



CIMMYT WHEAT GENE BANK, Inventory Experience

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INTRODUCTION

CIMMYT Germplasm bank, later 60's

New building inaugurated in 1996

“Wellhausen & Anderson Plant Genetic Resources Center”

Two separate areas, Maize and Wheat (Seed Treatment, Packing and Storage)

Maize Genebank, 26 000 accessions

Wheat Genebank, More than 150 000

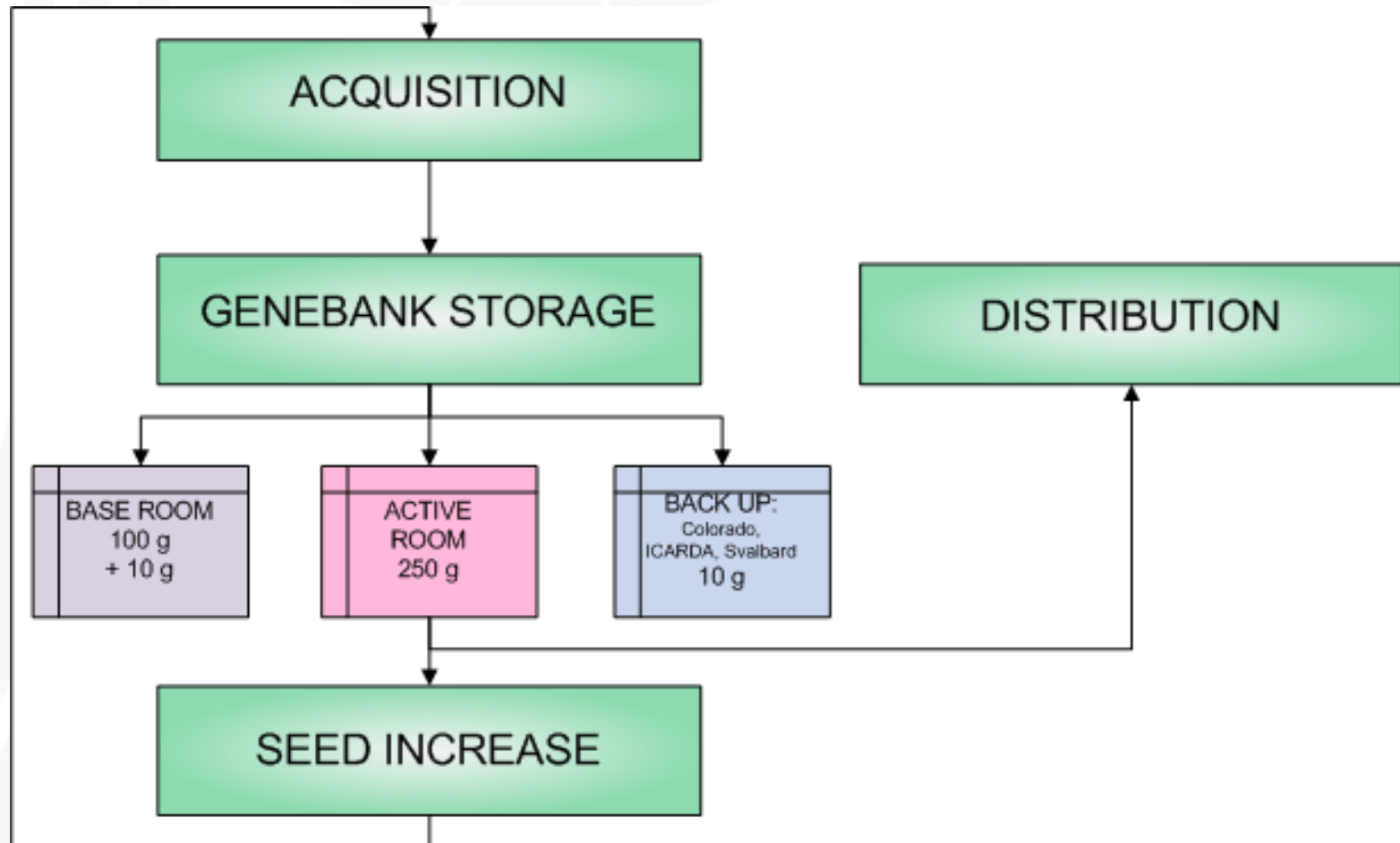
Cold Vault for Medium and Long-Term Storage, differences in the temperature and humidity conditions

Installed capacity of 450,000 seed samples

CIMMYT WHEAT COLLECTION

CROP	SCIENTIFIC NAME	ACCESSIONS
Bread Wheat	<i>Triticum aestivum</i> L.	100,847
Durum Wheat	<i>Triticum turgidum</i> L. subsp. <i>durum</i> (Desf.) Husn.	21,342
Triticale	× <i>Triticosecale</i> spp.	21,104
Barley	<i>Hordeum vulgare</i> L.	17,209
Rye	<i>Secale cereale</i> L. subsp. <i>cereale</i>	790
Ancestors or Wild relatives	<i>T. Spelta</i> , <i>T. Dicoccoides</i> , <i>T. Polonicum</i> , <i>T. Dicocon</i> , <i>T. Monococcum</i> , <i>T.</i> <i>Boeoticum</i> , <i>T. Urartu</i> , <i>T. Carthlicum</i> , <i>T.</i> <i>Timopheevii</i> , <i>T. Glutinosum</i> , <i>Ae.</i> <i>Squarrosa</i> , <i>Ae. Ovata</i> , <i>Ae. Sharonesis</i> , <i>Ae. Taushii</i> , <i>Ae. Bicornis</i> , <i>Ae. Searsii</i> , <i>Ae. Juvenalis</i> , <i>Ae. Triticoides</i> , <i>Ae.</i> <i>Persica</i> , <i>Ae. Genuculata</i> , <i>Ae. Neglecta</i>	10,412
*Source IWIS 2008		Total 171,704

GENEBANK ACTIVITIES



INTERNATIONAL WHEAT INFORMATION SYSTEM, IWIS

IWIS-NT 4.0 Program Launcher

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About WGBS

The Wheat Germoplasm Bank System is the application to manage all related information of the Wheat Germoplasm Bank. Main data are Introduction numbers, logistic and passport data and seed distribution.

Wheat Germoplasm Bank [help_wgbs] v. 4.21.4 04 Jul 2005

File Edit View Database Window Help

Consult Data

Search Information

From: [Cv 14718] To: [] From Keys: [] To Keys: []

Found Information

From	Coast	id	id	id	Access	Y	Available	Zone	Law
14718	1	1000	1	1000	1	1	1	40	
14718	1	1000	1	1000	1	1	1	40	
14718	1	1000	1	1000	1	1	1	40	


Course Name / Pedigree

Subsection History

Logistic Passport

Subs... Edit

IWIS



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Different Search tools in IWIS to make consults:
Cross Info

Fieldbooks or TRIALS (TID - ENT)

Seed Regeneration,
Distribution
New acquisitions

WGBS

Storage: Automatic designation of
accession names

WPMS

Updates (Data curation)

ICIS

Inventory

Creating accurate Lists in Excel files (Storage location)

Loading data location in ICIS (LOTID designation)

Design and configuration of the new barcoding labels
(envelopes & boxes)

Re-labeling of the whole collection (Base an Active Room)

Loading Stocks

Loading Viability test data

STORAGE

Two Cold Vaults: Active Collection: $-2\text{ }^{\circ}\text{C}$, 25 %

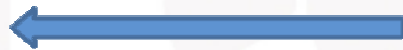
Base Collection: $-18\text{ }^{\circ}\text{C}$

23 Cars for Maize and 23 Cars for Wheat



STORAGE LOCATION

**Section
A to F**



1 car= 6 Sections x 6 shelves
1 Shelf= 8 boxes (4x2)
1 Box = 40 or 100
accessions

B-6-A-3-8

A-4-A-3-7



**S
h
e
l
f**
1
to
6



Third party system attached to this inventory

Labels for Long-Term Storage

Stickiness, Extreme temperatures, waterproof

Laser Printer

Bar code readers

Scale

*Human Resources



RESULTS



Base Collection was finished on November
Active Collection is in process (next April-May)

138,243 accessions with stock record in
ICIS

Viability Test (10% Sample of each box)

Around 8000 test results, workbook
application tool

ICIS DEMO

What is next?

Pilot Test of the Genebank Operations

IWIS2 / ICIS

Different BATCH Search tools to make consults

Fieldbooks or TRIALS (TID - ENT)

Seed Regeneration,
Distribution
New acquisitions

New material to be stored (MXI 07-08, 16,000 ac.)

Automatic designation of accession names,
New location LOTID
Stock Record

Printed Reports (Fieldbooks Format)

Updates (Data curation)



B' Point of view

Is ICIS useful?

Could it fulfill Wheat Genebank Management necessities?

Does it need to improve?

How many “users” are really using it?

Where is the failure??

Desisions' makers
Institutional
Heads & CRIL
head

Conviction*
Reaches/Restrictions PP
Priority Areas
Deadlines
Budget

Operational world
Ants of the GR Programs:
Real User, the ones who
need these tools
Defined Tasks, Expertises
used to a specific System
**Biased point view based
on the role*

Users

Programmers

Application development,
DB Maintaince,
Updating
And all the virtual
wonderland that what
was saw here....
**Isolation & Commands*

B' Point of view

Where is the failure??

In ICIS Implementation

Which will be the strategy?

Monkey testers?, Programmer Translator between ICIS & end-users? Whatever that adjusts better...


Less development more implementation,

Release one version, select a target institution, start the training

Courses based on different GR ROLES (Breeders, genetic resources managers, international nurseries, etc)

General and Personalized (baby sit them for a while!

Developing patience from both sides



Thanks
for your
attention!