Supplemental data for

El Tahir, I. M., Babiker, A. Z., Abdalla, E. A., Ahmed, A. A. E., Goda, M. O. Y., Elgabri, M. A. M. (2025). Overview of germplasm collecting activities for plant genetic resources for food and agriculture in Sudan from 2002 to 2022. *Genetic Resources* 6 (11), 24–40. doi: https://doi.org/10.46265/genresj.BWNF7962

Table of Contents

Supplemental Table 1. Germplasm collecting missions across the cultivation seasons from 2002-2003 to 2021-2022

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
1	Single species	Low rainfall savanna	North Kordofan	Watermelon	January 2003	Elsadig Ahmed Abdalla	Magdi Ahmed Mohamed Elgabri	85
2	Single species	Desert on Nile banks	River Nile	Banana	March 2003	Elsadig Ahmed Abdalla		12
3	Single species	Semi–desert	Kassala	Banana	May 2003	Elsadig Ahmed Abdalla		24
4	Multi-species	Low rain savanna on sand	North Kordofan	Different crops	December 2003	Magdi Ahmed Mohamed Elgabri		203
5	Multi-species	High rainfall savanna	South Kordofan	Different crops	December 2003	Magdi Ahmed Mohamed Elgabri		29
6	Single species	Semi–desert	Kassala	Banana	January 2004	Elsadig Ahmed Abdalla		44

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
7	Single species	Semi–desert	Kassala	Banana	March 2004	Elsadig Ahmed Abdalla		81
8	Single species	Semi–desert	Khartoum	Banana	March 2004	Elsadg Ahmed Abdalla		4
9	Single species	Low rainfall savanna on clay	Gezira	Banana	June 2004	Elsadig Ahmed Abdalla		49
10	Multi-species	High rainfall savanna	South Kordofan	Different crops	November 2004	Ali Zakarai Babiker	Magdi Ahmed Mohamed Elgabri	933
11	Single species	Semi–desert	Kassala	Sorghum	February 2005	Elsadig Ahmed Abdalla		230
12	Multi-species	Desert on Nile banks	Northern	Different crops	February 2005	Awadelkarim Alamelhuda Ahmed		200
13	Single species	Semi–desert	Kassala	Banana	March 2005	Elsadig Ahmed Abdalla		2
14	Multi-species	Low rainfall savanna on clay	Blue Nile	Different crops	December 2005	Elsadig Ahmed Abdalla		391

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
15	Multi-species	High rainfall savanna	South Kordofan	Different crops	January 2006	Ali Zakarai Babiker	Magdi Ahmed Mohamed Elgabri	325
16	Multi-species	Low rainfall savanna	White Nile	Different crops	November 2006	Awadelkarim Alamelhuda Ahmed		183
17	Multi-species	High rainfall savanna	South Kordofan	Different crops	November 2006	Ali Zakarai Babiker	Magdi Ahmed Mohamed Elgabri	249
18	Single species	Low rainfall savanna on clay	Blue Nile	Banana	December 2006	Elsadig Ahmed Abdalla		84
19	Single species	Low rainfall savanna on clay	Sennar	Banana	December 2006	Elsadig Ahmed Abdalla		14
20	Multi-species	Desert and seasonal flooded areas	Red Sea	Different crops	January 2007	Elsadig Ahmed Abdalla		257
21	Single species	Desert on Nile banks	Northern	Banana	April 2007	Elsadig Ahmed Abdalla		21
22	Single species	High rainfall savanna	South Darfur	Banana	May 2007	Imam Malik		22

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
23	Multi-species	Low rain savanna on sand	North Kordofan	Different crops	October 2007	Ali Zakaria Babiker	Magdi Ahmed Mohamed Elgabri	104
24	Multi-species	Desert on Nile banks	River Nile	Different crops	March 2008	Awadelkarim Alamelhuda Ahmed		111
25	Multi-species	Low rain savanna on sand	North Kordofan	Different crops	January 2009	Ali Zakaria Babiker	Magdi Ahmed Mohamed Elgabri	47
26	Multi-species	High rainfall savanna	South Kordofan	Different crops	November 2010	Ali Zakarai Babiker	Magdi Ahmed Mohamed Elgabri	139
27	Multi-species	Low rainfall savanna	Gedarif	Different crops	March 2014	Elsadig Ahmed Abdalla		108
28	Multi-species	Semi–desert and low rainfall savanna	Kassala	Different crops	March 2014	Elsadig Ahmed Abdalla		109
29	Multi-species	Low rainfall savanna	Central Darfur	Different crops	November 2014	Alkahlil Alnour Braima		198

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
30	Multi-species	Low rainfall savanna on clay	Gezira	Different crops	November 2014	Ali Zakaria Babiker		51
31	Multi-species	Low rain savanna on sand	North Kordofan	Different crops	November 2014	Omer Bakheit	Magdi	118
32	Multi-species	Low rainfall savanna	Gedarif	Different crops	December 2014	Elsadig Ahmed Abdalla		247
33	Multi-species	Semi–desert	Khartoum	Vegetables	March 2015	Ali Zakaria Babiker	Amel Mohamed Ali	36
34	Single species	Desert on Nile banks	Northern	Date palm	August 2015	Elsadig Ahmed Abdalla	Barakat Ali Abdelfarag	56
35	Multi-species	Low rainfall savanna	West Darfur	Different crops	October 2015	Shareif Hammad Hussin		714
36	Multi-species	Low rain savanna on sand	North Kordofan	Natural range plants	November 2015	Hassan Osman		86
37	Multi-species	Low rainfall savanna	West Kordofan	Natural range plants	December 2015	Hassan Osman		33
38	Multi-species	Desert and seasonal flooded areas	Red Sea	Crop Wild Relatives	March 2016	Elsadig Ahmed Abdalla		30

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
39	Single species	Desert on Nile banks	River Nile	Date palm	October 2016	Elsadig Ahmed Abdalla	Barakat Ali Abdelfarag	40
40	Multi-species	Low rainfall savanna on clay	Blue Nile	Crop Wild Relatives	November 2016	Elsadig Ahmed Abdalla	Mohamed Elbagir, Sabri	44
41	Multi-species	Low rain savanna on sand	North Kordofan	Crop Wild Relatives	November 2016	Ali Zakaria Babiker	Mohamed Elbagir, Magdi Ahmed Mohamed Elgabri	42
42	Multi-species	Low rainfall savanna	Gedarif	Crop Wild Relatives	December 2016	Elsadig Ahmed Abdalla	Mohamed Elbagir, Monir Idris	60
43	Multi-species	Low rainfall savanna	West Kordofan	Crop Wild Relatives	December 2016	Ali Zakaria Babiker	Mohamed Elbagir, Magdi Ahmed Mohamed Elgabri	24
44	Single species	Desert on Nile banks	Northern	Date palm	October 2017	Elsadig Ahmed Abdalla	Barakat Ali Abdelfarag	51
45	Multi-species	Low rainfall savanna	West Kordofan	Crop Wild Relatives	November 2017	Ali Zakaria Babiker	Mohamed Elbagir,	12

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
							Magdi Ahmed Mohamed Elgabri	
46	Multi-species	High rainfall savanna	South Kordofan	Crop Wild Relatives	November 2017	Ali Zakaria Babiker	Mohamed Elbagir, Magdi Ahmed Mohamed Elgabri	64
47	Multi-species	High rainfall savanna	Blue Nile	Crop Wild Relatives	December 2017	Elsadig Ahmed Abdalla	Mohamed Elbagir, Sabri	56
48	Multi-species	High rainfall savanna	South Darfur	Different crops	November 2018	Abdelsamad Hassan Ahmed		692
49	Multi-species	Low rainfall savanna on clay	Gezira	Natural range plants	November 2018	Ali Zakaria Babiker		42
50	Single species	Desert on Nile banks	Northern	Date palm	December 2018	Elsadig Ahmed Abdalla	Barakat Ali Abdelfarag	32
51	Multi-species	Semi desert	North Darfur	Different crops	November 2019	Abdalla Adam Osman		365

NO.	Type of Mission	Agroecological zone	State	Targeted plants	Date	Leading Researcher	Collaborating Researcher and/ or assisting technician	Total accessions
52	Multi-species	Low and high rainfall savanna	East Darfur	Different crops	November 2020	Alkhader Ali Mokhaer		131
53	Multi-species	High rainfall savanna	South Kordofan	Different crops	November 2021	Ali Zakaria Babiker	Mohamed Elbagir, Magdi Ahmed Mohamed Elgabri	58
54	Multi-species	Low and high rainfall savanna	East Darfur	Different crops	November 2021	Alkhader Ali Mokhaer Mohamad		247
55	Multi-species	Low rainfall savanna	West Kordofan	Different crops	November 2021	Ali Zakaria Babiker	Magdi Ahmed Mohamed Elgabri	43
56	Multi-species	Low and high rainfall savanna on clay	Blue Nile	Different crops	December 2021	Elsadig Ahmed Abdalla		88
	Total		**56**					**7720**

Supplemental Material 1

Agricultural Research Corporation

AGRICULTURAL PLANT GENETIC RESOURCES CONSERVATION AND RESEARCH CENTRE, SUDAN

Germplasm Collection Form

Collector's Name(s): _____

Collector's Number: _____

Crop/Plant Name: _____

Scientific Name: _____

Common Local Name: _____

Variety Name: _____

Collecting Date: _____

Name of Site of collection: _____

Latitude: _____

Longitude: _____

Altitude: _____

Administrative Unit: _____

Locality: _____

State: _____

Biological Status:

- Wild
- Weedy
- Traditional/Landrace/Farmers' Variety
- Breeding Material
- Advanced/Improved Cultivar

Collecting Source:

- Wild Habitat
- Farmers' Field
- Farmers' Store
- Market
- Institute/Company
- Other

Farmer's Name: _____

Donor's Name: _____

Donor's Number: _____

Remarks: _____

_____

_____

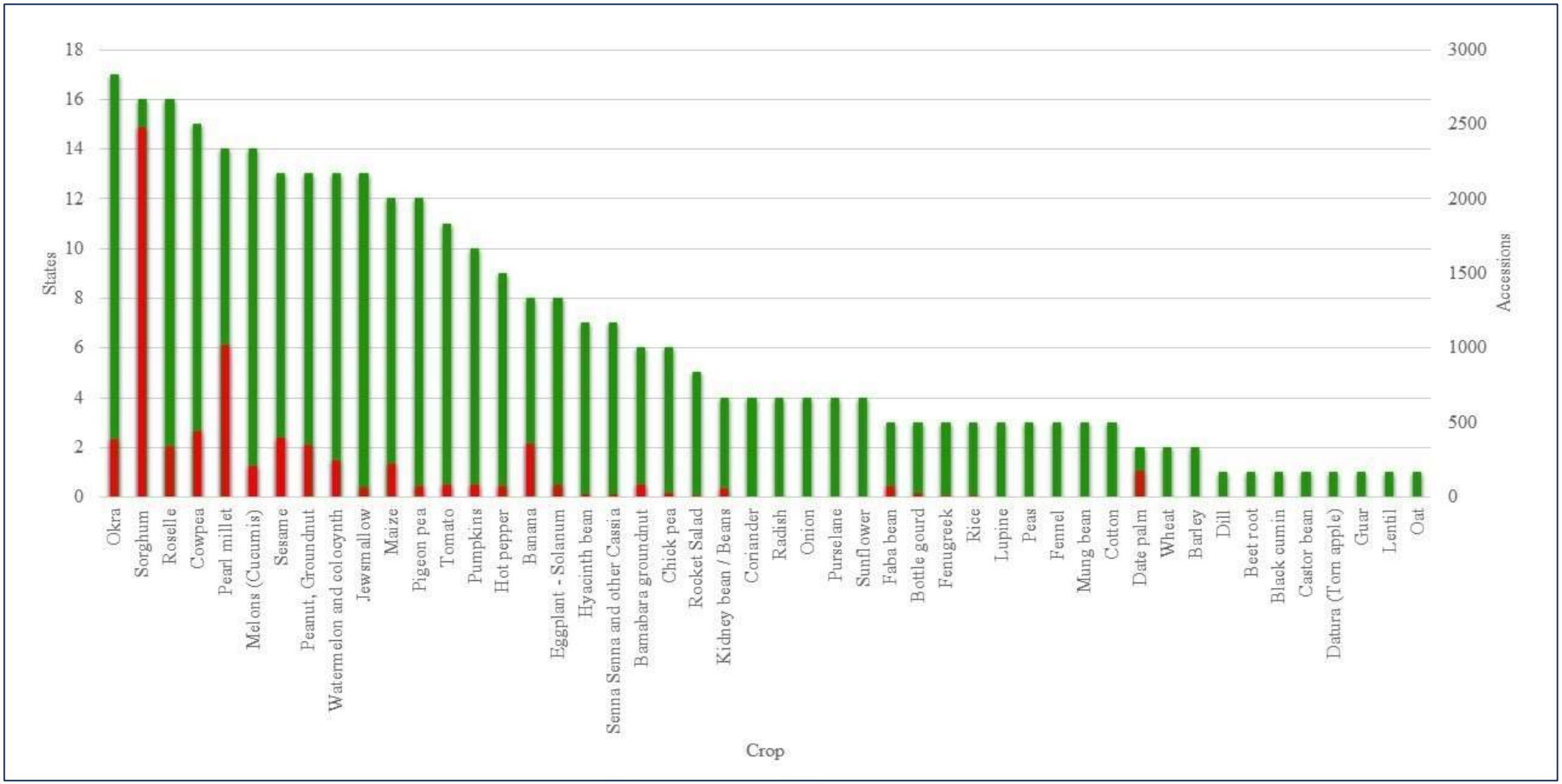
Supplemental Table 2. Total of collection sites visited by the germplasm collection missions in the different states during the cultivation seasons between 2002 and 2022 and the ranges of coordinates within which they were geographically located

No.	State	Collection years	Total collection sites	Range of latitudes (°)	Range of longitudes (°)
1	West Darfur	2015	142	12.43 -14.45 N	21.85 - 25.40 E
2	South Kordofan	2003, 2004, 2006, 2010, 2017, 2021	135	09.52 - 15.85 N	27.55 – 32.12 E
3	Blue Nile	2005, 2006, 2016, 2017, 2021	109	11.07 – 12.80 N	24.55 – 35.03 E
4	North Darfur	2019	94	12.32 - 15.50 N	23.43 - 26.42 E
5	South Darfur	2007, 2018	86	09.83 - 13.95 N	23.17 - 26.18 E
6	Northern state	2005, 2007, 2015, 2017, 2018	84	17.98 - 20.93 N	30.30 -32.02 E
7	North Kordofan	2003, 2007, 2009, 2014, 2015, 2016	78	12.05 - 14.97 N	22.55 - 31.40 E
8	Kassala	2003, 2004, 2005, 2014	74	14.28 - 15.83 N	35.38 - 35.98 E
9	East Darfur	2020, 2021	65	10.65 - 14.49 N	23.08 - 27.98 E
10	River Nile	2003, 2008, 2016	61	16.45 - 19.53 N	31.22 - 34.23 E
11	White Nile	2006	55	11.95 – 13.18 N	32.02 – 34.00 E
12	Gedarif	2014, 2016	53	12.72 - 14.80 N	34.10 - 36.28 E
13	Gezira	2004, 2014, 2018	39	13.88 - 15.17 N	33.28 - 34.07 E
14	Red Sea	2007, 2016	26	17.78 – 19.78 N	37.01 – 38.43 E
15	West Kordofan	2015, 2016, 2017, 2021	22	10.56 - 13.60 N	27.19 - 30.48 E
16	Central Darfur	2014	18	12.02 – 13.73 N	22.15 – 24.03 E
17	Khartoum	2004, 2015	9	15.32 - 16.12 N	32.45 - 32.57 E
18	Sennar	2006	5	12.50 – 13.00 N	34.00 – 34.98 E
Total			**1155**		

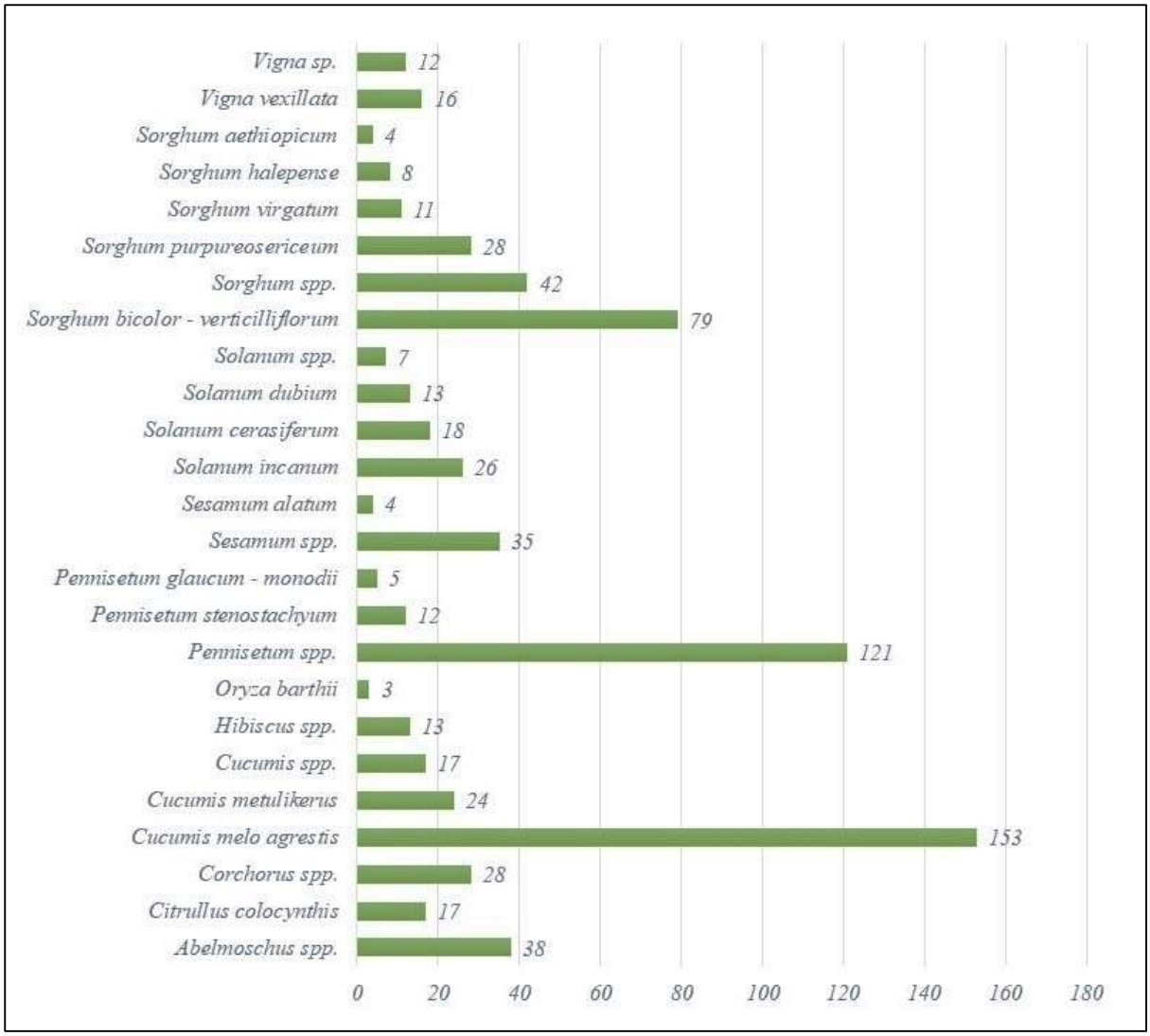
Supplemental Table 3. Total accessions collected from each crop or plant and the total number of states from where they were collected

Plant	Genus	Plant group	Total accessions	Total states
Sorghum	*Sorghum*	Cereal	2481	16
Pearl millet	*Pennisetum*	Cereal	1022	14
Cowpea	*Vigna*	Legume	449	15
Sesame	*Sesamum*	Oil crop	398	13
Okra	*Abelmoschus*	Vegetable	394	17
Banana	*Musa*	Fruit	357	8
Peanut, Groundnut	*Archis*	Oil crop	349	13
Roselle	*Hibiscus*	Medicinal and aromatic plants	344	16
Watermelon	*Citrullus*	Vegetable	252	13
Maize	*Zea*	Cereal	221	12
Melons	*Cucumis*	Vegetable	210	14
Range plants	Different genera	Range plant	181	3
Date palm	*Phoenix*	Fruit	179	2
Pumpkins	*Cucurbita*	Vegetable	84	10
Tomato	*Solanum*	Vegetable	83	11
Bambara groundnut	*Vigna*	Legume	80	6
Eggplant	*Solanum*	Vegetable	80	8
Faba bean	*Vicia*	Legume	77	3
Hot pepper	*Capsicum*	Vegetable	75	9
Pigeon pea	*Cajanus*	Legume	74	12
Jewsmallow	*Corchorus*	Vegetable	66	13
Kidney Bean	*Phaseolus*	Legume	62	4
Chick pea	*Cicer*	Legume	31	6
Bottle gourd	*Lagenaria*	Vegetable	26	3
Hyacinth bean	*Lablab*	Legume	23	7
Senna and others	*Cassia*	Medicinal and aromatic plants	18	7
Fenugreek	*Trigonella*	Medicinal and aromatic plants	12	3
Rice	*Oryza*	Cereal	12	3
Rocket Salad	*Eruca*	Vegetable	9	5
Lupine	*Lupinus*	Legume	7	3
Coriander	*Corianderum*	Medicinal and aromatic plants	6	4
Radish	*Raphanus*	Vegetable	6	4
Wheat	*Triticum*	Cereal	6	2
Onion	*Allium*	Vegetable	5	4
Peas	*Pisum*	Legume	5	3

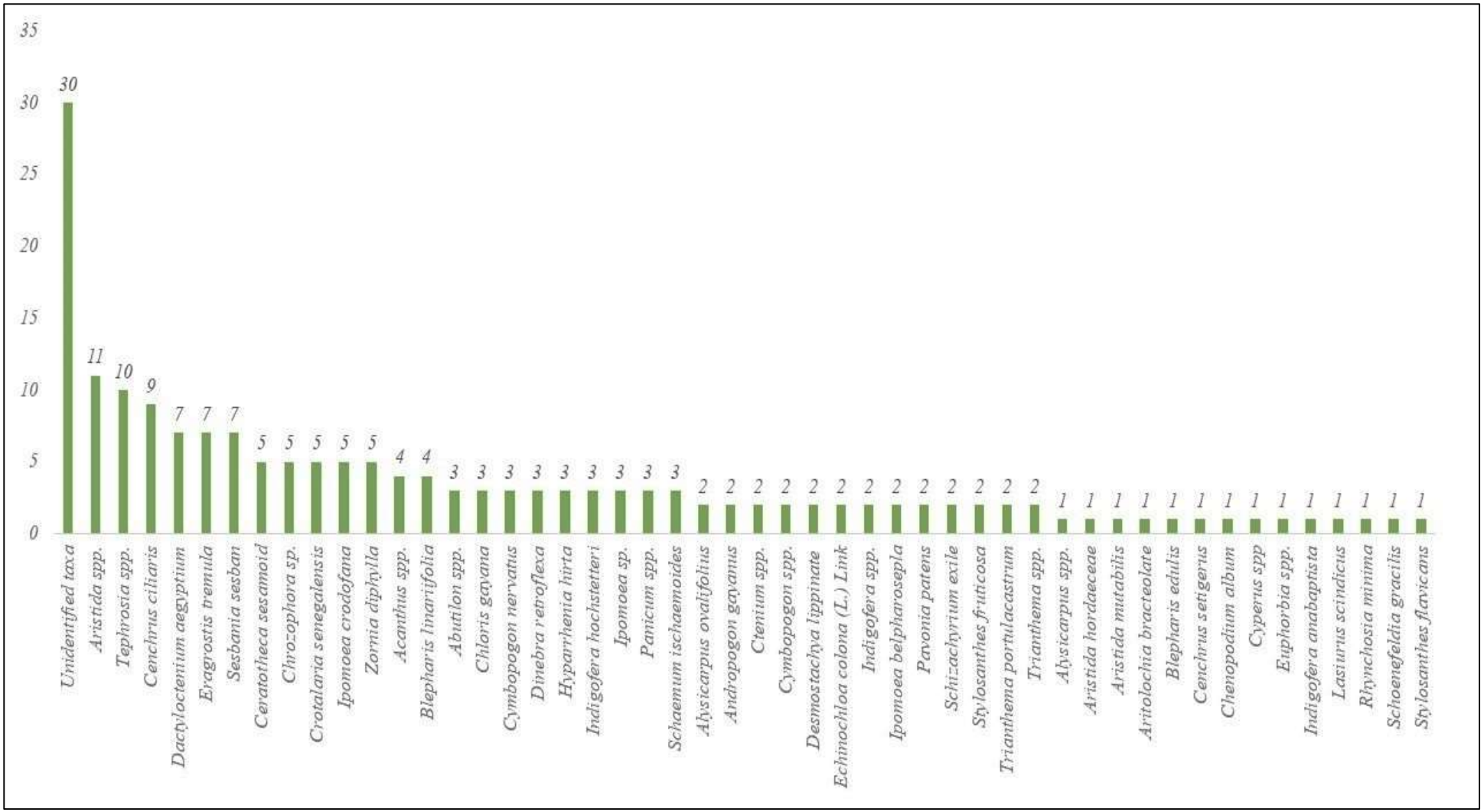
Plant	**Genus**	**Plant group**	**Total accessions**	**Total states**
Purselane	*Portulaca*	Vegetable	5	4
Sunflower	*Helianthus*	Oil crop	5	4
Barley	*Hordeum*	Cereal	4	2
Fennel	*Foeniculum*	Medicinal and aromatic plants	4	3
Mung bean	*Vigna*	Legume	4	3
cotton	*Gossypium*	Fibre crop	3	3
Dill	*Anethum*	Medicinal and aromatic plants	2	1
Beetroot	*Beta*	Vegetable	1	1
Black cumin	*Nigella*	Medicinal and aromatic plants	1	1
Castor bean	*Ricinus*	Oil crop	1	1
Thorn apple	*Datura*	Medicinal and aromatic plants	1	1
Guar	*Cyamopsis*	Legume	1	1
Lentil	*Lens*	Legume	1	1
Oat	*Avena*	Cereal	1	1
Soya Bean	*Glycine*	Oil crop	1	1
Sowthistle	*Sonchus*	Medicinal and aromatic plants	1	1
Total			**7720**	



Supplemental Figure 1. Total number of states from where total accessions of the genetic resources of different crops collected



Supplemental Figure 2. Total number of accessions collected from different crop wild relatives



Supplemental Figure 3. Total number of accessions collected from each range plant species