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Biodiversity Directorate

National Center for Agricultural

Research and Extension (NCARE)

Amman - Jordan

NCARE - October, 2015

NCARE Genebank

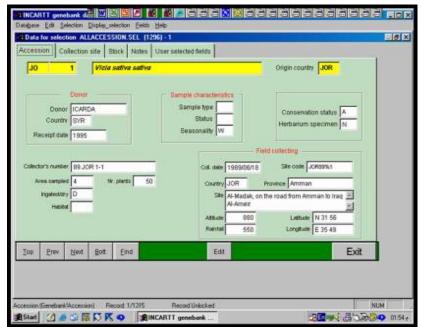


 The Genebank at NCARE was established in 1993.





 During 1996 the Genebank was fully equipped and started conservation activities



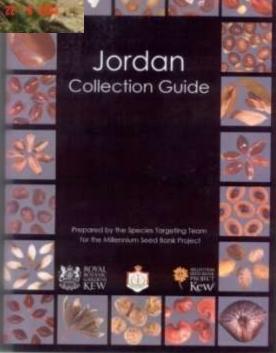
Methodology





There are three main themes of the seed banking procedure:

- Planning and collecting.
- Processing and testing.
- storage and utilization.



Planning and collecting



- Planning and permission seeking.
- Field collection of labeled seeds and voucher (pressed) specimens plus field data.
- Rapid shipment of the seeds & herbarium samples to the Genebank







processing and testing









- Data record creation about each accession
- Drying
- Seed cleaning
- Determination of seed moisture status
- Seed quantity determination



storage and utilization









- Packaging
- Storage under cold conditions
- Distribution to users (through time)
- Characterization and evaluation
- Germination test (through time)
- Regeneration / Multiplication of collections (when required)



- Identification in the field
- Special notes
- Colorful simple booklets





The Genebank conserves 4367 seed accessions representing:



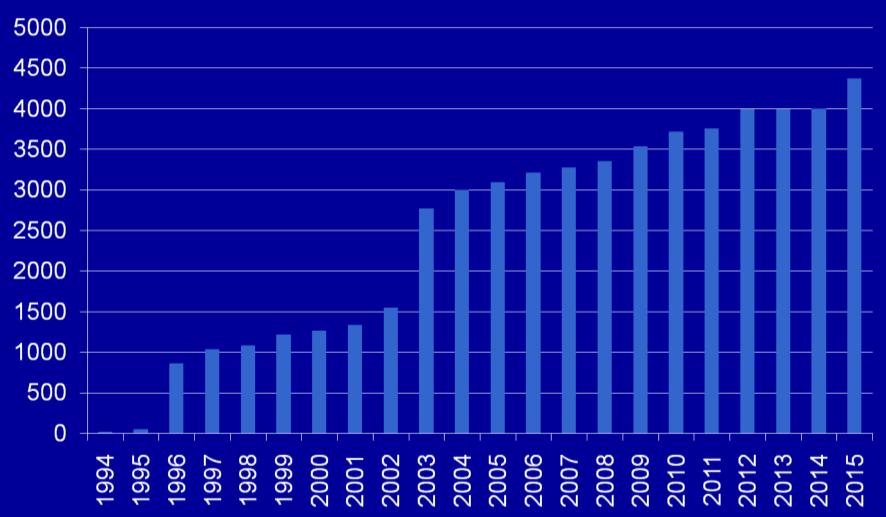
91 Families

438 Genus

672 species



accessions conserved in Genebank since 1994



Distribution of seeds from the Genebank since 1999



- 2134 different accessions
- 95485 seeds

These seeds were used for:

- M.Sc. Researches
- Ph.D. Researches
- Evaluation & characterization
- Basic science researches in Universities and different research institutions inside and outside country.



Genebank & Herbarium Database (interpretation)



 Information system to help running and sustaining genetic resources conservation and utilization



Genebank database Main features (1)



 Focus on data documenting accessions (seeds, Herbaria) conserved in long- and short-terms



Genebank database main features (2)



- Focus on "operational" data
 - supports management of collections



supports planning of future work



Genebank database main features (3)

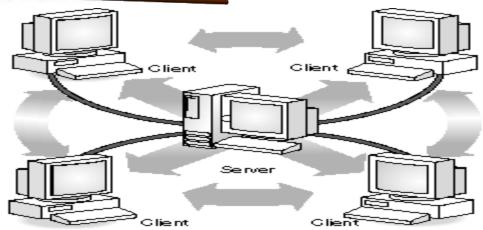


- Multi-user
 - all staff has daily access





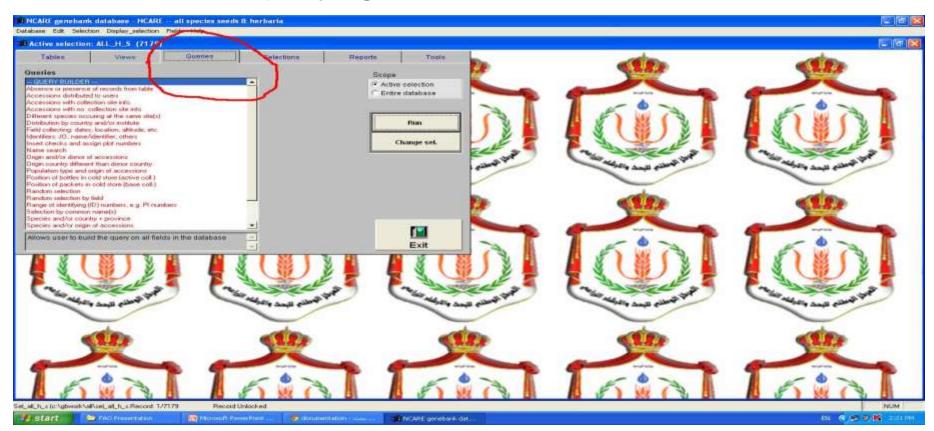
on network



Genebank database main features (4)



- Flexibility in querying
 - by pre-defined or built by users
 - recurrent querying



Genebank database main features (5)



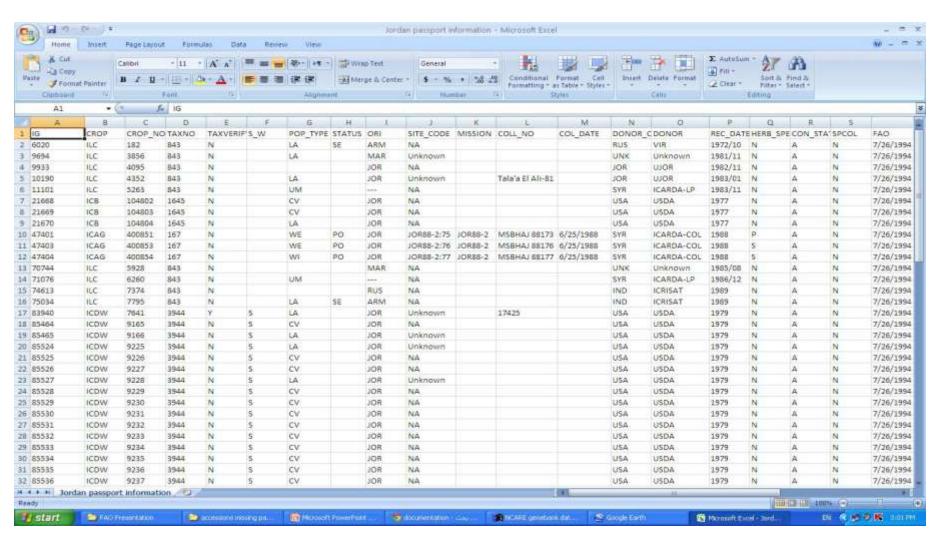
 Flexibility to "export" data and/or to link to other data analysis packages, e.g. GIS



Genebank database main features (6)



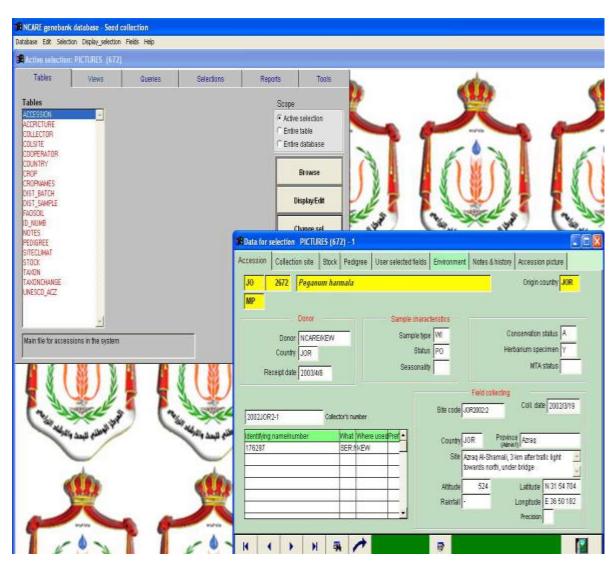
Flexibility in "importing" data from different sources



Genebank database main features (7)



- Open-ended system easy to accommodate new data.
- Adherence to international data standards

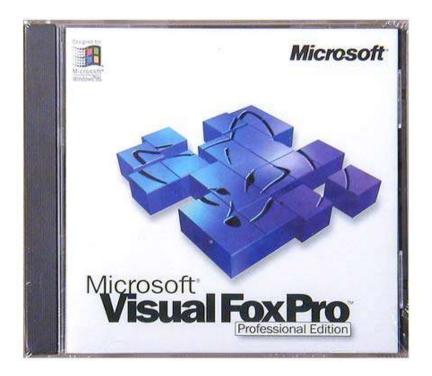


Genebank database considerations (1)



 Backbone: commercial Data Base Management System (FoxPro).

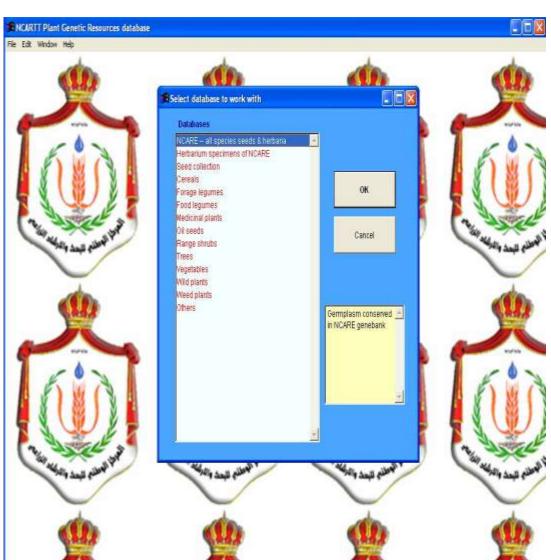




Genebank database considerations (2)



- Database design defined by all staff.
- One comprehensive database is better than many scattered ones.



Examples of more than two databases



- Database supporting ex-situ conservation of genetic resources at GRU of NCARE.
- Database of botanical surveys for Medicinal Plants Project.
- Database supporting Herbarium samples conserved at the Herbarium at GRU of NCARE



Genebank database available data

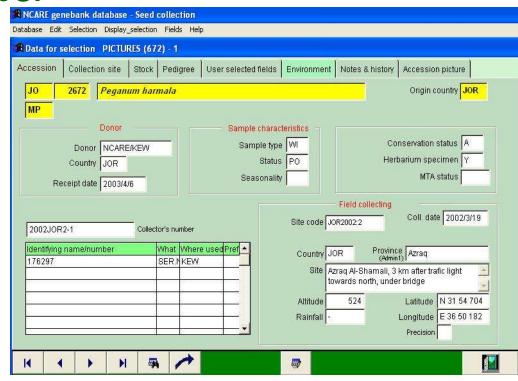


Passport - the most important category.

 Characterization and preliminary evaluation routine for major crops.

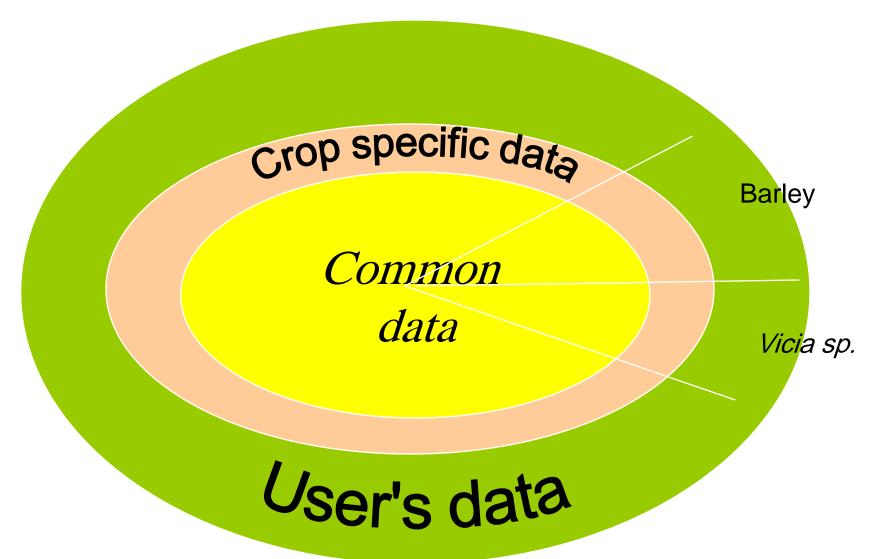
 Stock - quality and quantity of seeds.

- Distribution.
- Other: taxonomy, collaborators, etc.

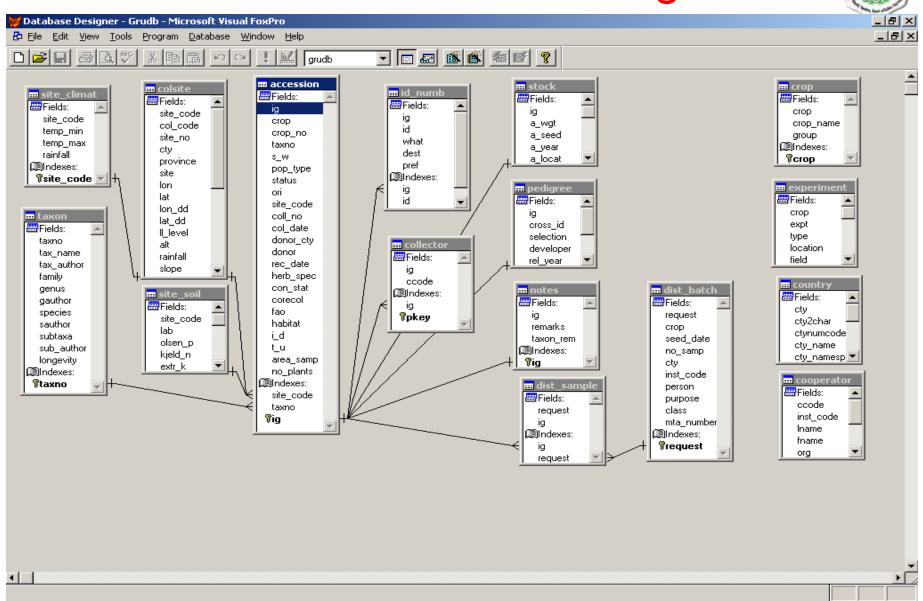


Genebank database layers





Genebank database design





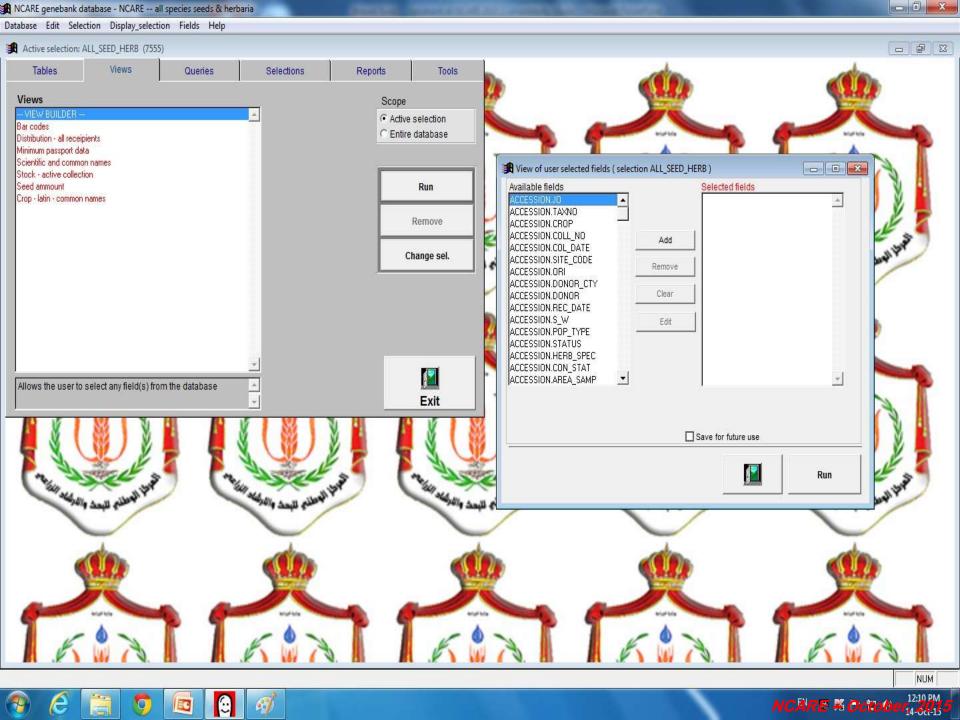


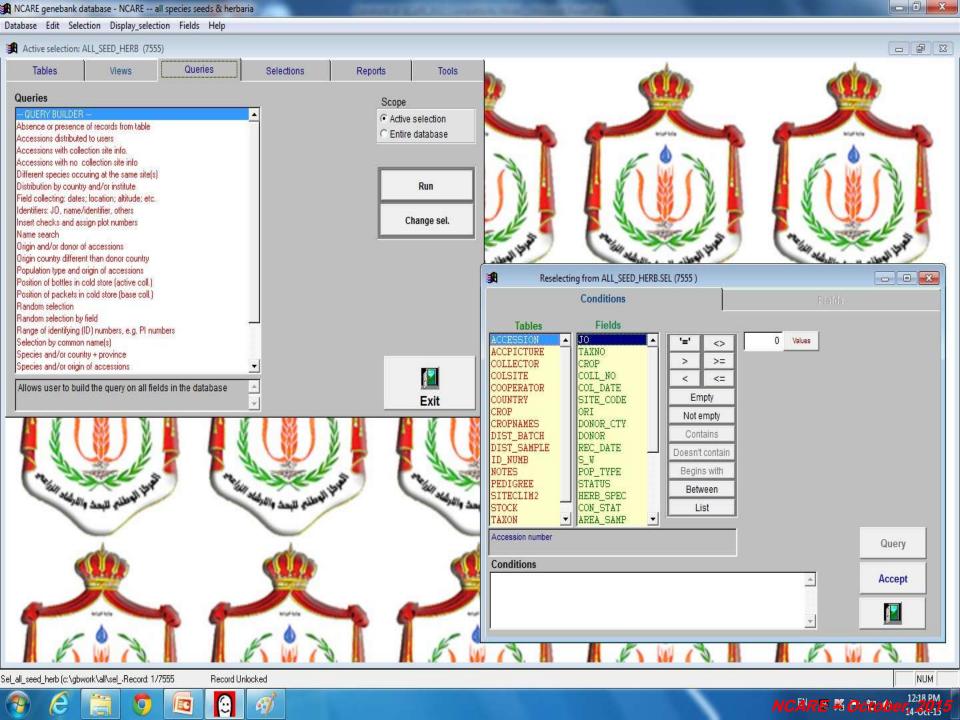


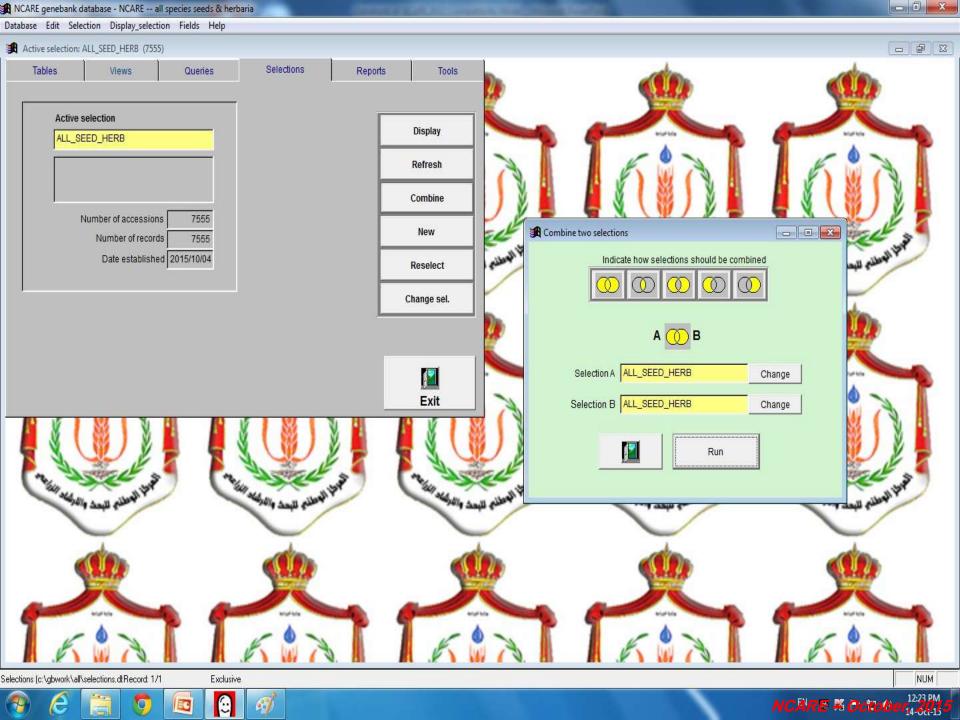


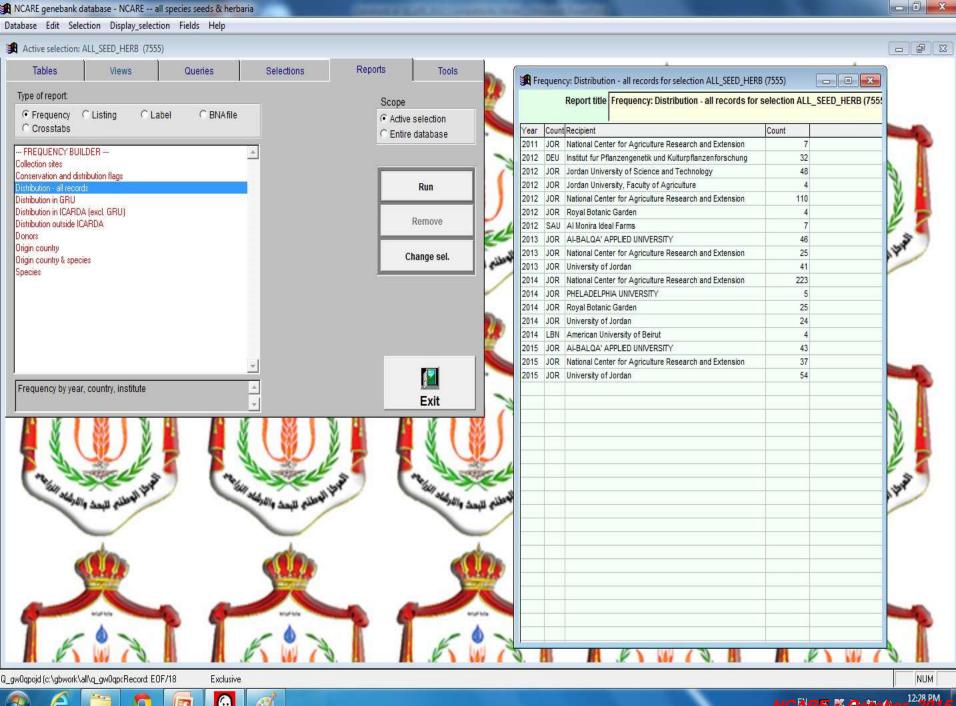














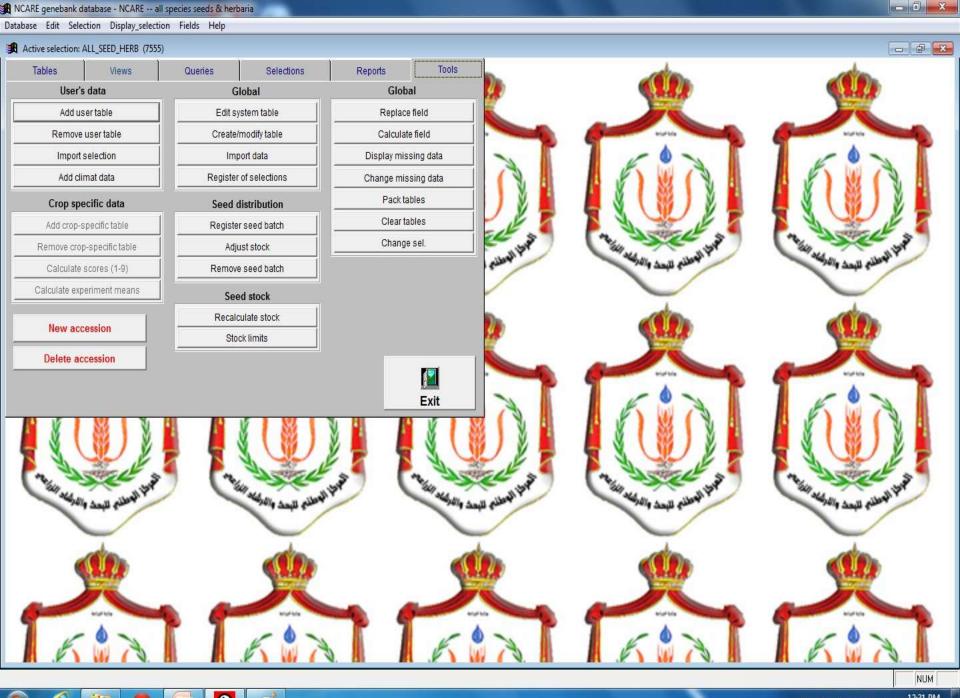
















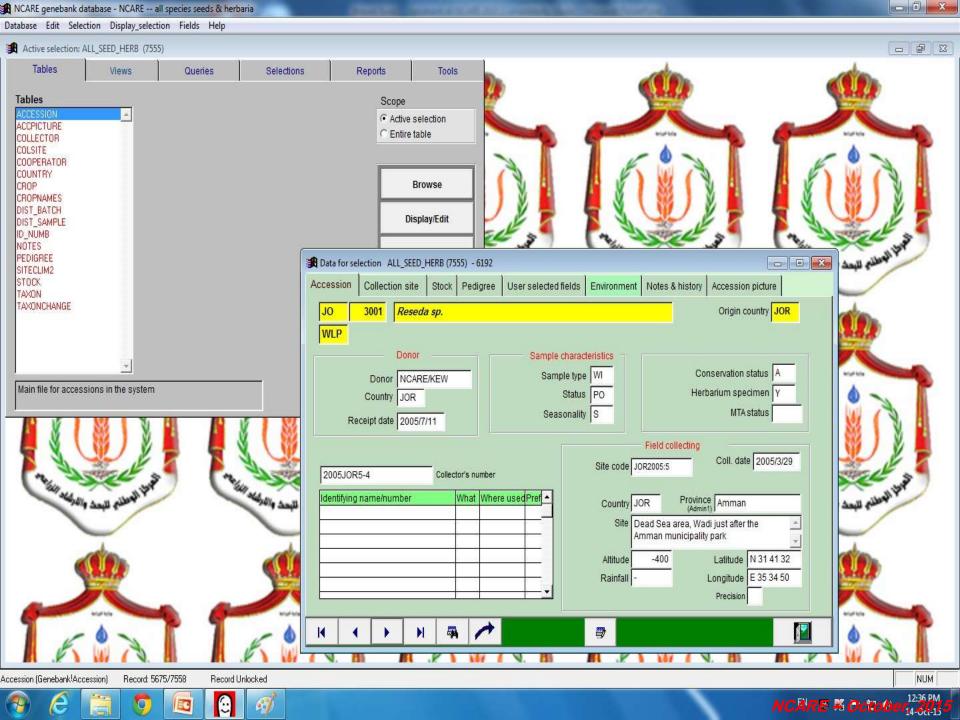


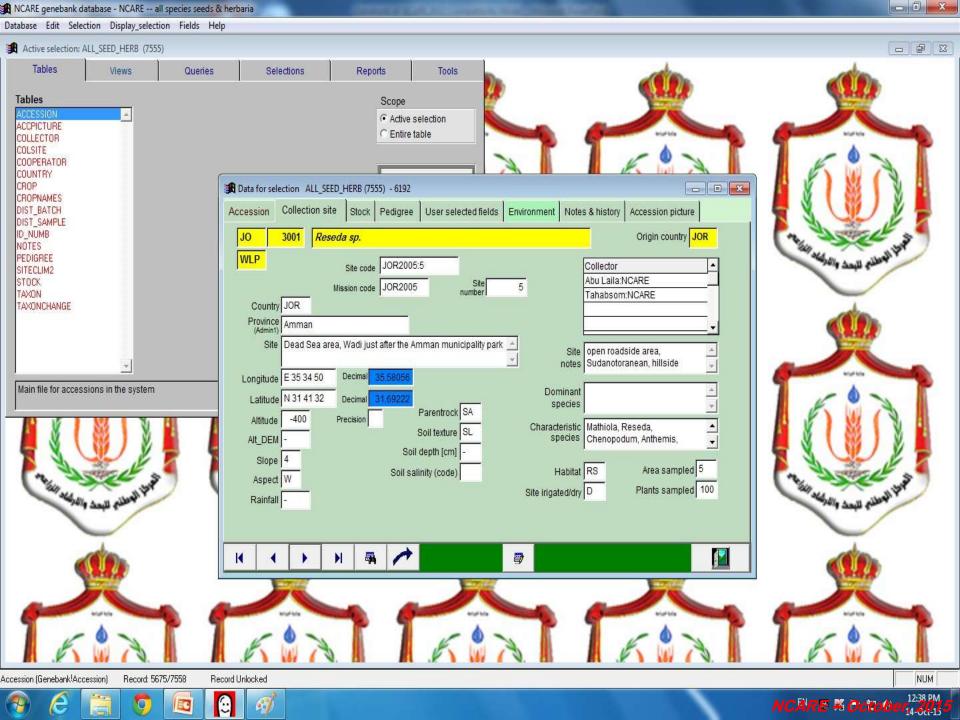


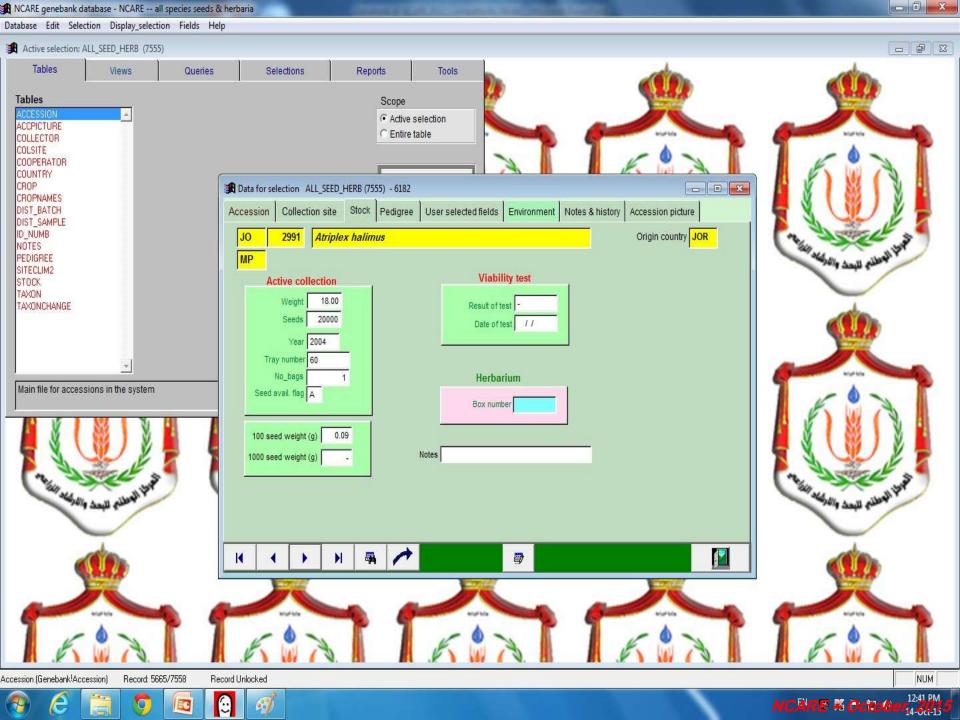


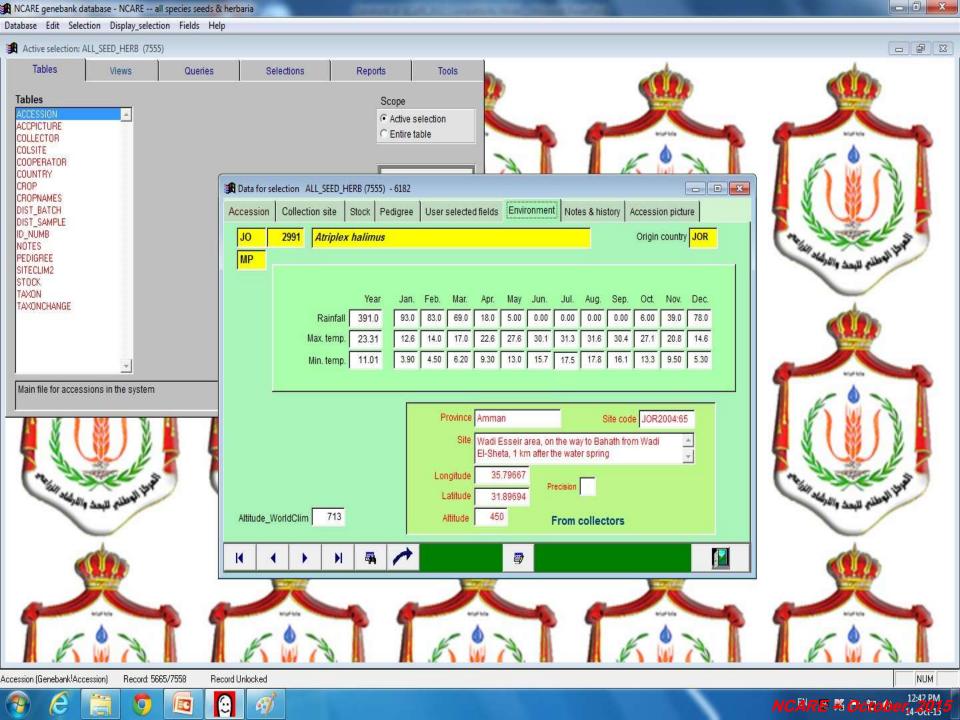


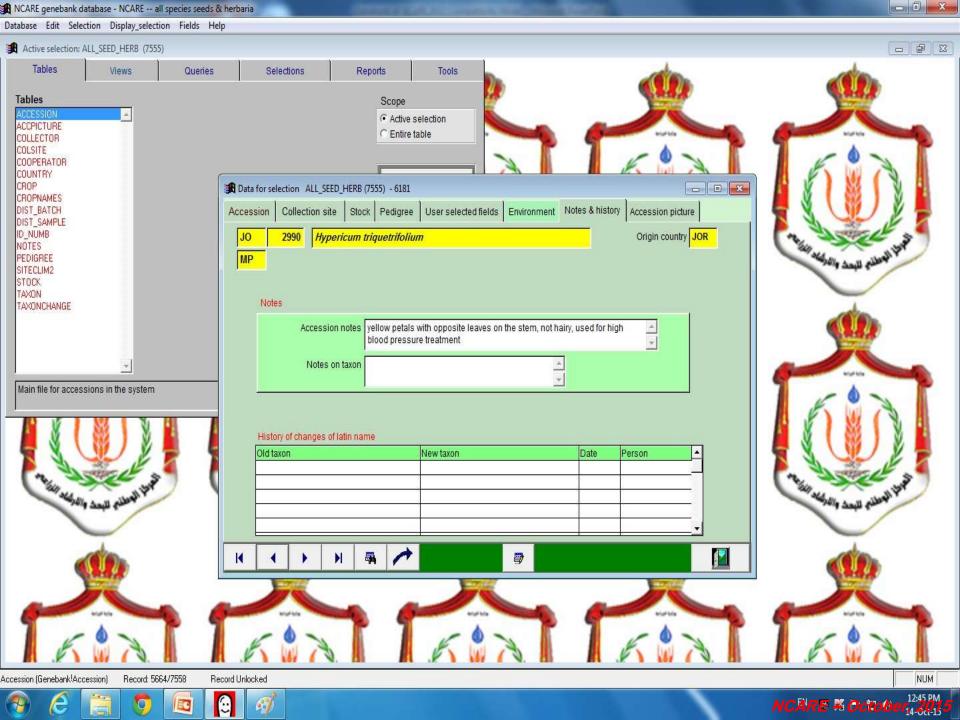


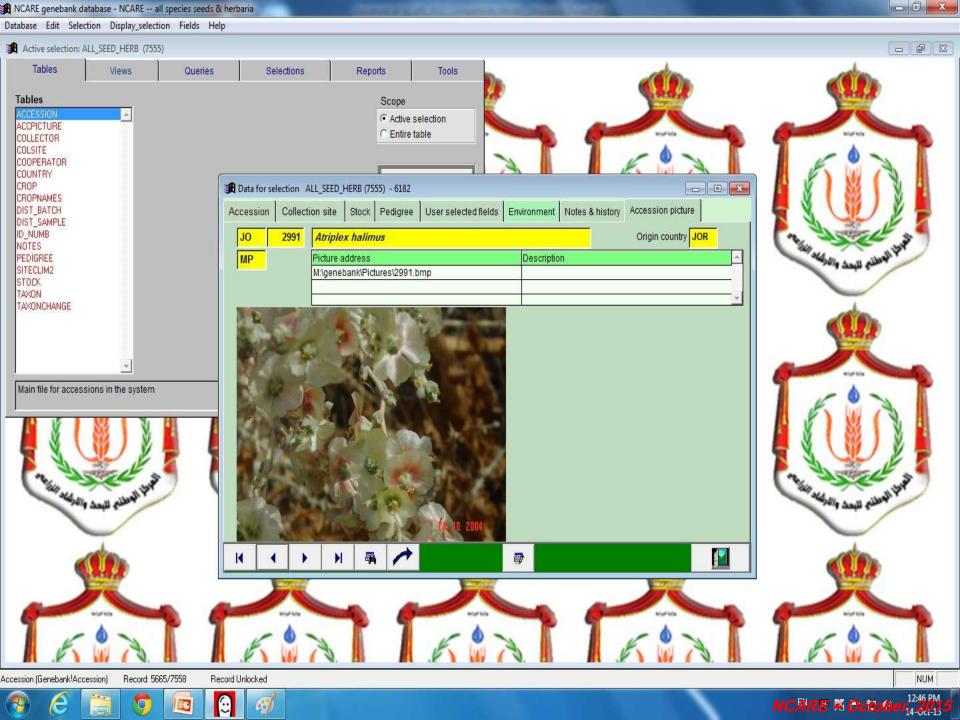












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LOCATION

Al-Heesheh, protected area for royal palace

2 km N. of Sakib towards Anjara on Jerash-Ajlun

15 km N. of Ajlun to Irbid at 3 km after Ibbin junctio

close to E. of Samta village, between Ajlun and Irt

From Salt toward Jordan valley through Arda road

Al-Qastal, 2 km after the turn of from Airport high-

20 km W. of Jurf Al-Darawish to Tafila

Samta village, between Ajlun and Irbid

Jordan valley, at Bagoura, 5 km of Shuneh

Al-Aal, between Amman and Madaba

5 km east Um-Qais to Irbid

Dana reserve

Al-Khanasry Station

187-d: 187-t- d--

Libb

Browse COLSITE - selection ALL_SEED_HERB (3093) SITE CODE COL CODE SITE NO CTY PROVINCE

SITE_CODE	COL_CODE	SITE_NO CTY	PROVINCE	LOCATION	ALTITUDE	ALT_DEM	LONGITUDE	LATITUDE	LON_DD	LAI_DD	LL_LEV	RAINFALL	SLOPHASP	ECPARE A	
2001-2JOR-1	JOR2001-2	1 JOR	Azraq	80 km E. of Amman	450	-	E 36 34.857	N 31 48.254	36.58095	31.80423		180			header to sort
2001-2JOR-2	JOR2001-2	2 JOR	Ma'an	Shoubak, 13 km S. of Bair Al-Dabaghat, S. of NCA		9			-	-		250			 Ascending
2001-2JOR-3	JOR2001-2	3 JOR	Tafila	0.5 km E. of RSCN hotel					15			250			C Descending
2001-2JOR-4	JOR2001-2	4 JOR	Ma'an	Shoubak, 15 km E. of NCARTT center	=							300			
2001JOR-10	JOR2001	10 JOR	Jerash	5 km SW. of Jerash to Dibbin near ministry of agri	590	-	E 35 50 06	N 32 14 55	35.83500	32.24861		-	4 NE	LI	W -
2001JOR-11	JOR2001	11 JOR	Irbid	Jordan valley at Baqora, 5 km N. of Shuna	-168	-	E 35 38 20	N 32 40 47	35.63889	32.67972		-	5 W	BA	Sort
2001JOR-12	JOR2001	12 JOR	Ajlun	Ishtafina to Zobia	861	-	E 35 44 23	N 32 22 15	35.73972	32.37083		(+)	4 E	LI	
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2001JOR-14	JOR2001	14 JOR	Irbid	Sakhra, at Kafraya	1003	-	E 35 51 48	N 32 23 18	35.86333	32,38833		-	2 F	LI	102000000000000000000000000000000000000
2001JOR-15	JOR2001	15 JOR	Tafila	Hamad Bin Jazi forest, 5 km N. of Tafila, near Sah	1034	-	E 35 37 07	N 30 41 37	35.61861	30.69361		- 2	4 W	LI	Print preview
2001JOR-16	JOR2001	16 JOR	Tafila	just outside Dana village	1296	-	E 35 36 48	N 30 40 36	35.61333	30.67667			4 SW	SA	Otatiatias
2001JOR-17	JOR2001	17 JOR	Tafila	just outside Dana village, near the spring	1304		E 35 36 40	N 30 40 42	35.61111	30.67833		-	5 SW	BA	Statistics
2001JOR-18	JOR2001	18 JOR	Tafila	Dana, near Sabila camp	1306		E 35 36 44	N 30 39 23	35.61222	30.65639			3 S	LI	Filter
2001JOR-19	JOR2001	19 JOR	Tafila	Ain Lahtha to Dana tower at nature reserve	1426		E 35 35 23	N 30 42 19	35.58972	30.70528		-	2 F	LI	1 iller
2001JOR-20	JOR2001	20 JOR	Tafila	just outside Qadeseya, on Tafila-Shoubak road	1315	-	E 35 38 40	N 30 36 20	35.64444	30.60556		-	2 S	LI	Exit
2001JOR-21	JOR2001	21 JOR	Ma'an	in Shoubak	1358	-	E 35 33 33	N 30 30 59	35.55917	30.51639		-	2 W	Li	
2001JOR-22	JOR2001	22 JOR	Ma'an	Shoubak, inside NCARTT station	1356	-	E 35 31 49	N 30 30 30	35.53028	30.50833		-	2 F	LI	
2001JOR-23	JOR2001	23 JOR	Tafila	N. of Dana from main road to Rummana camp nea	1479	9	E 35 36 03	N 30 41 45	35.60083	30.69583		-	2 F	LI	
2001JOR-24	JOR2001	24 JOR	Karak	Ghor Fifa	315		E 35 26 52	N 30 56 11	35.44778	30.93639		-	2 F	U	
2001JOR-25	JOR2001	25 JOR	Tafila	terrain of agricultural station near Dana	1343		E 35 36 42	N 30 39 30	35.61167	30.65833		-	4 W	LI	
2001JOR-26	JOR2001	26 JOR	Tafila	road to Dana from main Tafila-Shoubak road	1409	-	E 35 36 54	30 39 35	35.61500	30.65972		-	2 N	LI	
2001JOR-27	JOR2001	27 JOR	Madaba	Mushagar, at 5 km N. of Madaba	797	,	E 35 48 05	N 31 46 08	35.80139	31.76889		-	2 F	LI	
2001JOR-28	JOR2001	28 JOR	Madaba	Mae'n	872	-	E 35 43 38	N 31 40 51	35.72722	31.68083		-	2 SW	LI	
2001JOR-29	JOR2001	29 JOR	Tafila	Al-Rashadeyeh-Dana road, 4 km after Tafila to Ai	1025	-	E 35 35 538	N 30 48 537	35.73278	30.94917			3 SE	Li	
2001JOR-3	JOR2001	3 JOR	Irbid	15 km NW of Irbid, near Hibras village	502	-	E 35 50 13	N 32 39 11	35.83694	32.65306		-	2 NW	LI	
2001JOR-30	JOR2001	30 JOR	Tafila	Hamad Bin-Jazi forest, Al-Rashadeyeh	1451		E 35 39.981	N 30 38.195	35,66635	30.63658			4 NW	LI	
2001JOR-32	JOR2001	32 JOR	Ma'an	Shoubak, Al-Baqa', 6 km SW. of NCARTT station	1389		E 35 31.418	N 30 28.817	35.52363	30.48028		-	2 N	LI	
2001JOR-33	JOR2001	33 JOR	Ma'an	Shoubak, Al-Baqa', 8 km SW. of NCARTT station	1391		E 35 31.282	N 30 28.453	35.52137	30.47422		-	2	LI	
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