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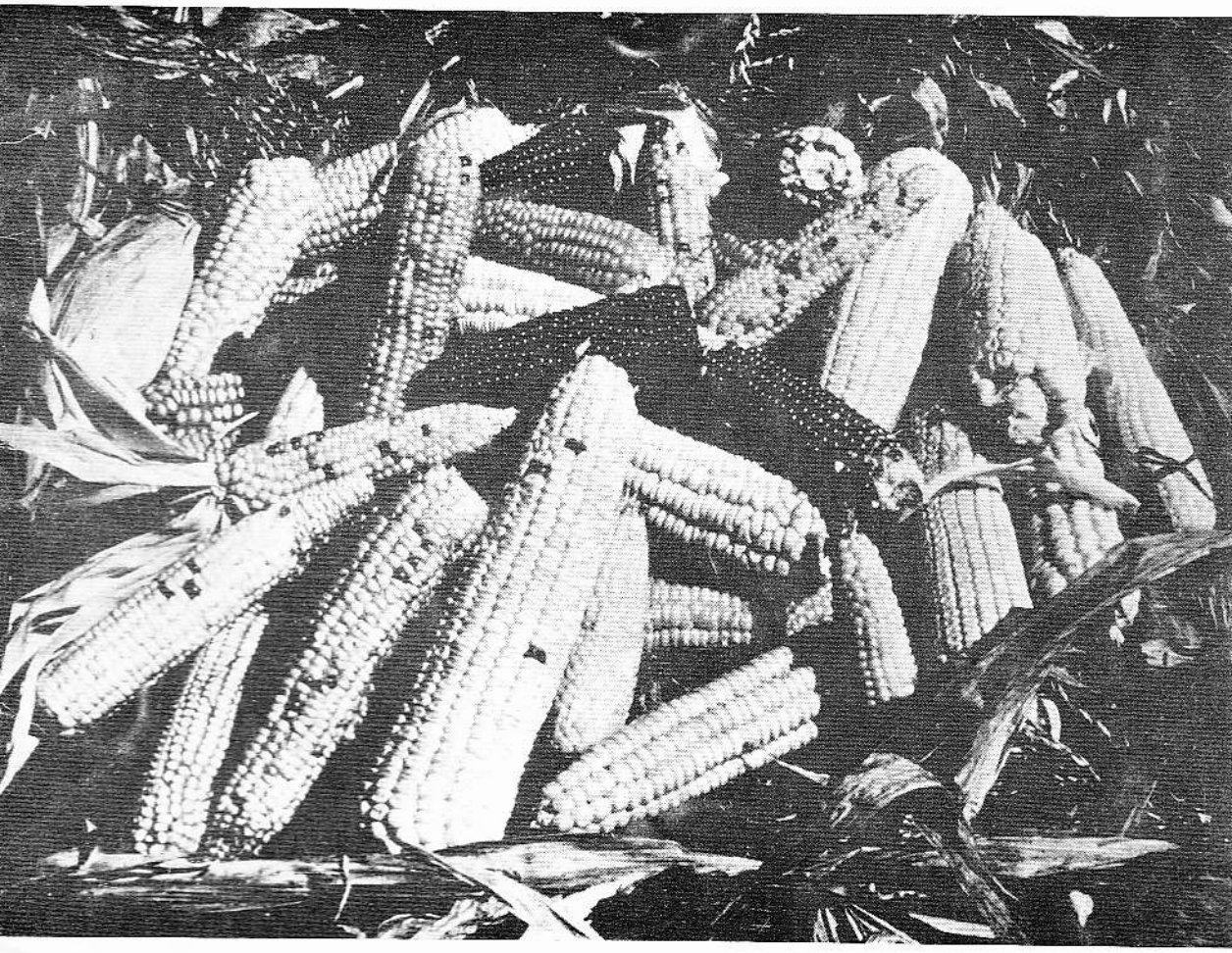
MAIZE



DESCRIPTORS

AGP:IBPGR/80/94
December 1980

INTERNATIONAL BOARD FOR PLANT GENETIC RESOURCES

Maize Descriptors

IBPGR Secretariat
Rome, 1980

The International Board for Plant Genetic Resources (IBPGR) is an autonomous, international, scientific organization under the aegis of the Consultative Group on International Agricultural Research (CGIAR). The IBPGR, which was established by the CGIAR in 1974, is composed of 15 members from 13 countries; its Executive Secretariat is provided by the Food and Agriculture Organization of the United Nations. The basic function of the IBPGR, as defined by the Consultative Group, is to promote an international network of genetic resources centres to further the collection, conservation, documentation, evaluation and use of plant germplasm and thereby contribute to raising the standard of living and welfare of people throughout the world. The Consultative Group mobilizes financial support from its members to meet the budgetary requirements of the Board.

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PREFACE

The IBPGR's Advisory Committee on Maize Germplasm, co-sponsored by CIMMYT was asked to consider the preparation and finalization of a minimal list of descriptors. The second meeting of the Committee, 3-4 March 1977, agreed to a provisional list of characteristics. These were amended by correspondence and issued by the IBPGR in Plant Genetic Resources Newsletter 37:17-18, in March 1979.

The Committee held its third meeting 25-26 September 1980 and reached agreement on the final list presented here.

Those scientists who participated in the various discussions are listed in the Appendix.

The IBPGR recommends this list for widespread use for documentation and exchange. It should be noted that the IBPGR endorses the descriptors and the descriptor states whilst the suggested coding should not be regarded as the only definitive scheme.

Suggestions from users will be welcomed by the IBPGR Secretariat.

J.T. Williams
Executive Secretary

DESCRIPTOR LIST FOR MAIZE

The IBPGR now uses the following definitions in genetic resources documentation:

(i) passport data (accession identifiers and information recorded by collectors);

(ii) characterization (consists of recording those characters which are highly heritable, can be easily seen by the eye and are expressed in all environments);

(iii) preliminary evaluation (consists of recording a limited number of additional agronomic traits thought desirable by a consensus of users of the particular crop).

The evaluation according to the above will be the responsibility of the curators, while further evaluation should be carried out by the plant breeder. The data from further evaluation should be fed back to the curator who will maintain a data file.

PASSPORT DATA

1. ACCESSION DATA

1.1 ACCESSION NUMBER

This number serves as a unique identifier for accessions and is assigned by the curator when an accession is entered into his collection. Once assigned this number should never be reassigned to another accession in the collection. Even when an accession is lost, its assigned number is still not available for re-use. Letters occur before the number to identify the genebank.

1.2 RACE

Name representing a population that differs from others in the relative frequency of some gene or genes.

1.3 DATE OF LAST MULTIPLICATION OF REGENERATION

Year of last multiplication or regeneration

1.4 DONOR NAME

Name of institution or individual responsible for donating the germplasm.

1.5 DONOR NUMBER

Number or name assigned to an accession by the donor

1.6 ANY OTHER NAMES OR NUMBERS ASSOCIATED WITH THE ACCESSION

e.g. Common name, other accession numbers, etc. (Not collection number, see 2.2)

2. COLLECTION DATA

Data to be recorded when collections are made in the field.

2.1 COLLECTING INSTITUTE

Institute or person collecting the original sample

2.2 ORIGINAL NUMBER ASSIGNED BY COLLECTOR OF THE SAMPLE

2.3 DATE OF COLLECTION OF ORIGINAL SAMPLE

Expressed as day/month/year, e.g. 20 October 1980 as 201080

2.4 COUNTRY OF COLLECTION

Use the three letter abbreviations supported by the Statistical Office of the United Nations. Copies of these abbreviations are available from the IBPGR Secretariat. If other abbreviations are used the list used should be noted

2.5 LATITUDE OF COLLECTION SITE

Degrees and minutes suffixed by N or S, e.g. 1030 S

2.6 LONGITUDE OF COLLECTION SITE

Degrees and minutes suffixed by E or W, e.g. 7625 W

2.7 LOCATION OF COLLECTION SITE

Specific place within a geographic area at which a particular germplasm accession was collected. The name of the smallest administrative unit larger than a town, such as the county or district, will be used to specify site of collection.

2.8 ALTITUDE OF COLLECTION SITE

Elevation above sea level, in metres

2.9 COLLECTION SOURCE

1 Field
2 Market
3 Farm store
4 Agricultural institute

2.10 SAMPLE SIZE

Number of cobs collected

CHARACTERIZATION AND PRELIMINARY EVALUATION

3. GENERAL

3.1 SITE OF CHARACTERIZATION AND PRELIMINARY EVALUATION

3.2 PLANTING DATE

Expressed as day/month/year, e.g. 5 March 1980 as 050380

4. CHARACTERIZATION

4.1 KERNEL TYPE

Code indicating the primary type of kernel produced by a given accession

OP - Opaque

AM Amylaceous or floury

SA Semi-floury, with an external layer of hard endosperm

DT Dent or shrunken

SD Semi-dent, intermediate between dent and flint but closer to dent

SF Semi-flint, flint with a soft cap

FT Flint

PP Pop

SW Sweet

OP Opaque

4.2 KERNEL ROWS PER EAR

Number of rows of kernels on an ear

4.3 ENDOSPERM COLOUR

1 White
2 Cream
3 Pale yellow
4 Yellow
5 Orange
6 White cap

4.4 WAXINESS

0 Absent
+ Present

5. PRELIMINARY EVALUATION

5.1 DAYS TO SILK

Number of days from planting to when 50% of plants have extended silk

5.2 PLANT HEIGHT

In centimetres from ground level to the node bearing the flag leaf, at tassel emergence

5.3 EAR LENGTH

In centimetres from the point of attachment on the ear peduncle to the tip of the dehusked ear

5.4 EAR HEIGHT

In centimetres from ground level to the node bearing the upper ear

5.5 OTHER COMMENTS

Other available information on an accession should also be given. Any codes used to describe such characters as mildew, lodging, drought susceptibilities, etc. should be fully explained in accompanying documentation.

APPENDIX

PARTICIPANTS IN THE DISCUSSIONS OF THE IBPGR ADVISORY COMMITTEE ON MAIZE GERMPLASM

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