

Report of a Network Coordinating Group on Forages

First meeting - 17 November 1999 - Elvas, Portugal

L. Maggioni, *compiler*

European Cooperative Programme for Crop Genetic Resources Networks (ECP/GR)

Meeting of the provisional Forages Network Coordinating Group

Elvas, Portugal (17 November 1999)

List of participants:

L. Horvath
M. Hulden
E. Lipman
L. Maggioni
P. Marum
V. Negri
R. Sackville-Hamilton
M. Sevcikova
E. Willner

1. Introduction

L. Maggioni presented the outcomes of the last ECP/GR Steering Committee meeting (June 1998). He mentioned that new Working Groups (WGs) were created (increase from 8 to 12) and that the Steering Committee had stressed the need to increase coordination between different networks and to decrease the number of WG meetings. They recommended the establishment of coordinating groups to promote coordination at the Network level and to oversee the activities of the Working Groups. The selection of a provisional Forages Network Coordinating Group (NCG) was made on an *ad hoc* basis by the WG Chair, in consultation with the ECP/GR Secretariat, and according to the criteria of balanced expertise and geographical representation. The ECP/GR Coordinator thanked all the participants who had accepted to serve as Forages NCG members.

P. Marum opened the discussion by asking the opinion of the group about the new mode of operation of ECP/GR during Phase VI. Overall, the establishment of a Forages Network Coordinating Group was welcomed. It is considered a useful forum where issues can be identified in advance by a small group of technicians and valid recommendations prepared in order to be brought to the attention of the WG. However, concern was raised that the entire Forages Working Group was not planning to meet again in the next four years. A number of reasons were given to raise the awareness of the Steering Committee on the need to hold WG meetings more frequently and with larger representation:

-Commitment to work on WG activities is usually offered by WG members during the meetings and in the absence of these it will become increasingly difficult to agree on group workplans.

-During a four to five year time span, many WG members are likely to change. In the absence of meetings, these people will find it difficult to integrate effectively into the group. The continuity of the programme is bound to suffer.

- Experience says that WG activities are more intense around the meeting's event, which is essential to give momentum to the action of the Working Group.

- It is important that the meetings are representative of all the European countries, if ECP/GR is to live up to be the "Platform for the Implementation of the Global Plan of Action (GPA) in Europe"

- While the NCG is composed of a group of experienced people who know how to operate by correspondence, it is especially important that WG members who are not fully integrated meet with the rest of the Group

M. Hulden and P. Marum stressed the need to have communication among networks and not only within networks. L. Maggioni informed that the Industrial Crops NCG had already suggested a meeting of the WG Chairpersons, to be held back to back with the next meeting of the Documentation and Information Network. He also informed that the ECP/GR Secretariat would make sure that all the NCG meetings' reports be made available.

2. Crop Working Group Process Analysis

L. Maggioni explained that the Steering Committee (SC) attempted to develop a matrix that distinguishes minimum and additional tasks for the WGs (see SC meeting report, Braunschweig 1998). The SC will use the (still provisional) matrix to review the WGs' progress and the WGs were encouraged to use it as a basis for the identification of minimum and additional objectives that they should try to achieve.

The NCG discussed and revised the WG Process Analysis matrix, with specific adaptations to accommodate the needs of the Forages WG (see revised Table, Annex 1).

The revision of the table resulted from specific comments listed below:

CONSERVATION REGULAR

Duplicates and synonyms: it is important to define "similar" material, not "duplicates". It would be useful to identify Most Original Samples rather than duplicates.

Tasks remaining to be completed by the Group: really adopt standards; identify Most Original Samples (MOS); determine appropriate methods; and implement appropriate strategies for conservation.

CONSERVATION EMERGENCY

Safety duplication implemented should be in the "conservation regular" column.

Tasks remaining to be completed by the Group: regeneration needs were identified in part. All the rest remains to be done

DOCUMENTATION

Considering that today there is a tendency towards relational database (DB), we should talk about one database, not several databases. "European databases established" should be changed to "contributing to the European database". However, "Crop Group" DB managers should be nominated

Mention of the implementation of quality control was suggested, seeing that the original data entry is a problem. The wording "integrity check on data implemented" is suggested.

Accessibility of DBs on the Internet: "Downloadable" access is considered the top priority. "Searchable" access as a second priority.

Tasks remaining to be completed by the Group: passport data are included to large extent, but still need to be validated. Several data are still missing (passport coverage is not complete, several national collections are missing (i.e. VIR collection).

COLLECTING

Tasks remaining to be completed by the Group: all are far from being achieved. Completion of databases is necessary first.

CHARACTERIZATION/EVALUATION

The word "finalised" is considered too strong for the definition of descriptors' lists. It is suggested to change to "agreed".

"Core collection established" should be part of a column of its own.

"Evaluation of collections carried out". Suggested removing the word "experiments".

Tasks remaining to be completed by the Group: most activities still need to be carried out. Descriptors' list is to be made simpler and more specific.

CORE COLLECTION

A new column is suggested for core collection activities

Tasks remaining to be completed by the Group: a preliminary core collection for Lolium was already established. Pre-breeding is carried out by a number of institutes, but not as a group activity.

COLLABORATION

Tasks remaining to be completed by the Group: all.

3. Sharing of responsibility

As an introduction, P. Marum distributed the section on sharing of responsibility published in the report of the last meeting (Discussion and Recommendations, pp. 12-16 and Appendix II, pp. 162-166). The group discussed the need to get started with the establishment of European Forages Collections, as suggested by the Steering Committee. The need to simplify the mechanism originally proposed and published in the report of the sixth Forages meeting, was expressed. The approach taken by the Working Group on *Beta* was chosen as an example. Common feeling was that the Most Original Samples (MOS) would be the ideal candidate accessions to be included in the European Forages Collection. Putting effort into identifying MOS was felt to be more effective than the identification of probable duplicates.

Using theoretical examples, M. Hulden highlighted how to use data integrity checks to identify MOS (e.g. same code for genebank and collecting institute), invalid records (e.g. same code for genebank and donor), incomplete records and how to correct/complete the data.

Further to this discussion, M. Hulden reminded the Group of the need to decide on the standardization of Institutes' acronyms to be used in databases and suggested that each institute decide by which acronym it would want to be known. L. Maggioni explained that the official responsibility for maintaining this

list is in the hands of FAO and that further to the departure of J. Serwinsky it remains to be clarified as to how this update would be carried out.

On the basis of M. Hulden's proposal, R. Sackville Hamilton suggested an algorithm that the European Central Crop Databases (ECCDB) managers could use to quickly analyze their database and identify MOS. A proposal based on the NCG discussion was presented on 19 November to the plenary meeting. See conclusion and recommendations in the forages meeting report.

4 Minimum standards for regeneration

This topic was discussed in preparation for the plenary meeting of the following day. The question was asked as to whether the minimum standard guidelines published in the Sixth meeting report can be adopted or need changing?

E. Willner reported that minimum standards are not realistic in her experience (e.g. distance plot, harvest system). It is considered more urgent to multiply more accessions with lower standards rather than multiplying less accessions with higher standards.

M. Sevcikova confirmed that standards are also too high in their institute, where multiplication of collected samples is carried out and not regeneration of stored samples (no request from the genebank). However, R. Sackville Hamilton's and V. Negri's opinion was that it is better to regenerate fewer samples with higher standards, rather than losing genetic diversity between accessions. R. Sackville Hamilton encouraged people to use isolation chambers more, which is often cheaper than using more land.

Difficulties in the application of the higher standards were acknowledged, but it was suggested to keep the same standards until alternative solutions to preserve the same level of genetic diversity can be demonstrated.

It was agreed that at least the regeneration of MOS should be of high quality level. Reference was made to the decision of the World Beta Network to use ISO 9000 standard for quality control.

A report of the NCG discussion was made to the plenary meeting, where the discussion was continued (see conclusion and recommendations in the forages meeting report).

5. Creation of Core Collections in other species

V. Negri introduced the discussion on the opportunity to proceed with the establishment of Core Collections (CCs) . The NCG agreed that this is an important task for the Network. The idea of establishing a CC across species was presented by R. Sackville Hamilton. Overall, it was felt that the Group should focus on one crop for which a large collection exists. Medicago was proposed as a Mediterranean crop and *Trifolium repens* as a crop of wider European interest.

M. Hulden proposed the establishment of a virtual CC, considering that on the basis of given criteria, a search engine could build subsets. In this way, the collection would not be static, but evolving (criteria may change over time).

The choice of an appropriate algorithm for the selection of core accessions was discussed.

It was recommended that a subgroup would study details in step implementation, once the species is chosen.

A report of the NCG discussion was made to the plenary meeting, where the discussion was continued (see conclusion and recommendations in the forages meeting report)

6. Evaluation of forage accessions

The issue was introduced by P. Marum. Using an example from Japan, he asked if the group should take the opportunity to prepare guidelines on technical assistance for the evaluation of forage crop genetic resources for different genera.

The Group agreed that this topic will be studied further by the Coordinating Group.

Annex 1 - Crop Working Group Process Analysis

Activities	Minimum	Undecided	Additional
<p>Conservation Regular</p>	<p>Uniform standards for regeneration, multiplication and conservation adopted.</p> <p>Most original samples identified.</p> <p>Most appropriate methods of conservation determined.</p> <p>Safety-duplication implemented.</p>		<p>Appropriate alternative/complementary <i>ex situ</i> conservation strategies implemented.</p>
<p>Conservation emergency</p>	<p>Regeneration needs identified.</p> <p>Procedures for emergency regeneration established.</p> <p>Emergency regeneration carried out.</p>		
<p>Documentation</p>	<p>Contribute to the European database.</p> <p>Crop group data set manager identified</p> <p>Passport data included.</p> <p>Protocol for updating data elaborated.</p> <p>Implementation of integrity check</p>	<p>Database accessible through Internet</p>	<p>Characterization data included.</p> <p>Evaluation data included.</p> <p>Crop-specific links with other programmes/</p> <p>Networks/databases established.</p>
<p>Collecting</p>	<p>Genetic diversity of crops inventoried based on available data.</p>		<p>Collecting activities, where needed, carried out.</p>

	Gaps and potential needs for collecting identified.		
Characterization/ Evaluation	Descriptor lists for characterization and evaluation agreed.	Descriptor lists for further characterization and evaluation finalized.	Characterization of collection carried out. Evaluation of collection carried out. Pre-breeding (base broadening) undertaken.
Collaboration	Priorities for complementary activities identified in collaboration with other relevant actors.		Above priorities implemented. Collaboration with other regions/ established.
Core collection	Core collection established.		