

Seeds of Success: Data Form Field Dictionary

Abundance – The frequency at which the collected species or the associated taxon occur. Pick from the following: dominant, abundant, very common, common, frequent, occasional, infrequent, rare, scattered, or sporadic.

Accession – A number representing unique germplasm or collection, and associated with a Seed Collection Reference Code or field number. This number is consecutive and never to be reused. Collections made in different growing seasons from the same population are unique accessions or collections, assigned unique seed collection reference numbers. Example: CO932-5. See also *Seed Collection Reference Code*.

Approx. Area of Population – The amount of land the collection's population covers.

Approx. No. of Individual Plants Present and Accessible – The total number of plants in the population with collectable seed.

Area Sampled – In acres, the size of the area in which the collection was made. Since collections should be made from the entire population, this number should be very close to the actual population size, in acres.

Aspect – The direction of the slope where the collection was made. Measure using a compass. Example: NW.

Associated Species – List all plants found coexisting with the collected species. Example: *Salix sp.*, *Hordeum jubatum*, and *Polygonum alpinum*.

Associated Taxa – See *Associated Species*.

Collector (s) – All active participants, include the institution if different from collector's code prefix.

Common Name(s) – The vernacular or trade name(s) of the collected species. Common names should be lower case, except for proper nouns within the name. Examples: blue grass, Iowa tall grass, and creeping Jenny.

County – The country the collection was made. Example: Williams.

Cut Test – A test performed by splitting seeds in half to determine the viability of a potential collection. Immature seeds are usually green, and seeds ripe for collecting are usually brown. A cut test can be used to estimate the number of healthy seeds per fruit.

Date(s) Collected – Enter every date (in the form of day/month/year) a collection was made from the same population. Collections made in different growing seasons from the same population are unique accessions or collections, assigned unique seed collection reference numbers.

Example: August 4, 2005 is recorded as 04/08/2006.

Ecoregion – Areas with generally similar ecosystems and with similar types, qualities, and quantities of environmental resources. Enter the appropriate ecoregional number, and cite the reference. Omernik Level III Ecoregions are the SOS ecoregion standard (http://www.epa.gov/wed/pages/ecoregions/level_iii.htm).

Elevation – Distance above or below sea level. If necessary use qualifiers:

> (greater than, above)

< (less than, below)

ca. (about, approximately)

SEEDS



OF SUCCESS

Estimate the number of healthy seeds per fruit – After performing a cut test, calculate the number of seeds ripe for collection per fruit.

Estimate the number of healthy fruits per plant – This number will yield an approximation of how many plants in the population need to be sampled to reach the ideal sample size of more than 20,000 healthy seeds.

Evidence of disturbance or damage – Any manipulations made to the collection site, most collections should be made on sites falling under ‘No Damage.’

Family – The family to which the collection belongs.

Genus – The genus to which the collection belongs.

Geology – The mineral structure of the collection site, either a formation type or specific rock. Example: granite, limestone or sandstone.

GPS Datum – GPS device setting, when using GPS with a map, make sure both tools match.

Habitat – Description of the collection site as a plant community or ecosystem. Example: oak savanna.

Infraspecific Rank – The term preceding the infraspecific epithet. Example: ssp. (subspecies), var. (variety), or subvar. (subvariety).

Infraspecific Epithet – The taxonomic designation below the species level to which the collection belongs, part of the scientific name. Example: *multiflora* in *Brickellia longifolia* var. *multiflora*.

Land Form – Description of local topography should be provided. Example: flat, undulating, mountainous.

Landowner Permission – For collections made on BLM land, enter ‘BLM’; permission is needed to collect on all private and public land managed by any agency other than BLM. For public land collections, enter the land managing agency’s acronym: USFS, DOD, FWS, etc. Permission from private landowners should be obtained in writing and kept on file at the collecting team’s office.

Land Use – How the land is used by humans. Examples: grazing, protected area, recreation.

Latitude – Direction from the equator (N/S), degree, minute, and second.

Location Details – Enter the locality of the collection site. Example: 3 mi. SE of Valley View, population 100 ft. from quarry entrance.

Longitude – Direction from the Prime Meridian (E/W), degree, minute, and second.

MSB Serial Number – Millennium Seed Bank Serial Number, assigned at Kew.

NRCS PLANTS Code – See <http://plants.usda.gov/>, query the scientific name to find the unique code. Not to be used for documenting collection name or associated species.

Modifying Factors – Any event that has altered the collection site. If a modifying factor results in a cultivated population, the population can no longer be considered for collection.

Natural Dispersal Stage – The point in the population’s growing cycle where seeds would be distributed without human interference. The best stage at which to collect seed.

No. Plts. Sampled – Number of plants seed was collected from. At least one copy of 95% of the alleles occurring in the population at frequencies of greater than 0.05 can be achieved by sampling from:

1. 30 randomly chosen individuals in a fully outbreeding sexual species, or
2. 59 randomly chosen individuals in a self fertilizing species.

Plant Habit – The manner in which the collected species grows. Record one of the following: tree, shrub, forb, succulent, or grass/grasslike.

Plant Height – Distance from the ground to the top of the plant in feet and inches.

Photograph Reference – File name. Use the following naming convention to document each of the three digital images taken with for every collection: PLANTS Code_Collection Number_Picture Letter. Example: Photos for Chicago Botanic Garden's collection of *Symphyotrichum lanceolatum* are named SYLA6_CBG-419_A.jpg, SYLA6_CBG-419_B.jpg, SYLA6_CBG-419_C.jpg.

Population size (No. Plants Found) – Total number of plants living at the collection site; this number includes those plants whose seeds are not ripe for collection on collection day.

Population – A group of individuals living within the same collection site, continuous in range and generally uniform in appearance; one accession or collection.

Sub-Populations – A cluster of individuals that are divided from the main population either physically or in appearance.

Readiness of Population – The ripeness of the population on collection day; collections should be made when the population is closest to natural dispersal stage.

Seed Collection Reference Code – BLM field office or institutional code followed by a consecutive and chronological number representing the unique collection or accession, never to be reused. See *Accession*. Example: OR020-1 or CBG-1.

Seed Collected From – Choose from the following: plant, ground, both. The best collections are made from plants.

Slope – The degree of steepness at the collection site; record a number representing the degree of slope 0-90 measured with a clinometer or use a descriptive word. Examples: 30 degrees, flat, gentle, steep, or cliff.

Soil Color – Refer to the Munsell Soil Color Chart and document color using the code and descriptive name.

Soil Texture – Describes the soil at the collection site with the following terms: clay, silt, and sand etc. Soil texture is best estimated by rolling a sample of soil between your finger and thumb. Soil pH can only be measured with the use of a pH meter.

Species – The species to which the collection belongs.

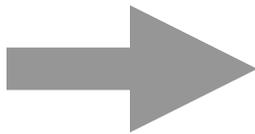
State – The state in which the collection was made.

Subspecies – See *Infraspecific Rank*.

Where image will be filed – Institution(s) where the image is stored.

Variety – See *Infraspecific Rank*.

Example of Correctly Entered Data Form



Complete all fields.
Circle relevant descriptions shown in *italics*.

MSB Serial Number:
NRCS PLANTS Code:
Cleaning Facility:

Date(s) Collected (DD/MM/YY): Seed Collection Reference Number:

Collector(s):

Country: Ecoregion (T,O,B): State: County:

Location Details:

Lat. (dg/min/sec) (ex: 40° 34' 19.5" N): GPS Used?: If no, please see other side.

Long. (dg/min/sec) (ex: 107° 36' 51.54" W): GPS Datum:

Elevation (feet): Landowner Details (Permission?):

HABITAT DATA

Habitat, Associated Species & Ecological Site Descriptor:
Atriplex canescens, Ephedra nevadensis, Psoralea polydenius

Modifying Factors:

Land Form: Slope:

Land Use: Aspect:

Geology:

Soil Texture: Soil Color:

COLLECTION DATA - If plant has been identified by a specialist, please see other side.

Family: No. of Plants Sampled (min. 50):

Genus: No. of Plants Found (approx.):

Species: Area Sampled (acres):

Subspecies/Variety:

Seeds Collected From:

Plant Habit: Plant Height (feet):

Native plant materials development and research this accession will be used for:

Notes to assist identification of pressed specimen (e.g. flower color, odor, presence of closely related species):

Common Name(s) of Plants:

Photograph Taken: Reference (PLANTS Code Coll. Number_Pic. No.): Where Image will be Filed:

PRE-COLLECTION CHECKLIST

(Check box to right if condition indicated by **boldface** is met or is the most frequently occurring condition.)

Assess Population & Seed Dispersal Stage					
Approximate area of population:	5 acres	(feet, yards, miles.....)			
Approximate total number of individual plants present and accessible:	0-50	50-500	500-5000	> 5000	
Evidence of disturbance or damage:	<i>Resown</i>	<i>Burnt</i>	<i>Sprayed</i>	No damage	
Readiness of population for collecting: give percentages or circle the most frequently occurring:	<i>Vegetative</i>	<i>In flower</i>	<i>Immature seeds</i>	Around natural dispersal	<i>Post dispersal</i>
Estimate the number of individual plants at natural dispersal stage:	<50	≥50			
Is the population:	A single population	A population with distinct sub-populations (Can you sample separately or from the most suitable?)			

Assess Seed Quality & Availability					
On a typical individual, where on the plant/branch/fruit is the seed at natural dispersal stage:	Recognized				
Using a cut test on the seeds at this stage, give percentages or circle the most frequently occurring:	Healthy	<i>Insect-damaged</i>	<i>Empty</i>	<i>Moldy</i>	<i>Malformed/other damage</i>
Estimate the number of healthy seeds per fruit:					
Estimate the number of fruits per individual plant:					

Should Seed Be Collected On This Trip?	
Using the above information, if you only collect 20% of the healthy seeds available today, will this result in a collection of >10,000 healthy seeds?	

OTHER DATA

If GPS was not used, please state method of obtaining lat. and long.:

Map Publisher:

Series: Scale:

Map Coordinates: Map Date (DD/MM/YY):

Herbarium voucher specimens:

Number of Pressed Specimens: or more Date Voucher Was Taken (DD/MM/YY):

Circle one: a. All Herbarium duplicates will be sent to Kew to arrange labeling, verification and distribution (default)

b. One duplicate will be sent to _____ herbarium for verification, other duplicates will be sent by the collector to Kew to arrange labeling and distribution.

c. All Herbarium duplicates will be sent to _____ herbarium that has agreed to arrange labeling, verification and distribution.

d. A herbarium voucher has been sent to the National Herbarium at the Smithsonian, and the remaining will be distributed by the _____ collecting team to regional herbaria: _____, _____.

By default, besides any herbaria mentioned above, one specimen will be sent to Kew and one to the Smithsonian. If you would like to request that additional specimens be sent to regional and/or local herbaria, please fill in the following information:

Regional Herbarium:	<input type="text" value="Rancho Santa Ana Botanic Garden
1500 N. College Ave.
Claremont, CA 91711
Attn: Steve Boyd"/>	Local Herbarium:	<input type="text" value="Bureau of Land Management
c/o Anne Halford
351 Pacu Lane, Suite 100
Bishop, CA 93514"/>
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If collection has been identified by a specialist, please complete sections below:

Material Identified:	<input checked="" type="checkbox"/> In Field <input type="checkbox"/> From Pressed Specimen on Day of Collection	Date identified (DD/MM/YY):	<input type="text" value="6/5/08"/>
	<input type="checkbox"/> From Pressed Specimen on Another Date <input type="checkbox"/> From Photograph		
Identified by:	<input type="text" value="Ferrell-Ingram, K."/>	Organization:	<input type="text" value="BLM"/>