

## Survey of Germplasm Utilization

### 1. Basic information

- 1) Your name:
- 2) Your institution (where applicable):
- 3) Address:

- 4) Accessions received:

Species name	Number of accessions requested	Number of accessions received

**Please fill in a separate questionnaire for each genepool/genus you received.**

- 5) Institution from which germplasm received: CATIE/CIAT/USDA

- 6) Major objective of your institution (circle all applicable items):

- A. Germplasm conservation
- B. Plant breeding
- C. Research. Specify: \_\_\_\_\_
- D. Rural development
- E. Education/Demonstration
- F. Producer of agronomic/horticultural products
- G. Other (please specify)

- 7) Do you conserve the germplasm you received?

- A. Yes
- B. No
- C. In some cases (please specify)

- 8a) Your institution has:

- A. An internal genebank (specify whether short-, medium or long-term). Please continue with question 9.
- B. Germplasm nursery. Please continue with question 9
- C. No genebank. Please continue with question 8b

8b) Where do you conserve the germplasm you received?

Please continue with question 10.

9) How many germplasm accessions of the genus/genepool you received does your institution conserve?  
Please indicate the number of accessions by type in the following table:

<b>Germplasm type</b>	<b>Number of accessions</b>
Wild relative	
Landrace	
Cultivar	
Breeding material	
Genetic stock	
Other (please specify)	
Unknown type	

10) Where did the germplasm conserved by your institution come from? Please use the following table:

<b>Germplasm type</b>	<b>% of collection</b>
Collecting by your own institution	%
Breeding and selection by own institution	%
Introduction from the national genebanks	%
Introduction from other countries	%
Introduction from other institutions in your country	%
Others (please specify):	%
Unknown	%

## 2. General questions about the material received

### A. General

**Note:**

Characterization of germplasm consists of recording those descriptors which are highly heritable, often can be seen easily by eye and are expressed in all environments (e.g. flower color, number of leaves).

Evaluation consists of recording those characters which are influenced by environmental differences (fruit yield, drought susceptibility, disease resistance, etc).

11) Has the germplasm received been further characterized and/or evaluated at your institute?

- A. Characterized only
- B. Evaluated only
- C. Both characterized and evaluated

12) Which traits were characterized or evaluated? If possible, could you please give indications of the results of such characterization/evaluation/screening? Please use the following table; use a separate sheet if needed.

<b>Traits characterized</b>	<b>Results</b>
<b>Traits evaluated</b>	<b>Results</b>

**B. For Breeding**

13a) Has the germplasm received been included in a breeding program?

- A. Yes
- B. No

13b) If yes, please list the number of accessions used and indicate stage of use (early testing, late testing, crossing, variety released (give name and year) and results, if possible. Please use the following table; use a separate sheet if needed.

Number of accessions received	Stage of use and results

### **C. For Research**

14) In the table below, please:

1. List type of study/studies and number of accessions used
2. Give brief results from studies that included germplasm received, if possible
3. List publications in which the results are discussed

Please use the back of this sheet if you need more space

	<b>Type of study</b>	<b>Number of accessions received which were used</b>	<b>Results and related publications</b>
1	Crop improvement/Plant breeding		
2	Evaluation for adaptation/response for (a)biotic stresses		
3	Studies of domestication and evolution		
4	Taxonomic studies		
5	Genetic diversity studies		
6	Genomics		
7	Classical genetics		
8	<i>In situ</i> conservation (e.g. participatory plant breeding)		
9	Ecology and habitat restoration		
10	Weed science/biological controls		
11	Basic plant science: anatomy, morphology, physiology, reproductive biology/pollination systems		
12	Historical, archaeological and anthropological research		
13	Biochemical studies: industrial chemicals, biopesticides, bioactive compounds		
14	Other (please specify)		

### **C. Direct Use**

15a) Please list specific characteristic(s) of the germplasm received that was/were responsible for it to be used directly.

15b) Under what name has the germplasm been released?

### 3. Factors limiting the use of germplasm

16) For your needs, which traits should be characterized by genebanks?

17) For your needs, which traits should be evaluated by genebanks?

**Reminder:**

Characterization of germplasm consists of recording those descriptors which are highly heritable, often can be seen easily by eye and are expressed in all environments (e.g. flower color, number of leaves).

Evaluation consists of recording those characters which are influenced by environmental differences (fruit yield, drought susceptibility, disease resistance, etc).

18) The major approaches you use to acquire information about germplasm conserved in other genebanks are (you may indicate more than one):

- A. Directories/Catalogues
- B. Scientific journals
- C. Databases (please specify)
- D. Visits / Oral presentations
- E. Other (please specify)

19) The way to share germplasm information and germplasm should be:

- A. Unrestricted distribution from genebank
- B. benefit sharing
- C. Others (please specify)

20) Please indicate to what extent you agree with the statements in the table below by ticking the appropriate box:

- strongly disagree
- disagree
- 0** no judgement
- + agree
- ++ strongly agree

	<b>Statement</b>	--	-	<b>0</b>	+	++
1	Potential clients do not know where to get information on the germplasm held in genebanks					
2	Getting hold of the information on germplasm holdings is difficult even if you know where to ask for it					
3	Genebank curators do not know users' needs					
4	Obtaining germplasm from national genebanks is too complicated					
5	Obtaining germplasm from genebanks takes a long time					
6	Obtaining germplasm from genebanks is expensive					
7	Too few accessions of species of interest are available in genebanks anyway					
8	Size of samples supplied by genebanks is not large enough for work					
9	Too many accessions of species of interest are available in genebanks					
10	Low genetic diversity in germplasm of species of interest is available in genebanks					
11	Locality data on germplasm are adequate in quality and quantity					
12	Taxonomic identification of germplasm is generally adequate and reliable					
13	Characterization of germplasm in genebanks is adequate					
14	Evaluation for disease and pest resistance of germplasm in genebanks is adequate					
15	Evaluation for stress tolerance (e.g. cold, drought, salt tolerance) of germplasm in genebanks is adequate					
16	Genetic studies of germplasm in genebanks are insufficient or inadequate					
17	There has been insufficient germplasm enhancement					
18	Elite materials are sufficiently available from genebanks					
19	Property rights may be involved if germplasm from other institutions is used					
20	Present access policies are conducive to germplasm sharing					
21	Introduction of desirable materials from other sources is faster and less expensive than request of germplasm from CATIE/CIAT/USDA					

21) Based on your experience, what are the major constraints in the use of germplasm, among the ones alluded to above (and any others you may have encountered)? And how would you suggest trying to solve them?

#### 4. Redistribution of the germplasm received

22a) Did you redistribute the germplasm you received?

- A. Yes
- B. No

22b) If yes, how many times did you distribute the germplasm you received? What was the aim of the germplasm distribution? What was the type of institution you sent the material to? Please use the tables below.

Number of times distributed	No. of accessions (only material received)
Never	
5 times or less	
More than 5 times	

Aim	No. of accessions (only material received)
Breeding	
Research	
Direct use	

Type of institution	No. of accessions distributed to institutions within the country (only material received)	No. of accessions distributed outside the country (only material received)
Conservation		
Plant breeding		
Research		
Rural development		
Education/demonstration		
Producer of agronomic/horticultural products		
Other (please specify)		