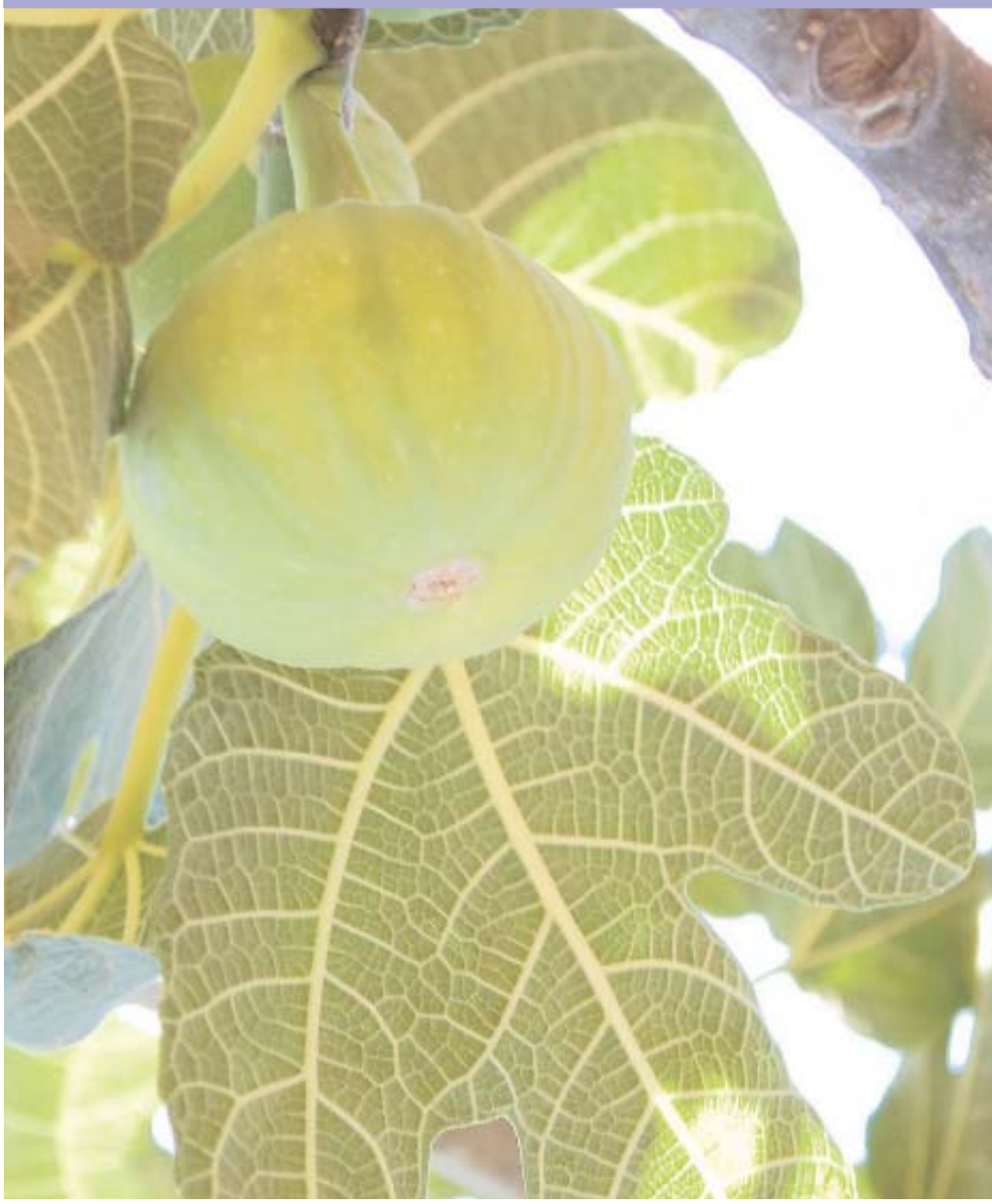
IPGRI

Descriptors for

Fig

Ficus carica



CIHEAM

List of Descriptors

Allium (E,S)	2000
Almond (revised) * (E)	1985
Apple * (E)	1982
Apricot * (E)	1984
Avocado (E,S)	1995
Bambara groundnut (E,F)	2000
Banana (E,S,F)	1996
Barley (E)	1994
Beta (E)	1991
Black pepper (E,S)	1995
Brassica and *Raphanus* (E)	1990
Brassica campestris L. (E)	1987
Buckwheat (E)	1994
Capsicum * (E,S)	1995
Cardamom (E)	1994
Carrot (E,S,F)	1999
Cashew * (E)	1986
Cherry * (E)	1985
Chickpea (E)	1993
Citrus (E,F,S)	1999
Coconut (E)	1992
Coffee (E,S,F)	1996
Cotton * (Revised) (E)	1985
Cowpea * (E)	1983
Cultivated potato * (E)	1977
Echinochloa millet * (E)	1983
Eggplant (E,F)	1990
Faba bean * (E)	1985
Finger millet * (E)	1985
Forage grass * (E)	1985
Forage legumes * (E)	1984
Grapevine (E,S,F)	1997
Groundnut (E,S,F)	1992
Jackfruit (E)	2000
Kodo millet * (E)	1983
Lathyrus spp. (E)	2000
Lentil * (E)	1985
Lima bean * (E,P)	1982
Litchi	2002
Lupin * (E,S)	1981
Maize (E,S,F, P)	1991
Mango (E)	1989
Medicago (Annual) * (E,F)	1991
Mung bean * (E)	1980
Oat * (E)	1985
Oca * (S)	2001
Oil palm (E)	1989
Panicum miliaceum and *P. sumatrense* (E)	1985
Papaya (E)	1988
Peach * (E)	1985
Pear * (E)	1983
Pearl millet (E,F)	1993
Phaseolus acutifolius (E)	1985
Phaseolus coccineus * (E)	1983
Phaseolus vulgaris * (E,P)	1982
Pigeonpea (E)	1993
Pineapple (E)	1991
Pistacia (excluding *Pistacia vera*) (E)	1998
Pistachio (E,F,A,R)	1997
Plum * (E)	1985
Potato variety * (E)	1985
Quinua * (E)	1981
Rice * (E)	1980
Rocket (E,I)	1999
Rye and Triticale * (E)	1985
Safflower * (E)	1983
Sesame * (E)	1981
Setaria italica and *S. pumilia* (E)	1985
Sorghum (E,F)	1993
Soyabean * (E,C)	1984
Strawberry (E)	1986
Sunflower * (E)	1985
Sweet potato (E,S,F)	1991
Taro (E,F,S)	1999
Tea (E,S,F)	1997
Tomato (E, S, F)	1996
Tropical fruit * (E)	1980
Vigna aconitifolia and *V. trilobata* (E)	1985
Vigna mungo and *V. radiata* (Revised) * (E)	1985
Walnut (E)	1994
Wheat (Revised) * (E)	1985
Wheat and *Aegilops* * (E)	1978
White Clover (E)	1992
Winged Bean * (E)	1979
Xanthosoma * (E)	1989
Yam (E,S,F)	1997

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Descriptors for

Fig

Ficus carica

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CONTENTS

PREFACE

Descriptors for Fig (*Ficus carica* and related *Ficus* spp.) was originally developed by Dr Uygun Aksoy and revised by Fernando Toribio. Afterwards, and as an output of the joint effort of the CIHEAM Network of Underutilized Fruit Trees Crops and IPGRI, it was coordinated by Gerardo Llacer, Mars Messaoud, leader of CIHEAM and Stefano Padulosi, IPGRI Senior Scientist. A draft version prepared in the internationally accepted IPGRI format for descriptor lists was subsequently sent to a number of international experts for their comments and amendments. A full list of the names and addresses of those involved is given in 'Contributors'.

Fig is a typical neglected and underutilized crop, strategic in many marginal rural areas, particularly in the Mediterranean region where it originated. This Descriptor List is meant to provide the scientific community with an additional tool to promote research on its genetic resources and contribute to enhance its sustainable use and ultimately income generation opportunities of its growers.

IPGRI encourages the collecting of data for all five types of descriptors (see Definitions and Use of Descriptors), whereby data from the first four categories – *Passport*, *Management*, *Environment and Site*, and *Characterization* – should be available for any accession. The number of descriptors selected in each of the categories will depend on the crop and their importance to the crop's description. Descriptors listed under *Evaluation* allow for a more extensive description of the accession, but generally require replicated trials over a period of time.

Although the suggested coding should not be regarded as the definitive scheme, this format represents an important tool for a standardized characterization system and it is promoted by IPGRI throughout the world.

This descriptor list provides an international format and thereby produces a universally understood 'language' for plant genetic resources data. The adoption of this scheme for data encoding, or at least the production of a transformation method to convert other schemes into the IPGRI format, will produce a rapid, reliable and efficient means for information storage, retrieval and communication, and will assist with the utilization of germplasm. It is recommended, therefore, that information should be produced by closely following the descriptor list with regard to ordering and numbering descriptors, using the descriptors specified, and using the descriptor states recommended.

This descriptor list is intended to be comprehensive for the descriptors that it contains. This approach assists with the standardization of descriptor definitions. IPGRI, however, does not assume that curators will characterize accessions of their collection utilizing all descriptors given. Descriptors should be used when they are useful to the curator for the management and maintenance of the collection and/or to the users of the plant genetic resources. Highly discriminating descriptors are marked as highlighted text to facilitate selection of descriptors and are listed in Annex I.

Multicrop passport descriptors were developed jointly by IPGRI and FAO, to provide consistent coding schemes for common passport descriptors across crops. They are marked in

the text as [MCPD]. Please note that owing to the generic nature of the multicrop passport descriptors, not all descriptor states for a particular descriptor will be relevant to a specific crop.

Any suggestions for improvement on the Descriptors for Fig will be highly appreciated by IPGRI.

DEFINITIONS AND USE OF THE DESCRIPTORS

IPGRI uses the following definitions in genetic resources documentation:

Passport descriptors: These provide the basic information used for the general management of the accession (including registration at the genebank and other identification information) and describe parameters that should be observed when the accession is originally collected.

Management descriptors: These provide the basis for the management of accessions in the genebank and assist with their multiplication and regeneration.

Environment and site descriptors: These describe the environmental and site-specific parameters that are important when characterization and evaluation trials are held. They can be important for the interpretation of the results of those trials. Site descriptors for germplasm collecting are also included here.

Characterization descriptors: These enable an easy and quick discrimination between phenotypes. They are generally highly heritable, can be easily seen by the eye and are equally expressed in all environments. In addition, these may include a limited number of additional traits thought desirable by a consensus of users of the particular crop.

Evaluation descriptors: The expression of many of the descriptors in this category will depend on the environment and, consequently, special experimental designs and techniques are needed to assess them. Their assessment may also require complex biochemical or molecular characterization methods. These types of descriptors include characters such as yield, agronomic performance, stress susceptibilities and biochemical and cytological traits. They are generally the most interesting traits in crop improvement.

Highly discriminating descriptors are indicated as highlighted text.

Characterization will normally be the responsibility of genebank curators, while evaluation will typically be carried out elsewhere (possibly by a multidisciplinary team of scientists). The evaluation data should be fed back to the genebank, which will maintain a data file.

The following internationally accepted norms for the scoring, coding and recording of descriptor states should be followed:

(a) the Système International d'Unités (SI) is used;

(b) the units to be applied are given in square brackets following the descriptor name;

(c) standard colour charts, e.g. Royal Horticultural Society Colour Chart, Methuen Handbook of Colour, or Munsell Color Chart for Plant Tissues, are strongly recommended for all ungraded colour characters (the precise chart used should be specified in the section where it is used);

(d) the three-letter abbreviations from the *International Standard (ISO) Codes for the representation of names of countries* is used;

(e) many quantitative characters which are continuously variable are recorded on a 1-9 scale, where:

1	Very low	6	Intermediate to high
2	Very low to low	7	High
3	Low	8	High to very high
4	Low to intermediate	9	Very high
5	Intermediate		

is the expression of a character. The authors of this list have sometimes described only a selection of the states, e.g. 3, 5 and 7 for such descriptors. Where this has occurred, the full range of codes is available for use by extension of the codes given or by interpolation between them, e.g. in Section 10 (Biotic stress susceptibility), 1 = very low susceptibility and 9 = very high susceptibility;

(f) when a descriptor is scored using a 1-9 scale, such as in (e), '0' would be scored when (i) the character is not expressed; (ii) a descriptor is inapplicable. In the following example, '0' will be recorded if an accession does not have a central leaf lobe:

Shape of central leaf lobe
1 Linear
2 Elliptic
3 Lanceolate

(g) absence/presence of characters is scored as in the following example:

Terminal leaflet
0 Absent
1 Present

(h) blanks are used for information not yet available;

(i) for accessions which are not generally uniform for a descriptor (e.g. mixed collection, genetic segregation), the mean and standard deviation could be reported where the descriptor is continuous. Where the descriptor is discontinuous, several codes in the order

of frequency could be recorded; or other publicized methods can be utilized, such as Rana *et al*. (1991) or van Hintum (1993), that clearly state a method for scoring heterogeneous accessions;

(j) dates should be expressed numerically in the format YYYYMMDD, where
YYYY - 4 digits to represent the year
MM - 2 digits to represent the month
DD - 2 digits to represent the day.

PASSPORT

All descriptors listed under Passport, belonging to the multicrop passport descriptors category, are indicated in the text as [MCPD]

1. Accession descriptors

1.1 Institute code [MCPD]

Code of the institute where the accession is maintained. The codes consist of the 3-letter ISO 3166 country code of the country where the institute is located plus a number. The current set of Institute Codes is available from FAO website (http://apps3.fao.org/wiews/). If new Institute Codes are required, they can be generated online by national WIEWS administrators

1.2 Accession number [MCPD]

This number serves as a unique identifier for accessions within a genebank collection, and is assigned when a sample is entered into the genebank collection. Once assigned this number should never be reassigned to another accession in the collection. Even if an accession is lost, its assigned number should never be re-used. Letters should be used before the number to identify the genebank or national system (e.g. IDG indicates an accession that comes from the genebank at Bari, Italy; CGN indicates an accession from the genebank at Wageningen, The Netherlands; PI indicates an accession within the USA system)

1.3 Donor institute code [MCPD]

Code for the donor institute. (See instructions under Institute Code, **1.1**)

1.4 Donor accession number [MCPD]

Number assigned to an accession by the donor. (See instructions under Accession Number, **1.2**)

1.5 Other identification number(s) associated with the accession [MCPD]

Any other identification (numbers) known to exist in other collections for this accession. Use the following system: INSTCODE:ACCENUMB;INSTCODE: ACCENUMB;… INSTCODE and ACCENUMB follow the standard described above and are separated by a colon. Pairs of INSTCODE and ACCENUMB are separated by a semicolon without space. When the institute is not known, the number should be preceded by a colon

1.6 Genus [MCPD]

Genus name for taxon. Initial uppercase letter required

1.7 Species [MCPD]

Specific epithet portion of the scientific name in lowercase letters. The abbreviation “sp.” is allowed

1.7.1 Species authority [MCPD]

Provide the authority for the species names

1.8 Subtaxa [MCPD]

Subtaxa can be used to store any additional taxonomic identifier. The following abbreviations are allowed: "subsp." (for subspecies); "convar." (for convariety); "var." (for variety); "f." (for form)

1.8.1 Subtaxa authority [MCPD]

Provide the subtaxa authority at the most detailed taxonomic level

1.9 Accession name [MCPD]

Either a registered or other formal designation given to the accession. First letter uppercase. Multiple names separated with semicolon without space

1.9.1 Synonyms

Include here any previous identification other than the current name. Collecting number or newly assigned station names are frequently used as identifiers

1.10 Ancestral data [MCPD]

Information about pedigree or other description of ancestral information (i.e. parent variety in case of mutant or selection)

1.11 Common crop name [MCPD]

Name of the crop in colloquial language, preferably in English (i.e. 'malting barley', 'cauliflower', or 'white cabbage')

1.12 Remarks

The Remarks field is used to add notes or to elaborate on descriptors with value "99" (=Other)

2. Collecting descriptors

2.1 Collecting institute(s)

Name and address of the institute(s) and individual(s) collecting / sponsoring the collection of the sample(s)

2.2 Collecting institute code [MCPD]

Code of the institute (s) collecting the sample. If holding institute has collected the material, the collecting institute code should be the same as the holding institute code. (See instructions under Institute Code, **1.1**)

2.3 Collecting number [MCPD]
Original number assigned by the collector(s) of the sample, normally composed of the name or initials of the collector(s) followed by a number. This item is essential for identifying duplicates held in different collections

2.4 Collecting date of sample [YYYYMMDD] [MCPD]
Collecting date of the sample where YYYY is the year, MM is the month and DD is the day. Missing data (MM or DD) should be indicated by hyphens. Leading zeros are required

2.5 Country of origin [MCPD]
Code of the country in which the sample was originally collected. Use the three-letter abbreviations from the *International Standard (ISO) Codes for the representation of names of countries*. The ISO 3166-1: Code List can be obtained from IPGRI [ipgri-mcpd@cgiar.org]

2.6 Breeding institute code [MCPD]
Code of the institute that has bred the material. If the holding institute has bred the material, the breeding institute code should be the same as the holding institute

2.7 Location of collecting site [MCPD]
Location information below the country level that describes where the accession was collected. This might include the distance in kilometers and direction from the nearest town, village or map grid reference point (e.g. 7 km south of Curitiba in the state of Parana)

2.8 Latitude of collecting site[1] [MCPD]
Degree (2 digits), minutes (2 digits) and seconds (2 digits) followed by N (North) or S (South) (e.g. 103020S). Every missing digit (minutes or seconds) should be indicated with a hyphen. Leading zeros are required (e.g. 10----S; 011530N; 4531--S)

2.9 Longitude of collecting site[1] [MCPD]
Degree (3 digits), minutes (2 digits) and seconds (2 digits) followed by E (East) or W (West) (e.g. 0762510W). Every missing digit (minutes or seconds) should be indicated with a hyphen. Leading zeros are required (e.g. 076----W).

2.10 Elevation of collecting site [m asl] [MCPD]
Elevation of collecting site expressed in meters above sea level. Negative values are allowed

---

1 To convert longitude and latitude in degrees (º), minutes (’), seconds (”), and a hemisphere (North or South and East or West) to decimal degrees, the following formula should be used:

dº m’ s” = h * (d + m / 60 + s / 3600)

where h=1 for the Northern and Eastern hemispheres and h=–1 for the Southern and Western hemispheres, i.e. 30º30’0” S = –30.5 and 30º15’55” N = 30.265.

2.11 Collecting /acquisition source [MCPD]

The coding scheme proposed can be used at 2 different levels of detail: either by using the general codes such as 10, 20, 30, 40 or by using more specific codes such as 11, 12 etc.

- 10 Wild habitat
  - 11 Forest/woodland
  - 12 Shrubland
  - 13 Grassland
  - 14 Desert/tundra
  - 15 Aquatic habitat
- 20 Farm or cultivated habitat
  - 21 Field
  - 22 Orchard
  - 23 Backyard, kitchen or home garden (urban, peri-urban or rural)
  - 24 Fallow land
  - 25 Pasture
  - 26 Farm store
  - 27 Threshing floor
  - 28 Park
- 30 Market or shop
- 40 Institute, Experimental station, Research organization, Genebank
- 50 Seed company
- 60 Weedy, disturbed or ruderal habitat
  - 61 Roadside
  - 62 Field margin
- 99 Other (specify in descriptor **2.17 Remarks**)

2.12 Collecting source environment

Use descriptors 6.1.1 to 6.2 in section **6**

2.13 Biological status of sample [MCPD]

The coding scheme proposed can be used at 3 different levels of detail: either by using the general codes such as 100, 200, 300, 400 or by using the more specific codes such as 110, 120 etc.

- 100 Wild
  - 110 Natural
  - 120 Semi-natural/wild
- 200 Weedy
- 300 Traditional cultivar/landrace
- 400 Breeding/research material
  - 410 Breeder's line
    - 411 Synthetic population
    - 412 Hybrid
    - 413 Founder stock/base population
    - 414 Inbred line (parent of hybrid cultivar)
    - 415 Segregating population
  - 420 Mutant/genetic stock
- 500 Advanced/improved cultivar
- 999 Other (specify in descriptor **2.17 Remarks**)

2.14 Type of sample

Type of plant material collected. If different types of material were collected from the same source, each sample (type) should be designated with a unique collecting number and a corresponding unique accession number

- 1 Vegetative
- 2 Seed
- 3 Both
- 99 Other (specify in descriptor **2.17 Remarks**)

2.15 Ethnobotanical data

2.15.1 Ethnic group

Name of the ethnic group of the donor of the sample or of the people living in the area of collecting

2.15.2 Local vernacular name

Name given by farmer to crop and cultivar/landrace/clone/wild form. State local language and/or dialect if the ethnic group is not provided

2.15.2.1 Translation

Provide translation of the local name into English, if possible

2.15.3 Parts of the plant used

1 Seed
2 Root
3 Trunk
4 Leaf
5 Flower/inflorescence
6 Fruit
7 Flower
99 Other (specify in descriptor **2.17 Remarks**)

2.15.4 Uses

2.15.4.1 Female cultigens

1 Fresh consumption
2 Drying
3 Canning or industrial use
99 Other (specify in descriptor **2.17 Remarks**)

2.15.4.2 Male cultigens

1 Caprification
2 Industrial use (jam, confectionary, etc.)
99 Other (specify in descriptor **2.17 Remarks**)

2.15.5 History of plant use

1 Ancestral/indigenous
(always associated with the place and community)
2 Introduced (but in unknown distant past)
3 Introduced (time and introduction known)

2.16 Prevailing stresses

Information on associated biotic and abiotic stresses and the accession's reaction

2.17 Remarks

Specify here any additional information recorded by the collector or any specific information on descriptors with value "99" (=Other)

MANAGEMENT

3. Management descriptors

3.1 Accession number (Passport 1.2)

3.2 Population identification (Passport 2.3)

Collecting number, pedigree, cultivar name, etc., depending on the population type

3.3 Storage address

(Building, room, shelf number/location in medium-term and/or long-term storage)

3.4 Type of germplasm storage [MCPD]

If germplasm is maintained under different types of storage, multiple choices are allowed, separated by a semicolon (e.g. 20;30). (Refer to FAO/IPGRI Genebank Standards 1994 for details on storage type)

10 Seed collection
- 11 Short term
- 12 Medium term
- 13 Long term

20 Field collection

30 *In vitro* collection (Slow growth)

40 Cryopreserved collection

99 Other (elaborate in **3.12 Remarks**)

3.5 Acquisition date [YYYYMMDD] [MCPD]

Date on which the accession entered the collection where YYYY is the year, MM is the month and DD is the day. Missing data (MM or DD) should be indicated with hyphens. Leading zeros are required

3.6 Amount of stored plant material [g or number]

3.7 Duplication at other location(s) (Passport 1.4)

0 No

1 Yes

3.8 Location of safety duplicates [MCPD]

Code of the institute where a safety duplicate of the accession is maintained. See instructions under **1.1** Institute Code

3.9 Propagation method

1 Seed
2 Grafting
3 Cutting
4 Layering
5 Top grafting
6 Tissue culture
99 Other (specify in descriptor **3.12 Remarks**)

3.10 *In vitro* conservation

3.10.1 Type of explant

1 Seed
2 Zygotic embryo
3 Apical or axillary meristem
4 Apical or axillary shoot tip
5 Somatic embryo
6 Callus
7 Cell suspension
99 Other (specify in descriptor **3.12 Remarks**)

3.10.2 Date of introduction *in vitro* [YYYYMMDD]

3.10.3 Type of subcultured material

1 Seed
2 Zygotic embryo
3 Apical or axillary meristem
4 Apical or axillary shoot tip
5 Somatic embryo
6 Callus
7 Cell suspension
99 Other (specify in descriptor **3.12 Remarks**)

3.10.4 Regeneration process

1 Organogenesis
2 Somatic embryogenesis
99 Other (specify in descriptor **3.12 Remarks**)

3.10.5 Number of genotypes introduced *in vitro*

3.10.6 Number of replicates per genotype

3.10.7 Last subculture date [YYYYMMDD]

3.10.8 Medium used at the last subculture

3.10.9 Number of plants at the last subculture

3.10.10 Location after the last subculture

3.10.11 Next subculture date [YYYYMMDD]

3.11 Cryopreservation

3.11.1 Type of material for cryopreservation

1 Seed
2 Zygotic embryo
3 Apical or axillary meristem
4 Apical or axillary shoot tip
5 Somatic embryo
6 Callus
7 Cell suspension
8 Ovule
99 Other (specify in descriptor **3.12 Remarks**)

3.11.2 Introduction date in liquid nitrogen [YYYYMMDD]

3.11.3 Number of samples introduced in liquid nitrogen

3.11.4 End of storage period [YYYYMMDD]

3.11.5 Number of samples taken from liquid nitrogen

3.11.6 Type of subcultured material for recovery

(After liquid nitrogen)

1 Seed
2 Zygotic embryo
3 Apical or axillary meristem
4 Apical or axillary shoot tip
5 Somatic embryo
6 Callus
7 Cell suspension
8 Ovule
99 Other (specify in descriptor **3.12 Remarks**)

3.11.7 Regeneration process

1 Organogenesis
2 Somatic embryogenesis
99 Other (specify in descriptor **3.12 Remarks**)

3.11.8 Number of recovered samples

3.11.9 Location after the last subculture

3.12 Remarks

Any additional information may be specified here

4. Multiplication/regeneration descriptors

4.1 Accession number (Passport 1.2)

4.2 Population identification (Passport 2.3)

Collecting number, identifier number, pedigree, cultivar name etc., depending on the population type

4.3 Multiplication/regeneration site location

4.4 Collaborator's name

4.5 Sowing/planting date [YYYYMMDD]

4.6 Cultural practices

4.6.1 Field spacing

4.6.1.1 Distance between plants

4.6.1.1.1 Number of plants per m^2

4.6.1.1.2 Number of plants per 1-m row

4.6.1.2 Distance between rows [m]

4.6.1.3 Fertilizer application

Specify types, doses, frequency of each and method of application

4.6.1.4 Water availability

If irrigated, specify frequency in descriptor **4.11 Remarks**

1 Irrigated
2 Rainfed

4.7 Plant/seedling vigour

Recorded in the nursery after 25 days of sowing at 4-5 leaf stage of development

3 Poor
5 Medium
7 Good

4.8 Number of plants established

4.9 Previous multiplication and/or regeneration

4.9.1 Location

4.9.2 Sowing date [YYYYMMDD]

4.9 Number of times accession regenerated

Since the date of acquisition

4.11 Remarks

Any additional information may be specified here

ENVIRONMENT AND SITE

5. Characterization and/or evaluation site descriptors

5.1 Country of characterization and/or evaluation
(See instructions in descriptor **2.5 Country of origin**)

5.2 Site

5.2.1 Latitude

5.2.2 Longitude

5.2.3 Elevation [m asl]

5.2.4 Name and address of farm or institute

5.3 Evaluator's name and address

5.4 Sowing date [YYYYMMDD]

5.5 Transplanting date [YYYYMMDD]

5.6 Harvest date [YYYYMMDD]

5.7 Evaluation environment
Environment in which characterization/evaluation was carried out

1 Field
2 Screenhouse
3 Greenhouse
4 Laboratory
99 Other (specify in descriptor **5.9 Remarks**)

5.8 Environmental characteristics of site
Use descriptors **6.1.1** to **6.2** in section **6**

5.9 Remarks
Any other site-specific information

6. Collecting and/or characterization/evaluation site environment descriptors

This standard section has been reduced according to the relevance of descriptors for Ficus documentation

6.1 Site environment

6.1.1 Land element and position

Description of the geomorphology of the immediate surroundings of the site (adapted from FAO 1990). (See Fig. 1)

1	Plain level	17	Interdunal depression
2	Escarpment	18	Mangrove
3	Interfluve	19	Upper slope
4	Valley	20	Midslope
5	Valley floor	21	Lower slope
6	Channel	22	Ridge
7	Levee	23	Sea coast
8	Terrace	24	Beachridge
9	Floodplain	25	Rounded summit
10	Lagoon	26	Summit
11	Pan	27	Coral atoll
12	Caldera	28	Drainage line (bottom position in flat or almost-flat terrain)
13	Open depression		
14	Closed depression	29	Coral reef
15	Dune	99	Other (specify in appropriate section's **Remarks**)
16	Longitudinal dune		

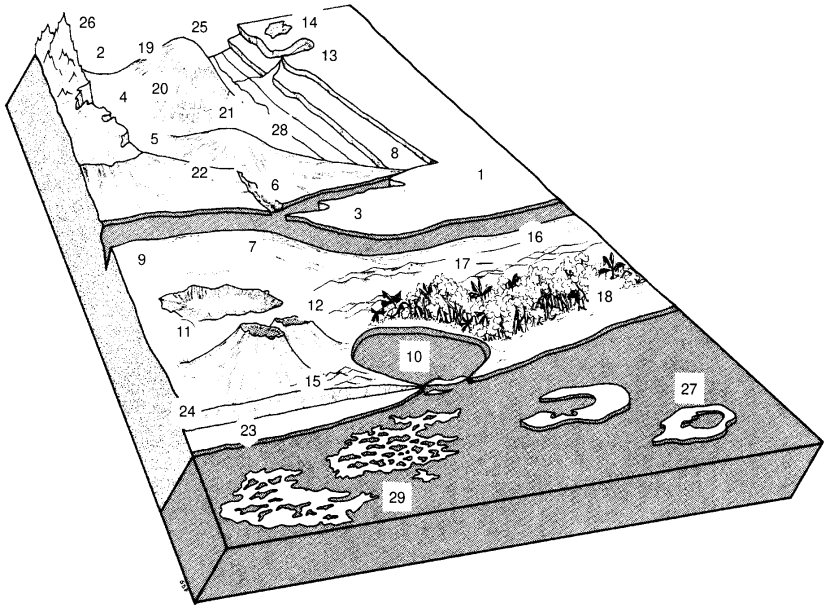


Fig. 1. Land element and position

6.1.2 Slope [º]

Estimated slope of the site

6.1.3 Slope aspect

The direction that the slope faces. Describe the direction with symbols N, S, E, W (e.g. a slope that faces a southwestern direction has an aspect of SW)

6.1.4 Higher level landform (general physiographic features)

The landform refers to the shape of the land surface in the area in which the site is located (adapted from FAO 1990)

1 Plain
2 Basin
3 Valley
4 Plateau
5 Upland
6 Hill
7 Mountain

6.1.5 Soil drainage

(Adapted from FAO 1990)

3 Poorly drained
5 Moderately drained
7 Well drained

6.1.6 Soil fertility

General assessment of the soil fertility based on existing vegetation

3 Low
5 Moderate
7 High

6.1.7 Soil texture classes

(Adapted from FAO 1990)

For convenience in determining the texture classes of the following list, particle size classes are given for each of the fine earth fraction listed below. (See Fig. 2)

1	Clay	12	Coarse sandy loam
2	Loam	13	Loamy sand
3	Clay loam	14	Loamy very fine sand
4	Silt	15	Loamy fine sand
5	Silty clay	16	Loamy coarse sand
6	Silty clay loam	17	Very fine sand
7	Silt loam	18	Fine sand
8	Sandy clay	19	Medium sand
9	Sandy clay loam	20	Coarse sand
10	Sandy loam	21	Sand, unsorted
11	Fine sandy loam	22	Sand, unspecified

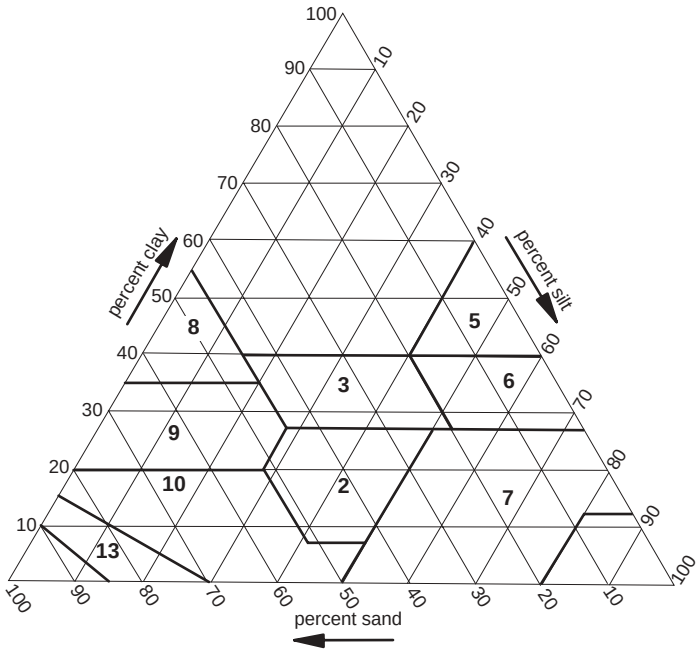


Fig.2. Soil texture classes

6.1.8 Soil taxonomic classification

As detailed a classification as possible should be given. This may be taken from a soil survey map. State class (e.g., Alfisols, Spodosols, Vertisols etc.)

6.1.9 Water availability

1 Rainfed
2 Irrigated
3 Flooded
4 River banks
5 Sea coast
99 Other (specify in appropriate section's **Remarks**)

6.1.10 Rainfall [mm]

Provide either the monthly or the annual mean (state number of recorded years)

6.1.11 Temperature [ºC]

Provide either the monthly or the annual mean

6.2 Remarks

Provide here any additional information related to the site (i.e. if data collected refers to collecting or to characterization/evaluation sites)

CHARACTERIZATION

7. Plant descriptors

- Data should be at least the average of two years.
- Periods of time classified as 'very early', 'early' etc. correspond to Mediterranean climate conditions.
- For the colour descriptors, the Royal Horticultural Colour Chart codes have been used

Female Cultigens

7.1 Biological characters

7.1.1 Date of terminal bud-burst (leafing) [YYYYMMDD]

Date leaves shown on 50% of the terminal buds

7.1.2 Crop setting fruit

7.1.2.1 Breba

0 Absent
1 Present

7.1.2.2 Main crop

0 Absent
1 Present

7.1.2.2 Late crop

0 Absent
1 Present

The following periods of time correspond to Mediterranean climate conditions

7.1.3 Beginning of fruit maturation

1 Very early (<20 July)
2 Early (20-31 July)
3 Mid-season (1-15 August)
4 Late (15-31 August)
5 Very late (>31 August)

7.1.4 Full maturity

Recorded when 50% of the fruits mature

7.1.4.1 Breba

1 Very early (< 15 May)
2 Early (16-31 May)
3 Mid-season (1-15 June)
4 Late (16-30 June)
5 Very late (> 1 July)

7.1.4.2 Main crop

1 Very early (end July)
2 Early (1-10 August)
3 Mid-season (11-31 August)
4 Late (1-30 September)
5 Very late (> 1 October)

7.1.5 Harvest period

1 Very short (<15 days)
2 Short (15-20 days)
3 Medium (21-40 days)
4 Long (41-60 days)
5 Very long (>60 days)

7.1.6 Pollination requirement for fruit set

7.1.6.1 Breba

1 Caducous (non-parthenocarpic)
2 Persistent (parthenocarpic)

7.1.6.2 Main crop

1 Deciduous (non-parthenocarpic)
2 Persistent (parthenocarpic)

7.1.7 Onset of caprification

1 Early (<10 June)
2 Middle (10-30 June)
3 Late (>30 June)

7.1.8 Length of the caprification period

1 Short (<7 days)
2 Medium (7-15 days)
3 Long (16-21 days)
4 Very long (>21 days)

7.1.9 **Onset of leaf fall** [YYYYMMDD]

7.2 Growth descriptors

7.2.1 Tree growth habit

See Fig. 3

1 Erect
2 Semi-erect
3 Open
4 Spreading
5 Weeping

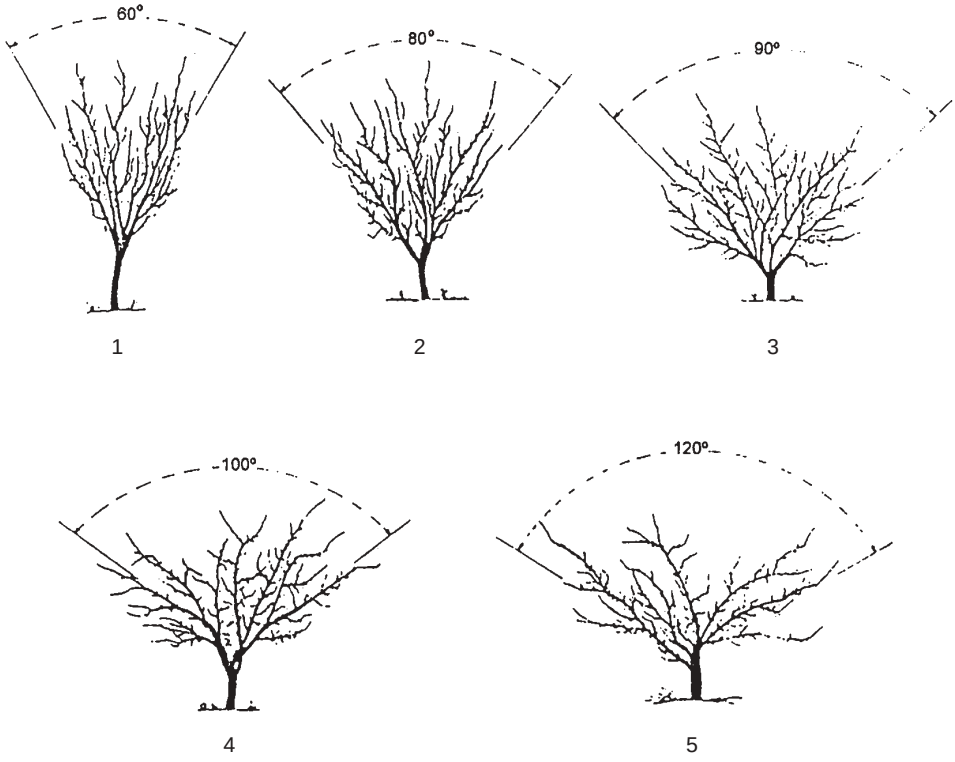


Fig. 3. Tree growth habit

7.2.2 Tree vigour

3 Low
5 Intermediate
7 High

7.2.3 Branching

7.2.3.1 Apical dominancy

0 Absent
1 Present

7.2.3.2 Lateral shoot formation on seasonal growth

0 Absent
1 Present

7.2.4 Relative degree of branching

3 Sparse
5 Intermediate
7 Dense

7.2.5 Terminal bud shape

1 Conical
2 Spherical
99 Other (specify in descriptor **7.6 Remarks**)

7.2.6 Terminal bud length [mm]

7.2.7 Terminal bud width [mm]

7.2.8 Terminal bud length/width ratio

7.2.9 Terminal bud colour

1 Light green (yellow-green group 145)
2 Green (green group 138)
3 Pinkish brown (greyed-purple group 184)
4 Brown (greyed-orange group 164)

7.2.10 Seasonal shoot growth in mature trees

(More than ten years old)

7.2.10.1 Shoot length

1 Short (poor) (<10 cm)
2 Medium (10-20 cm)
3 Long (21-35 cm)
4 Extremely long (vigorous) (>35 cm)

7.2.10.2 Shoot width

(Average of three internodes)

1 Thin (<10 mm)
2 Medium (10-15 mm)
3 Thick (>15 mm)

7.2.10.3 Shoot internode length

7.2.10.3.1 Length of apical third [cm]

7.2.10.3.2 Length of medium third [cm]

7.2.10.3.3 Length of basal third [cm]

7.2.11 Shoot colour

1 Green (green group 138)
2 Grey (greyed-green group 198)
3 Brown (greyed-orange group 164)
99 Other (specify in descriptor **7.6 Remarks**)

7.2.12 Tendency to form suckers

1 Low (less than three)
2 Medium (three to seven)
3 High (more than seven)

7.2.13 Rooting ability of the cuttings

3 Low
5 Medium
7 High

7.2.14 Nodal swellings location

(Lateral enlargements at the nodes)

1 Young branches
2 Older branches

7.2.15 Bark tubers

Tubers formed on dormant buds

7.2.15.1 Bark tubers quantity

1 Rare
2 Frequent
3 Abundant

7.2.15.2 Bark tubers location

1 Trunk only
2 Trunk and young branches
3 Trunk and older branches

7.2.16 Burrknots

(Aerial roots)

7.2.16.1 Burrknots quantity

1 Rare
2 Frequent
3 Abundant

7.2.16.2 Burrknots location

1 Trunk only
2 Trunk and primary branches
3 Trunk and older branches

7.2.16.3 Burrknots shape

1 Round
2 Flattened

7.3 Leaf descriptors

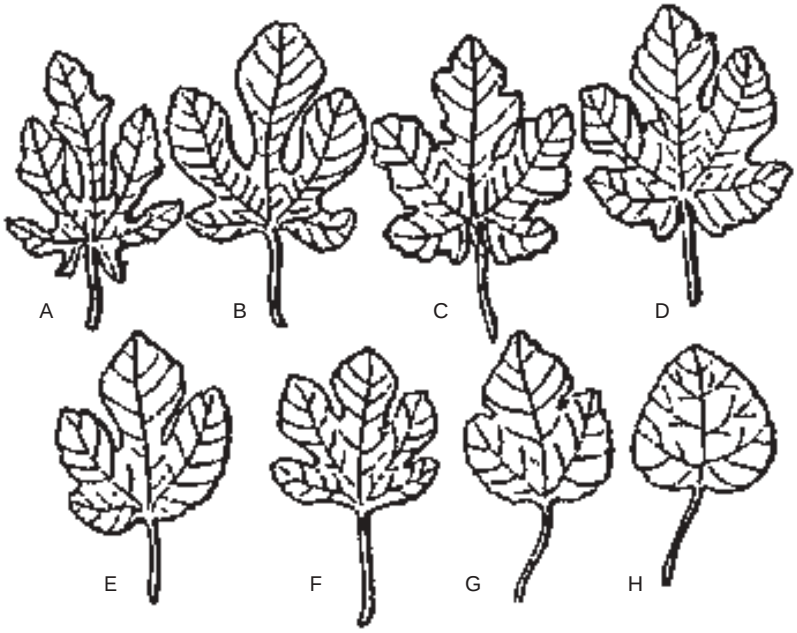
Leaf sample: The leaf having the first fruit taken at the onset of fruit ripening.

7.3.1 Number of leaves per shoot

1 <4
2 4-8
3 9-12
4 >12

7.3.2 Leaf shape

Average of 30 leaves for the two predominant shapes. See Fig. 4



A	Base calcarate, lobes linear	E	Base cordate, three-lobed
B	Base cordate, five lobed, lobes spatulate	F	Base truncate
C	Base calcarate, lobes lyrate	G	Base decurrent
D	Base calcarate, lobes latate	H	Leaf not lobed

Fig. 4. Leaf shape (from Condit, 1947)

7.3.3 Number of lobes

0 Absent (entire, undivided)
1 Three
2 Five
3 Seven
4 More than seven

7.3.4 Shape of lobes

1 Spatulate (narrower at the base and wider at the top)
2 Linear (more slender and regular in shape)
3 Latate (wider lobes)
4 Lyrate (as in *Ficus lyrata*)
99 Other (specify in descriptor **7.6 Remarks**)

7.3.5 Location of little lateral lobes

1 In central lobe
2 In lateral lobes

7.3.6 Degree of leaf lobation/incision [cm]

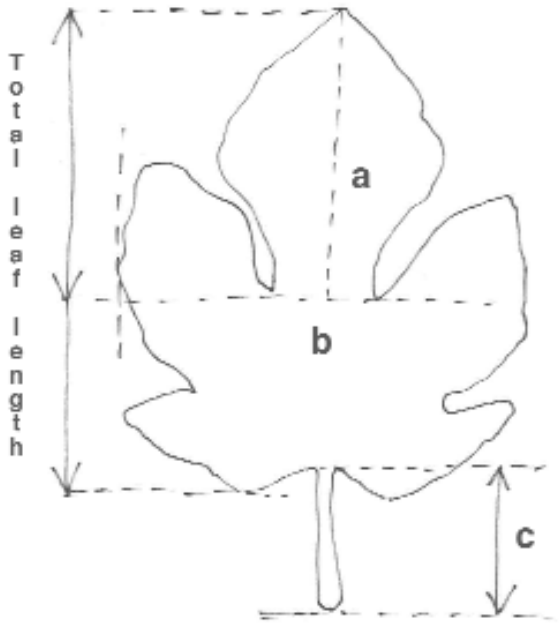
Length of central lobe/ length of leaf. See Fig 5

0 No leaf lobation
1 Slight lobation (value 0 – 0.25)
2 On average lobation (value 0.26 – 0.50)
3 Marked lobation (0.51 – 0.75)
4 Very marked lobation (value > 0.75)

7.3.7 Shape of leaf base

(Petiole sinus)

1 Truncate
2 Cordate
3 Calcarate
4 Decurrent
5 Open calcarate



a = length of central lobe

b = width of leaf

c = length of leaf stalk

Fig. 5. Leaf length and width

7.3.8 Leaf length [cm]
From the base of the petiole to the tip of the central lobe. See Fig. 5

7.3.9 Leaf width [cm]
See Fig. 5

7.3.10 Leaf area (L x W) [cm^2]
1 Small (<250)
2 Medium (250–400)
3 Large (400–550)
4 Very large (>550)

7.3.11 Length of leaf stalk/length of leaf
See Fig. 5

7.3.10 Leaf margin dentation
(Presence of teeth)
0 No dentation (entire)
1 Only upper margins dented
2 Lobes sides completely dented

7.3.13 Leaf margin
1 Crenate
2 Dentate
3 Serrate
4 Double serrate
6 Undulate
99 Other (i.e. 'parted', specify in descriptor **7.6 Remarks**)

7.3.14 Density of hairs/spicules on leaf upper surface
0 None
3 Sparse
5 Intermediate
7 Dense

7.3.15 Density of hairs or spicules on lower surface
0 None
3 Sparse
5 Intermediate
7 Dense

7.3.16 Leaf venation

(On lower surface)

1 Unapparent
2 Slightly apparent
3 Apparent

7.3.17 Leaf colour

1 Light green (yellow-green group 144)
2 Green (green group 137)
3 Dark green (green group 139)

7.3.18 Petiole length

Average of 30 petioles

1 Short (< 50 mm)
2 Medium (50-80 mm)
3 Long (>80 mm)

7.3.19 Petiole thickness [mm]

Measured about one cm from the point of union with the shoot

7.3.20 Petiole cross-section

1 Round
2 Flattened

7.3.21 Petiole colour

1 Light green (yellow-green group 145
2 Green (green group 138)
3 Pinkish (greyed-purple group 162)
4 Brown (greyed-yellow group 163-164)

7.4 Fruit descriptors

(For varieties producing two crops, breba and main crop will be described). See Fig 6

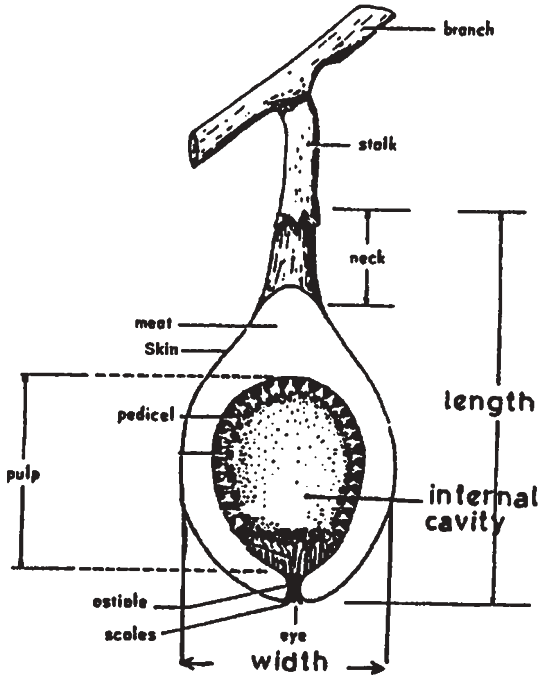


Fig. 6. Parts of the fig fruit (Storey, 1975)

Descriptors for fresh fruits

Fresh fruit sample: The basal-most fruit on the shoot taken during the middle of the ripening period

7.4.1 Fruit shape [index (width/length)= I]

1 Oblong (I < 0.9)
2 Globose (I = 0.9-1.1)
3 Oblate (I > 1.1)

7.4.2 Fruit shape according to the location of the maximum width

1 Ovoid (in the middle)
2 Bell shaped (nearer to the neck)
3 Pyriform (nearer to the ostiole-end)

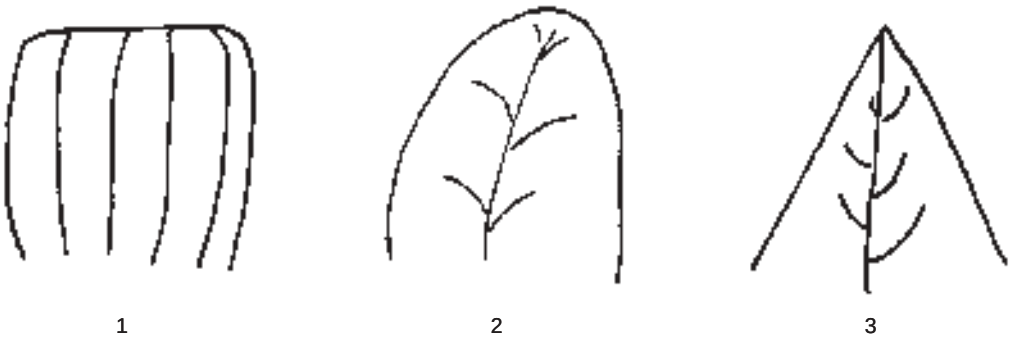


Fig. 7. Apex shape

7.4.3 Fruit apex shape

See Fig. 7

1 Flat (truncate)
2 Rounded
3 Acute (subconical)

7.4.4 Percentage of two syconia in the axil of a leaf per shoot [%]

7.4.5 Fruit weight [g]

Average of 25 fruits randomly selected

7.4.6 Fruit width

1	Small	(28-38 mm)
2	Medium	(38-49 mm)
3	Large	(50-60 mm)
4	Very large	> 60 mm

7.4.7 Fruit length

1	Short	(29-46 mm)
2	Medium	(29-54 mm)
3	Long	(54-75 mm)
4	Very long	>75 mm

7.4.8 Fruit neck length [mm]

7.4.8.1 Breba

0	Absent	
1	Short	(< 5)
2	Medium	(5-15)
3	Long	(>15)

7.4.8.2 Main Crop

0 Absent
1 Short (< 5)
2 Medium (5-10)
3 Long (>10)

7.4.9 Uniformity of fruit size

1 Uniform
2 Variable

7.4.10 Fruit symmetry

(According to the vertical axis)

0 No
1 Yes

7.4.11 Ostiole width [mm]

1 Small (< 1)
2 Medium (1–3)
3 Large (4–5)
4 Very large (> 5)

7.4.12 Drop at the eye

(Observed at maturation)

0 Absent
1 Present

7.4.13 Colour of liquid drop at the ostiole

1 Transparent
2 Pinkish
3 Red
4 Dark red

7.4.14 Scales around the ostiolum

7.4.14.1 Scale size

3 Small
5 Medium
7 Large

7.4.14.2 Scale colour

1 Same as skin
2 Different from skin

7.4.14.3 Scale adhesion

1 Detached
3 Adhered
5 Semi-adhered

7.4.15 Shape of the fruit stalk

(See Fig. 8)

1 Variously enlarged (A-E)
2 Long and slender (F-I)
3 Short and thick (J)

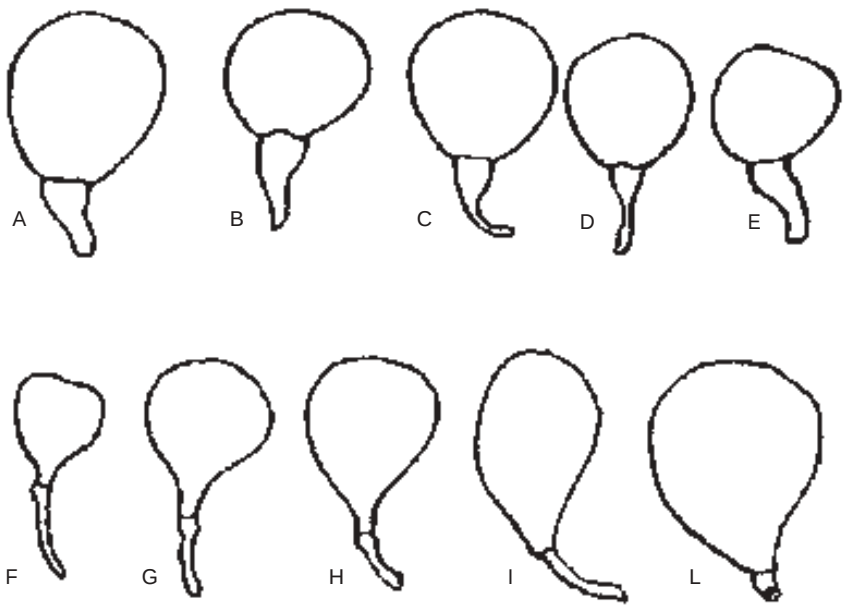


Fig. 8. Shape of the fruit stalk (from Condit, 1947)

7.4.16 Fruit stalk length [mm]

7.4.17 Abnormal fruit formation

0 None
3 Scarce
5 Frequent

7.4.18 Abscission of the stalk from the twig

3 Easy
5 Hard (fruit stalk remains attached to the shoot at harvest)

7.4.19 Ease of peeling

3 Easy
5 Medium (skin adheres to the meat only at the ostiole-end)
7 Difficult

7.4.20 Fruit ribs

(Longitudinal ridges on the fruit surface)

0 None
3 Intermediate
5 Prominent

7.4.21 Fruit skin cracks

See Fig. 9

1 Cracked skin
2 Scarce longitudinal cracks
3 Minute cracks

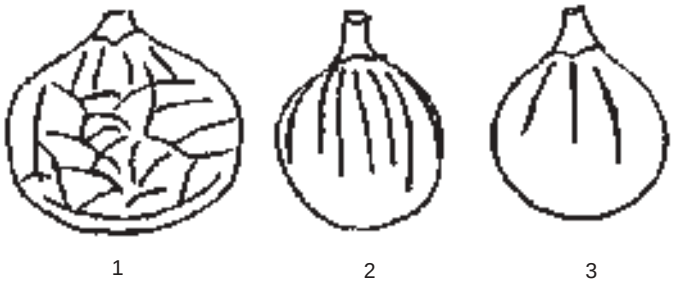


Fig. 9. Fruit skin cracks

7.4.22 Resistance to ostiole-end cracks

3 Susceptible
5 Intermediate
7 Resistant

7.4.23 Fruit flesh thickness [mm]

Measured at the centre

7.4.24 Firmness of the fruit skin

1 Soft
2 Medium
3 Firm
4 Rubbery

7.4.25 Bloom

0 Absent
1 Present
2 Abundant

7.4.26 Fruit skin ground colour

1 Black (black group 202)
2 Purple (greyed-purple group 183-187)
3 Brown (copper, light violet) (greyed-orange group 174-177)
4 Green (green group 141-143)
5 Light green (yellow-green group 144-145)
6 Yellow green (yellow-green group 151-153)
7 Yellow (yellow group 11)

7.4.27 Fruit skin overcolour

7.4.27.1 Regular bands

0 Absent
1 Yellow (yellow group 10-11)
2 Green (yellow-green group 144)
3 Purple (greyed-purple group 183-187)
99 Other (specify in descriptor **7.6** Remarks)

7.4.27.2 Irregular patches

0 Absent
1 Yellow sector (yellow group 10-11)
2 Green sector (yellow-green group 144)
3 Purple sector (greyed-purple group 183-187)
99 Other (specify in descriptor **7.6** Remarks)

7.4.28 Fruit lenticels quantity

3 Scarce
5 Intermediate
7 Numerous

7.4.29 Fruit lenticels colour

1 White
2 Pink
3 Green

7.4.30 Fruit lenticels size

3 Small
5 Medium
7 Large

7.4.31 Colour formation in the flesh

0 None
3 Light coloration
5 Intense colour formation

7.4.32 Pulp internal colour

1 White (yellow-white group 158)
2 Amber (light brown) (greyed-orange group 164)
3 Pink (red group 56)
4 Red (red group 53)
5 Dark red (red-purple group 59)

7.4.33 Pulp flavour

1 Neutral
2 Little flavour
3 Aromatic
4 Strong

7.4.34 Pulp texture

3 Fine
5 Medium
7 Coarse

7.4.35 Pulp juiciness

3 Doughy
5 Little juicy
7 Juicy
8 Very juicy

7.4.35 Fruit cavity

Observed in the wider cross-section

0 None
3 Very small
5 Small
7 Medium
9 Large

7.4.36 Amount of fruitlets

0 None
3 Low
5 Medium
7 High

7.4.37 Fruitlet size

3 Small
5 Medium
7 Large

7.4.38 Weight of 100-fruitlets [mg]

7.4.39 Total soluble solids [%]

1 Low (10.0-13.0)
2 Medium (13.1.-16.0)
3 High (16.1-20.0)
4 Very high (> 20.0)

7.4.40 Titratable acidity [% citric acid]

1 (< 0.050)
2 (0.050-0.125)
3 (0.126-0.225)
4 (0.226-0.300)
5 (> 0.300)

Descriptors for dried fruits

Dried fruit sample: Dried fruits collected during the intensive drying period

7.4.41 Number of dried fruits per kilogram

1 Very large < 45
2 Large 45-60
3 Medium 61-80
4 Small 81-100
5 Very small > 100

7.4.42 Colour of dried fruit

3 Light
5 Medium
7 Dark

7.4.43 Firmness of dried fruits

3 Soft
5 Medium
7 Hard

7.5 Male cultigens

The characterization of the male (caprifig) trees differs from the characterization of the female only in terms of the below mentioned aspects:

7.5.1 Crops setting fruit

1 *"Mamme"* (wintering crop)
2 *"Profichi"* (spring crop, used for caprifying females)
3 *"Mammoni"* (autumn crop)

7.5.2 Mamme fruit yield

3 Low
5 Medium
7 High

7.5.3 Profichi fruit yield

3 Low
5 Medium
7 High

7.5.4 Mammoni fruit yield

3 Low
5 Medium
7 High

7.5.5 Mamme: amount of gall flowers crops

3 Few
5 Medium
7 Abundant

7.5.6 Profichi: amount of gall flowers

3 Few
5 Medium
7 Abundant

7.5.7 Mammoni: amount of gall flowers

3 Few
5 Medium
7 Abundant

7.5.8 Mamme: presence of female flowers

0 Absent
1 Present

7.5.9 Profichi: presence of female flowers

0 Absent
1 Present

7.5.10 Mammoni: presence of female flowers

0 Absent
1 Present

7.5.11 Mamme: amount of male flowers

3 Few
5 Medium
7 Abundant

7.5.12 Profichi: amount of male flowers

3 Few
5 Medium
7 Abundant

7.5.13 Mammoni: amount of male flowers

3 Few
5 Medium
7 Abundant

7.5.14 Mamme: pollen maturation

3 Early
5 Mid-season
7 Late

7.5.15 Profichi: pollen maturation

3 Early
5 Mid-season
7 Late

7.5.16 Mammoni: pollen maturation

3 Early
5 Mid-season
7 Late

7.5.17 Mamme: date of Blastophaga's exit

3 Early
5 Mid-season
7 Late

7.5.18 Profichi: date of Blastophaga's exit

3 Early
5 Mid-season
7 Late

7.5.19 Mammoni: date of Blastophaga's exit

3 Early
5 Mid-season
7 Late

7.5.20 Mamme: duration of Blastophaga's exit

3 Short
5 Medium
7 Long

7.5.21 Profichi: duration of Blastophaga's exit

3 Short
5 Medium
7 Long

7.5.22 Mammoni: duration of Blastophaga's exit

3 Short
5 Medium
7 Long

7.5.23 Mamme: presence of parasitic (no role in pollination) insects

0 Absent
1 Present

7.5.24 Profichi: presence of parasitic (no role in pollination) insects

0 Absent
1 Present

7.5.25 Mammoni: presence of parasitic (no role in pollination) insects

0 Absent
1 Present

7.5.26 **Germination rate of pollen** [%]

7.6 Remarks

Any additional information, especially in the category of 99= 'other' under various descriptors above, may be specified here

EVALUATION

8. Plant descriptors

8.1 Agronomic characters

Come into bearing

1	Short	< 3 years
2	Medium	3-5 years
3	Long	> 5 years

8.2 Cropping efficiency

Average number of fruits per shoot. Average of 10 shoots per ten-year-old tree

1	Low	< 2
2	Moderate	2-6
3	High	> 6

8.3 Ratio of fruit set

Average of 10 shoots

8.4 Breba: regularity of production

3	Low
5	Medium
7	High

8.5 Main crop: regularity of production

3	Low
5	Medium
7	High

8.6 Estimated yield per tree [kg]

8.7 Fruit drying period

Number of days to get completely dried fruits under sun from fresh

1	Short	<7 days
2	Medium	7-14 days
3	Long	>14 days

8.8 Remarks

Specify here any other additional information

9. Abiotic stress susceptibility

Scored under artificial and/or natural conditions, this should be clearly specified. These are coded on a susceptibility scale from 1 to 9, viz.:

1 Very low or no visible sign of stress susceptibility
3 Low
5 Intermediate
7 High
9 Very high

9.1 Reaction to low temperature

9.2 Reaction to high temperature

9.3 Reaction to drought

9.4 Reaction to high soil moisture

9.5 Reaction to soil salinity

9.6 Reaction to sunscald

9.7 Reaction to transportation

9.8 Remarks

Specify any additional information here

10. Biotic stress susceptibility

In each case, it is important to state the life cycle tested, i.e. seedling, excised leaf, mature plant, seed-bearing plant, storage organ. Record such information in descriptor **10.2 Remarks**. These are coded on a susceptibility scale from 1 to 9, viz.:

1 Very low or no visible sign of susceptibility
3 Low
5 Intermediate
7 High
9 Very high

10.1.1 Fig mosaic virus

3 Low
5 Medium
7 High

10.1.2 Souring

3 Low
5 Medium
7 High

10.2 Remarks

Specify here any additional information

11. Biochemical markers

Specify methods used and cite reference(s)

11.1 Isozymes

For each enzyme, indicate the tissue analyzed and the zymogram type. A particular enzyme can be recorded as 11.1.1; 11.1.2, etc. Examples include: Acid phosphatase (ACPH); Esterases α and β (EST A and B); Isocitrate dehydrogenase (ICD); Malate dehydrogenase (MDH); Phosphogluconate dehydrogenase (PGD); Phosphoglucose isomerase (PGI); Phosphoglucose mutase (PGM); Peroxidases

11.2 Other biochemical markers

(e.g. Polyphenol profile)

12. Molecular markers

Describe any specific discriminating or useful trait for this accession. Report probe-enzyme combination analyzed. Below are listed some of the basic methods most commonly used

12.1 Restriction fragment length polymorphism (RFLP)

Report probe/enzyme combination (approach can be for nuclear, chloroplast or mitochondrial genomes)

12.2 Amplified fragment length polymorphism (AFLP)

Report primer pair combinations and accurate molecular size of products (used for nuclear genomes)

12.3 DNA amplification fingerprinting (DAF); random amplified polymorphic DNA (RAPD); AP-PCR

Accurately report experimental conditions and molecular size of products (used for nuclear genomes)

12.4 Sequence-tagged microsatellites (STMS)

Report primer sequences, and accurate product sizes (can be used for nuclear or chloroplast genomes)

12.5 PCR-sequencing

Report PCR primer sequences, and derived nucleotide sequence (can be used for single copy nuclear, chloroplast or mitochondrial genomes)

12.6 Other molecular markers

13. Cytological characters

13.1 Chromosome number

13.2 Ploidy level
(2x, 3x, 4x, etc.)

13.3 Meiosis chromosome associations
Average of 50 microspore mother cells, observed during metaphase 1

13.4 Other cytological characters

14. Identified genes
Describe any known specific mutant present in the accession

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ANNEX I. List of minimum highly discriminating descriptors for Fig

Descriptor IPGRI

Number	Name
7.1.2	Crop setting fruit
7.1.4	Full maturity
7.1.5	Harvest period
7.1.6	Pollination requirement for fruit set
7.2.3.1	Apical dominancy
7.2.13	Rooting ability of the cuttings
7.3.2	Leaf shape
7.4.1	Fruit shape [index (width/length)= I]
7.4.2	Fruit shape according to the location of the maximum width
7.4.3	Fruit apex shape
7.4.5	Fruit weight [g]
7.4.11	Ostiole width [mm]
7.4.19	Ease of peeling
7.4.21	Fruit skin cracks
7.4.22	Resistance to ostiole-end cracks
7.4.23	Fruit flesh thickness [mm]
7.4.26	Fruit skin ground colour
7.4.32	Pulp internal colour
7.4.35	Fruit cavity
7.4.39	Total soluble solids [%]
7.4.41	Number of dried fruits per kilogram
7.5.1	Crops setting fruit
7.5.3	Profichi fruit yield
7.5.6	Profichi: amount of gall flowers
7.5.12	Profichi: amount of male flowers
7.5.15	Profichi: pollen maturation
7.5.17	Mamme: date of Blastophaga's exit
7.5.18	Profichi: date of Blastophaga's exit
8.2	Cropping efficiency
8.4	Breba: regularity of production
8.6	Estimated yield per tree [kg]

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