadass R, Jones CS, Kpeki B, Lee J-S, McNally KL, Muchugi A, Ndjiondjop M-N, Oyatomi O, Payne T, Ramachandran S, Rossel G, Roux N, Ruas M, Sansaloni C, Sardos J, Setiyono TD, Tchamba M, van den Houwe I, Velazquez JA, Venuprasad R, Wenzl P, Yazbek M, and Zavala C (2022) State of *ex situ* conservation of landrace groups of twenty-five major crops. *Nature Plants* 8: 491–499. https://doi.org/10.1038/s41477-022-01144-8

Roullier C, Benoit L, McKey DB, and Lebot V (2013) Historical collections reveal patterns of diffusion of sweet potato in Oceania obscured by modern plant movements and recombination. *Proc Natl Acad Sci USA.* 110(6): 2205–2210. https://doi.org/10.1073/pnas.1211049110

USDA (2025) Global Global Taxonomy. https://npgsweb.ars-grin.gov/gringlobal/taxon/taxonomysearch (accessed September 2025)

Van Hintum T, Menting F, and Van Strien E (2011) Quality indicators for passport data in *ex situ* genebanks. *Plant Genetic Resources* 9(3): 478–485. https://doi.org/10.1017/S1479262111000682

Woolfe JA (1992). *Sweet Potato: An Untapped Food Resource*. Cambridge University Press, Cambridge, UK.

World Vegetable Center (WorldVeg) (2015) World Vegetable Center Genebank morphological descriptors. https://worldveg.tind.io/record/75880/?v=pdf (accessed November 2025)

Yan M, Li M, Wang X, Moeinzadeh M-H, Quispe-Huamanquispe DG, Fan W, *et al.* (2024) Haplotype-based phylogenetic analysis and population genomics uncover the origin and domestication of sweetpotato. *Molecular Plant*. 17(2):277–296 [accessed 2025 Oct 9]. https://linkinghub.elsevier.com/retrieve/pii/S1674205223004136. https://doi.org/10.1016/j.molp.2023.12.019

Supplementary information

Supplementary Table 1: Full list of *ex situ* collections of sweetpotato genetic resources, in descending order by total number of accessions. Number of accessions and storage condition information from Genesys and FAO WIEWS (2024), with supplementary information as noted. Multilateral System (MLS) status from Plant Treaty GLIS (2025) and from Genesys and FAO WIEWS (2024).

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
PER001	Centro Internacional de la Papa	6,266	32.9%	32.9%	5,004	7,560	6,198
JPN183	NARO Genebank	3,505	18.4%	51.3%	0	377	378
USA016	Plant Genetic Resources Conservation Unit, Southern Regional Plant Introduction Station, University of Georgia, USDA-ARS	1,214	6.4%	57.6%	738	0	0
BRA012	Embrapa Hortaliças	957	5.0%	62.6%	0	0	953
CUB006	Instituto Nacional de Investigaciones en Viandas Tropicales	920	4.8%	67.5%	0	0	0
ECU023	Departamento Nacional de Recursos Fitogenéticos	876	4.6%	72.1%	25	0	674
PNG039	Highlands Regional Centre - Aiyura	855	4.5%	76.5%	0	0	855
VNM049	Plant Resources Center	719	3.8%	80.3%	0	0	11
FJI049	Centre for Pacific Crops and Trees	363	1.9%	82.2%	363	327	0
ARG1342	Banco de Germoplasma, Centro Nacional de Investigaciones Agropecuarias, Instituto Nacional de Tecnología Agropecuaria	324	1.7%	83.9%	324	0	0
PRT102	Banco de Germoplasma - Universidade da Madeira	321	1.7%	85.6%	0	0	321
GHA091	Plant Genetic Resources Research Institute	283	1.5%	87.1%	260	282	282
LKA036	Plant Genetic Resources Centre	218	1.1%	88.2%	113	0	0
GBR004	Millennium Seed Bank - Royal Botanic Gardens Kew	201	1.0%	89.3%	8	0	27
ZMB048	National Plant Genetic Resources Centre	194	1.0%	90.3%	0	519	194

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
ZAF062	RSA National Plant Genetic Resources Centre	160	0.8%	91.1%	0	0	0
PNG041	Momase Regional Centre, Bubia	153	0.8%	91.9%	0	0	153
ESP172	Cabildo Insular de Tenerife. Centro de Conservación de la Biodiversidad Agrícola de Tenerife	151	0.8%	92.7%	0	0	151
GUY021	National Agricultural Research and Extension Institute	151	0.8%	93.5%	24	0	0
BRA003	Embrapa Recursos Genéticos e Biotecnologia	132	0.7%	94.2%	5	0	0
MWI041	Malawi Plant Genetic Resources Centre	106	0.6%	94.8%	0	0	106
TWN001	World Vegetable Center	89	0.5%	95.2%	0	83	84
BRA020	Embrapa Clima Temperado	88	0.5%	95.7%	10	0	0
COL017	Corporación Colombiana de Investigación Agropecuaria, AGROSAVIA	88	0.5%	96.2%	53	0	0
TTO010	Central Experiment Station, Research Division, Ministry of Agriculture, Land and Fisheries	60	0.3%	96.5%	0	0	0
PHL129	Institute of Plant Breeding-National Plant Genetic Resources Laboratory	56	0.3%	96.8%	0	0	0
PNG001	Islands Regional Centre Keravat	52	0.3%	97.0%	0	0	52
USA995	National Center for Genetic Resources Preservation	46	0.2%	97.3%	1	0	0
MEX208	INIFAP, Centro Nacional de Recursos Genéticos (CNRG)	43	0.2%	97.5%	0	0	0
MYS221	Crop and Soil Science Research Centre	40	0.2%	97.7%	0	0	0
PNG004	Southern Regional Centre Laloki (NARI)	39	0.2%	97.9%	0	0	39
KEN212	Genetic Resources Research Institute	28	0.1%	98.1%	0	0	0
CRI077	Instituto Nacional de Innovación y Transferencia de Tecnología Agropecuaria	26	0.1%	98.2%	0	0	0

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
GTM001	Instituto de Ciencia y Tecnología Agrícolas	23	0.1%	98.3%	0	0	0
FRA098	Station de la Réunion, CIRAD-FLHOR	22	0.1%	98.4%	0	0	0
CUB005	Instituto Nacional de Ciencias Agrícolas	21	0.1%	98.6%	0	0	0
PHL303	Northern Philippines Root Crops Research and Training Center	21	0.1%	98.7%	0	0	0
CRI001	Centro Agronómico Tropical de Investigación y Enseñanza	19	0.1%	98.8%	0	0	0
CRI134	CATIE - Jardín Botánico y Colecciones	19	0.1%	98.9%	0	0	0
MEX367	Facultad de Ciencias Naturales, Universidad Autónoma de Querétaro	18	0.1%	99.0%	0	0	0
NER001	Institut national de la recherche agronomique du Niger	17	0.1%	99.1%	0	0	17
IND001	National Bureau of Plant Genetic Resources	15	0.1%	99.1%	2	0	0
ROM021	Research and Development Station for Plant Culture on Sands Dabuleni	15	0.1%	99.2%	0	0	0
NIC028	Instituto Nicaraguense de Tecnología Agropecuaria, Estelí	13	0.1%	99.3%	13	0	0
CUB014	Instituto de Investigaciones Fundamentales en Agricultura Tropical	11	0.1%	99.3%	0	0	0
SLV050	CENTA - Banco de Germoplasma	10	0.0%	99.4%	0	0	0
BGD003	Bangladesh Agricultural Research Institute	8	0.0%	99.4%	0	0	0
ISR002	Israel Gene Bank for Agricultural Crops, Agricultural Research Organisation, Volcani Center	8	0.0%	99.5%	0	0	0
SWZ015	National Plant Genetic Resources Centre	8	0.0%	99.5%	0	0	0
SDN002	Agricultural Plant Genetic Resources Conservation and Research Centre	7	0.0%	99.5%	0	0	0
NGA010	National Centre for Genetic Resources and Biotechnology	6	0.0%	99.6%	0	6	0

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
PAN098	Centro de Investigación Agropecuaria de Azuero	6	0.0%	99.6%	6	0	6
BGR001	Institute for Plant Genetic Resources 'K.Malkov'	5	0.0%	99.6%	0	0	0
DEU146	Genebank, Leibniz Institute of Plant Genetics and Crop Plant Research	5	0.0%	99.7%	0	5	5
GRC005	Greek Genebank, Institute of Plant Breeding and Genetic Resources	5	0.0%	99.7%	0	0	0
PAK001	Plant Genetic Resources Program	5	0.0%	99.7%	0	0	1
TZA016	National Plant Genetic Resources Centre	5	0.0%	99.7%	0	0	0
BGD016	Bangladesh Agricultural University (BAU)	4	0.0%	99.8%	0	0	0
ECU331	Granja experimental Socavón	3	0.0%	99.8%	0	0	0
HUN003	Centre for Plant Diversity	3	0.0%	99.8%	0	0	1
MEX337	Jardín Botánico del Instituto de Biología (Universidad Nacional Autónoma de México)	3	0.0%	99.8%	0	0	0
NPL069	National Agriculture Genetic Resources Centre-Genebank	3	0.0%	99.8%	0	0	0
USA974	Seed Savers Exchange	3	0.0%	99.8%	0	0	0
UZB006	Uzbek Research Institute of Plant Industry	3	0.0%	99.9%	0	0	0
AUS167	Australian Pastures Genebank	2	0.0%	99.9%	0	2	2
BGD014	Bangladesh Forest Research Institute (BFRI)	2	0.0%	99.9%	0	0	0
CAN004	Plant Gene Resources of Canada, Saskatoon Research and Development Centre	2	0.0%	99.9%	0	0	2
ETH013	International Livestock Research Institute	2	0.0%	99.9%	0	2	2
ETH085	Ethiopian Biodiversity Institute	2	0.0%	99.9%	0	0	1
GBR006	Warwick Genetic Resources Unit	2	0.0%	99.9%	0	0	0
GRC102	Hellenic Mediterranean University	2	0.0%	99.9%	0	0	0

Institution Code	Institution name	Number of accessions	Percent of total	Cumulative percent	Number of accessions conserved in vitro or in cryo storage	Number of accessions included in MLS (from Plant Treaty GLIS)	Number of accessions included in MLS (from genebank collections databases)
NIC014	Centro Nacional de Investigación Agropecuaria (INTA-CNIA)	2	0.0%	99.9%	0	0	0
BGD028	Bangladesh Institute of Nuclear Agriculture (BINA)	1	0.0%	99.9%	0	0	0
JOR105	National Agricultural Research Center	1	0.0%	100.0%	0	1	1
MEX006	UACh, Banco Nacional de Germoplasma Vegetal (BANGEV)	1	0.0%	100.0%	0	0	0
MLT001	Argotti Botanic Gardens & Resource Centre, University of Malta	1	0.0%	100.0%	0	0	0
MMR015	Myanmar SeedBank	1	0.0%	100.0%	0	0	0
ROM007	Suceava Genebank	1	0.0%	100.0%	0	0	0
RUS001	N.I. Vavilov All-Russian Research Institute of Plant Industry	1	0.0%	100.0%	0	0	0
THA300	Genebank	1	0.0%	100.0%	0	0	0
UGA132	Plant Genetic Resource Centre	1	0.0%	100.0%	0	0	1
UGA528	Uganda National Genebank	1	0.0%	100.0%	0	0	0
USA151	National Arboretum-Germplasm Unit, USDA/ARS	1	0.0%	100.0%	0	0	0

Supplementary Table 2: Full list of taxonomic names in ex situ genetic resource collections, in descending order by number of accessions conserved. Germplasm data from Genesys and FAO WIEWS (2024).

Taxon	Number of accessions (from genebank collections databases)
Ipomoea batatas (L.) Lam.	16,594
Ipomoea L.	451
Ipomoea trifida (Kunth) G. Don	399
Ipomoea aquatica Forssk.	126
Ipomoea grandifolia (Dammer) O'Donell	124
Ipomoea triloba L.	124
Ipomoea purpurea (L.) Roth	109
Ipomoea cordatotriloba Dennst.	106
Ipomoea nil (L.) Roth	69
Ipomoea tiliacea (Willd.) Choisy	68
Ipomoea ramosissima (Poir.) Choisy	45
Ipomoea cairica (L.) Sweet	39
Ipomoea hederifolia L.	38
Ipomoea asarifolia (Desr.) Roem. & Schult.	36
Ipomoea pes-caprae (L.) R. Br.	30
Ipomoea quamoclit L.	30
Ipomoea setosa Ker Gawl.	30
Ipomoea amnicola Morong	26
Ipomoea squamosa Choisy	25
Ipomoea ochracea (Lindl.) Sweet	24
Ipomoea alba L.	22
Ipomoea leucantha Jacq.	21
Ipomoea hederacea Jacq.	20
Ipomoea incarnata (Vahl) Choisy	19
Ipomoea acanthocarpa Hochst. ex Choisy	18
Ipomoea obscura (L.) Ker Gawl.	18
Ipomoea muelleri Benth.	16
Ipomoea indica (Burm.) Merr.	15
Ipomoea lacunosa L.	15
Ipomoea dumetorum Willd.	13
Ipomoea tricolor Cav.	13
Ipomoea imperati (Vahl) Griseb.	12
Ipomoea pauciflora M. Martens & Galeotti	11
Ipomoea wrightii A. Gray	11
Ipomoea carnea subsp. *fistulosa* (Mart. ex Choisy) D. F. Austin	9
Ipomoea costata F. Muell. ex Benth.	9
Ipomoea aristolochiifolia (Kunth) G. Don	8
Ipomoea coccinea L.	8
Ipomoea digitata L.	8
Ipomoea eriocarpa R. Br.	8
Ipomoea murucoides Roem. & Schult.	8
Ipomoea splendor-sylvae House	8
Ipomoea carnea subsp. *carnea*	7
Ipomoea gracilis R. Br.	7

Ipomoea muricata (L.) Jacq.	7
Ipomoea parasitica (Kunth) G. Don	7
Ipomoea pedicellaris Benth.	7
Ipomoea sagittata Poir.	7
Ipomoea violacea L.	7
Ipomoea albivenia (Lindl.) Sweet	6
Ipomoea cordatotriloba var. *cordatotriloba*	6
Ipomoea kituiensis Vatke	6
Ipomoea phyllomega (Vell.) House	6
Ipomoea polpha R. W. Johnson	6
Ipomoea rubens Choisy	6
Ipomoea abrupta R. Br.	5
Ipomoea involucrata P. Beauv.	5
Ipomoea meyeri (Spreng.) G. Don	5
Ipomoea ophiodes Standl. & Steyerm.	5
Ipomoea pes-tigridis L.	5
Ipomoea setifera Poir.	5
Ipomoea ternifolia var. *leptotoma* (Torr.) J. A. McDonald	5
Ipomoea carnea Jacq.	4
Ipomoea cynanchifolia Meisn.	4
Ipomoea dichroa Choisy	4
Ipomoea hildebrandtii subsp. *hildebrandtii*	4
Ipomoea leptophylla Torr.	4
Ipomoea mauritiana Jacq.	4
Ipomoea ternifolia Cav.	4
Ipomoea adenioides Schinz	3
Ipomoea bahiensis Willd.	3
Ipomoea biflora (L.) Pers.	3
Ipomoea cardiophylla A. Gray	3
Ipomoea coptica (L.) Roth	3
Ipomoea cristulata Hallier f.	3
Ipomoea dubia Roem. & Schult.	3
Ipomoea jaegeri Pilg.	3
Ipomoea lobata (Cerv.) Thell.	3
Ipomoea lonchophylla J. M. Black	3
Ipomoea peruviana O'Donell	3
Ipomoea pileata Roxb.	3
Ipomoea tabascana J. A. McDonald & D. F. Austin	3
Ipomoea aculeata Blume	2
Ipomoea argillicola R. W. Johnson	2
Ipomoea chrysochaetia var. *velutipes* (Welw. ex Rendle) Lejoly & Lisowski	2
Ipomoea conzattii Greenm.	2
Ipomoea coscinosperma Hochst. ex Choisy	2
Ipomoea costellata Torr.	2
Ipomoea crassipes Hook.	2
Ipomoea diamantinensis J. M. Black ex Eardley	2
Ipomoea dumosa (Benth.) L. O. Williams	2
Ipomoea heterotricha Didr.	2

Ipomoea jujuyensis O'Donell	2
Ipomoea keraudreniae Deroin	2
Ipomoea lapathifolia Hallier f.	2
Ipomoea littoralis Blume	2
Ipomoea microdactyla Griseb.	2
Ipomoea orizabensis (Pellet.) Ledeb. ex Steud.	2
Ipomoea pandurata (L.) G. Mey.	2
Ipomoea platensis Ker Gawl.	2
Ipomoea reticulata O'Donell	2
Ipomoea sagittifolia Burm. f.	2
Ipomoea stans Cav.	2
Ipomoea teotitlanica McPherson	2
Ipomoea verbascoidea Choisy	2
Ipomoea androyensis Deroin	1
Ipomoea anisomeres B. L. Rob. & Bartlett	1
Ipomoea arborescens (Humb. & Bonpl. ex Willd.) G. Don	1
Ipomoea argentaurata Hallier f.	1
Ipomoea barbatisepala A. Gray	1
Ipomoea bathycolpos Hallier f.	1
Ipomoea bernoulliana Peter	1
Ipomoea bisavium A. Meeuse	1
Ipomoea bolusiana Schinz	1
Ipomoea chiliantha Hallier f.	1
Ipomoea chrysocalyx D. F. Austin	1
Ipomoea cicatricosa Baker	1
Ipomoea donaldsonii Rendle	1
Ipomoea eggersiana Peter	1
Ipomoea fimbriosepala Choisy	1
Ipomoea funis Schltdl. & Cham.	1
Ipomoea gracilisepala Rendle	1
Ipomoea graminea R. Br.	1
Ipomoea harlingii D. F. Austin	1
Ipomoea hartmannii Vatke & Rensch	1
Ipomoea hastifolia Domin	1
Ipomoea hochstetteri House	1
Ipomoea lapidosa Vatke	1
Ipomoea lindheimeri A. Gray	1
Ipomoea longifolia Benth.	1
Ipomoea longituba Hallier f.	1
Ipomoea magnusiana Schinz	1
Ipomoea marginisepala O'Donell	1
Ipomoea microsepala Benth.	1
Ipomoea minutiflora House	1
Ipomoea mombassana Vatke	1
Ipomoea neurocephala Hallier f.	1
Ipomoea ommannei Rendle	1
Ipomoea pilosa Houtt	1
Ipomoea plummerae var. *plummerae*	1
Ipomoea polymorpha Roem. & Schult.	1

Ipomoea pubescens Lam.	1
Ipomoea purga (Wender.) Hayne	1
Ipomoea racemigera F. Muell. & Tate	1
Ipomoea regnellii Meisn.	1
Ipomoea rubriflora O'Donell	1
Ipomoea saintronanensis R. W. Johnson	1
Ipomoea shirambensis Baker	1
Ipomoea sinensis (Desr.) Choisy subsp. blepharosepala (Hochst. Ex A. Rich) Verdc. Ex A. Meuse	1
Ipomoea sinensis (Desr.) Choisy	1
Ipomoea sloteri Macfarl. ex E. T. Reichert	1
Ipomoea tenuissima Choisy	1
Ipomoea trichosperma Blume	1
Ipomoea velardei O'Donell	1

THE GLOBAL CROP DIVERSITY TRUST
Platz der Vereinten Nationen 7
53113 Bonn
Germany

PUBLICATIONS CONTACT
publications@croptrust.org

GENERAL CONTACT
info@croptrust.org

CROP TRUST