



Users' Manual for the Database on Groundnut Aflatoxin Problem

International Crops Research Institute
for the Semi-Arid Tropics

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for
Database on the
Groundnut Aflatoxin Problem**

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Important Notes to Users

This Database is meant for use with the Mini-Micro CDS/ISIS database management software package developed and distributed by UNESCO, Paris.

Recipients of this Database and Manual may apply to UNESCO, General Information Programme, 7 Place de Fontenoy, 75000 Paris, France, to obtain the CDS/ISIS software. In case of difficulty in obtaining it or utilizing the Database, recipients may write for assistance to Dr V.K. Mehan or Mr L.J. Haravu, ICRISAT, Patancheru, Andhra Pradesh 502 324, India.

The Database is supplied as 10 diskettes. Three of these are labeled M1 to M3, and contain the mandatory and auxiliary files of the database, and seven diskettes, labeled D1 to D7, contain bibliographic data.

The Manual describes how the Database can be installed and used.

Introduction

This Manual delineates different data elements (or fields) in the Groundnut Aflatoxin Problem Database. It presents rules and guidelines followed for the bibliographic description of items that have been entered into the Database, and also explains how to make searches for information in the Database.

The database can be installed on an IBM-PC/XT, AT or compatible microcomputer, and run under PC-DOS or MS-DOS operating system. A hard disk of at least 40 megabytes is advised. Use of the Database requires that the recipient organization has a valid licence to use the software package called Mini-Micro CDS/ISIS developed by UNESCO, and distributed by them free of charge to nonprofit organizations throughout the world. Each country has an agency that is responsible for distribution of this software. Users should write to UNESCO, General Information Programme, 7 Place de Fontenoy, Paris, France, to obtain the name of the agency that distributes the software in their country.

This Manual provides some guidelines, with examples to illustrate the search features of the application. However, users who need more information are advised to consult the Mini-Micro CDS/ISIS Manual.

UNESCO's Reference Manual for Machine-Readable Bibliographic Description has been used as the source for the definition of data elements.

Since the database is being offered as a Mini-Micro CDS/ISIS application, the conventions and rules of Mini-Micro CDS/ISIS for subfields and repeatable fields have been used in this Manual.

This Manual aims to :

1. enable the installation, interpretation, and use of the Groundnut Aflatoxin Problem Database.
2. enable the application to be used by any recipient organization, to add its own data on the groundnut aflatoxin problem to the Database, and, if necessary, to provide search services to their users based on the Database.

Updates to the database will be provided by ICRISAT on request.

Installation of the Database and Software

This chapter assumes that the recipient organization already has a valid licence to use the Mini-Micro CDS/ISIS on one or more machines, and that version 2.3 of the software has been installed according to the instructions given in the CDS/ISIS Manual¹. It is assumed that Micro CDS/ISIS has been installed on the hard disk (usually drive C) of the computer in a directory called ISIS with five subdirectories, i.e., SYS, MENU, MSG, DATA, and PROG as advised in the CDS/ISIS Manual. It is also assumed that other requirements have been met with, e.g., the files, SYSPAR.PAR, and CONFIG.SYS have been defined as prescribed in the CDS/ISIS Manual.

The application comes with three diskettes containing the following mandatory and auxiliary files, and several numbered diskettes containing the Database.

Mandatory and Auxiliary Files

The following files are present on the diskettes labeled M1-M3

Mandatory Files

1. ATOXIN.XRF
2. ATOXIN.FDT
3. ATOXIN.FST
4. ATOXIN.PFT
5. ATOXIN.CNT
6. ATOXIN.LO1
7. ATOXIN.LO2
8. ATOXIN.NO1
9. ATOXIN.NO2
10. ATOXIN.IFP
11. ATOXIN.MST
12. ATOXIN.STW

Auxiliary Files

13. AATOXI.FMT
14. BATOXI.FMT
15. CATOXI.FMT
16. AJART.FMT
17. BJART.FMT
18. PROOF.PFT
19. BIB.PFT
20. AUTHOR.PAS
21. AUTHOR.PCD
22. ABYPRT.FMT
23. ASYBRT.FMT

Copy these files into the DATA subdirectory of the ISIS Directory. This can be done as follows :

1. Boot the machine and then place the diskette marked M1 in drive A.
2. Type (enter) **CD\ISIS\DATA** and press the **Enter** or **Return** key. This will place you in the DATA subdirectory of the ISIS Directory.
3. Type copy **a:atoxin.*** and press the **Enter** or **Return** key. This will copy the files numbered 1 to 6 to the DATA subdirectory of the ISIS Directory.

1. UNESCO. Division of Software Development and Applications. 1989. Mini-Micro CDS/ISIS Reference Manual (Version 2.3). Paris. France:UNESCO.

4. Place the diskette marked M2 in drive A. Type copy **a:atoxin,*** and press the **Enter** or **Return** key. This will copy files numbered 7 to 12 to the DATA subdirectory of the ISIS Directory.
5. Place the diskette marked M3 in drive A. Type copy **a:*.fmt** and press the **Enter** or **Return** key. This will copy the files numbered 13 to 17 to the DATA subdirectory of the ISIS Directory.
6. Type copy **a:*.pft** and press the **Enter** or **Return** key. This will copy the files numbered 18 and 19 to the DATA subdirectory of the ISIS Directory.
7. Now type **CD\ISIS\PROG** and press the **Enter** or **Return** key. This will place you in the PROG subdirectory of the ISIS Directory.
8. Type copy **a:author.*** and press **Enter** or **Return** key. This will copy the files numbered 20 and 21 to the PROG subdirectory of the ISIS Directory.
9. Type **CD\ISIS\MENU** and press the **Enter** or **Return** key. This will place you in the MENU subdirectory of the ISIS Directory.
10. Type copy **a:a?y?rt.fmt** and press the **Enter** or **Return** key. This will copy the files numbered 22 and 23 into the MENU subdirectory of the ISIS Directory.

Steps 1-10 have enabled you to copy all the mandatory and auxiliary files of a CDS/ISIS database and the CDS/ISIS Pascal source, and compiled programs provided with the application. You are now ready to import the data diskettes marked D1 to D7.

You can load the Database supplied on diskettes labeled D1 to D7 as follows:

1. Type **CDMSIS** and press the **Enter** or **Return** key. This will place you in the ISIS Directory.
2. Invoke the ISIS program by typing **ISIS** followed by **Enter** or **Return**. This will bring up the CDS/ISIS Opening Menu on the screen as shown below :

Micro CDS/ISIS - Version 2.3

- C - Change data base
- L - Change dialogue language

- E - ISISENT - Data entry services
- S - ISISRET - Information retrieval services
- P - ISISPRT - Sorting and printing services
- I - ISISINV - Inverted file services
- D - ISISDEF - Data base definition services
- M - ISISXCH - Master file services
- U - ISISUTL - System utility services
- A - ISISPAS - Advanced programming services

- X - Exit (to MSDOS)

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Micro CDS/ISIS - (C) Copyright Unesco 1988

6. You will now be told that the Master File Exists, and you will be asked if you would like to clear it (Type **Y** to clear it).
7. You will now be asked to specify the drive, on which the D1 was loaded. Type **A** to indicate the drive. Press the **Enter** or **Return** key.
8. Data in the D1 (ISO-2709 files) will now be loaded onto the hard disk. As each record is loaded, it is assigned a Master File Number (MFN) and this appears on the screen.
9. When all records on D1 diskette are loaded onto the hard disk, a message appears at the bottom of the screen asking if more diskettes are to be loaded. Then place diskettes D2 through D7. When data in diskette D7 is loaded, type **X** at the prompt which asks if there are more diskettes.

You have now loaded the database onto the hard disk.

To come to main menu, type X.

Before using the Atoxin Database and associated software, it is necessary to create an Inverted File of the Database. This can be done as follows :

1. At C:\>prompt, type **CD\ISIS** to come to the subdirectory ISIS. At C:\>ISIS> prompt, type **ISIS** to come to the Opening Menu. Type **I**. This will take you to the Inverted File Services Menu as shown below.

Service ISISINV	Inverted File Services	Menu EXG1
	L - Change dialogue language F - Full inverted file generation U - Update inverted file B - Inverted file backup G - Create unsorted link file S - Sort link file C - Load inverted file D - Dump inverted file P - Print search term dictionary X -Exit	

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Data base: ATOXIN
 Max MFN:

Worksheet: ATOXI
 Format : ATOXIN

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Step 2 or 3 will generate the Inverted File required for the application, and the ATOXIN Database and associated software becomes ready for use.

2. Type **F** (Full Inverted File generation) **or see step 3**. This will enable the generation of the inverted file for the application. This process may take approximately 10-12 hours.

3. An alternative to step 2, above, is to type **G** in the Inverted File Services Menu. This will generate an unsorted link file, i.e., a file which is an intermediate file before the Inverted File can be created. Following the creation of the link file, type **S** in the Inverted File Services Menu to sort the link file created. Once the sorting is over, type **C** in the Inverted File Services Menu to load the Inverted File to hard disk. The above series of choices in the Inverted File Services menu enables the Inverted File to be built up in three stages. This is recommended particularly when the computer is not available at a stretch for long periods in order to build the full Inverted file for a large database like this.

If the process is interrupted by power failure, you must start again. Sometimes a message "link not found" appears on the screen. Ignore the message as this does not interrupt the process of inversion, which is completed when you see the message 'Full Inverted File Generation Completed'.

Definitions of Fields (Data-elements) and Rules for Bibliographic Description

The CDS/ISIS database is a structured set of fields (data elements). Each field or data element is assigned a three digit identification called a Tag. This is a requirement of CDS/ISIS. The CDS/ISIS tag, definition and purpose of the field wherever required, characteristics of the field (its length, type, and whether it is mandatory or not), inversion status, data entry requirements, and examples are given for each field.

By inversion status of a field is meant whether or not the field has a place in the Inverted File of the database. Only those fields that are included (wholly or partly) in the Inverted File can be searched for within the CDS/ISIS software. The inverted file of a database, also called the Terms Dictionary, includes all elements (e.g., authors, words from titles, descriptors, group/category codes) that are defined as being searchable for a given database. The Field Selection Table (FST) in Appendix 2 shows all the fields (identified by their tags) that are searchable in the Groundnut Aflatoxin Problem Database.

CDS/ISIS permits data elements to be of variable length. Each field can occur several times, e.g., the author field for a book. CDS/ISIS also permits fields to have subfields. Each subfield is identified using a subfield identifier which is described while defining the database. The capability to handle subfields enables the user to work with a grouped field both at the level of the group as well as the level of a subfield.

All the fields described in this chapter constitute the record of a given entry in the Groundnut Aflatoxin Problem Database. If a field is described as mandatory, it means that if data for that field are available or can easily be ascertained, the data should be entered for such a field.

Type-codes for fields are as follows :

X = Alphanumeric field. This field can have any character.

N = Numeric field. This field can have only the digits 0-9.

The Field Definition Table (FDT), Field Selection Table (FST), and data-entry Worksheets ATOXIN and JART are given in Appendices 1-4.

1. Field name : Record Source

CDS/ISIS Tag : 1

This field is used to enter the name of the organization that is preparing the record for the document. The following codes can be used:

ICRISAT

ISC

AGRIS

CAB

2. Fieldname : Tear and Month of Data Entry

CDS/ISIS Tag: 2 Mandatory

Definition: The date when a record for a document is added to the database or amended in it is in YYMM form, i.e., the last two digits of the year (YY), and two digits of the month (MM).

Field Characteristics:

Length : 4 Type : P

Inversion Status : The field is indexed.

Repeatability : Not repeatable. .

Data Entry : If a record is added in January 1990, the field would contain 9001.

3. Field name: Bibliographic Entity

CDS/ISIS Tag: 3

The types of document and literature (bibliographic entities) are categorized as follows: Serials, monographs, theses, patents, reports, and conference documents.

A serial is a document in print or in nonprint form, issued in successive parts, usually having numerical or chronological designation, and intended to be continued indefinitely.

Monographs include books, and self-contained items in any medium. A monograph may contain individual chapters or parts by separate authors, and/or may cover separate topics.

Theses may be defined as treatises that have been submitted to a university or other educational institution in fulfilment of the requirements for a higher degree course.

Patent documents are documents published or laid open for public inspection by a patent office.

Conference documents are individual papers or collections of papers presented at a conference.

Field Characteristics :

Length : 1 Type : X

Inversion Status : Whole field is indexed.

Repeatability: Not repeatable.

Data Entry : Documents are abbreviated and entered in the

database as S for serials, M for monographs, P for patents, T for theses and C for conference documents.

The analytical level describes a bibliographic item that is a part of a larger work, and the bibliographic description of which cannot stand alone. Articles in periodicals or chapters of books are examples of analytical level records.

4. Field name : Bibliographic level

CDS/ISIS Tag : 4

Different types of bibliographic levels at which a document can be described have been identified. They are :

A record at the monographic level describes a document that can be considered as a self-contained bibliographic entity,

A record at the serial level describes a bibliographic entity that is issued in successive parts, usually but not necessarily having numerical or chronological description, and which is intended to be continued indefinitely.

Field Characteristics:

Length : 3 Type : X

Inversion Status : Field is indexed.

Repeatability: Not repeatable.

Data Entry: If a document is part of a serial, e.g., a journal article, it is entered in the Database as AS, a chapter of a monograph is entered as AM. A monograph which itself belongs to a series is entered as MS.

5. Field name : Literary Indicator

CDS/ISIS Tag : 5

Definition : The literary indicator is used to determine the literary form of the documentary unit being described and applied to the types of records described in the field Bibliographic Entity.

Field Characteristics:

Length : 2 Type : X

Inversion Status : Field is indexed.

Repeatability : Field is repeatable.

Data Entry : The following types of Literary Indicators are considered :

- L** for dictionaries, encyclopedias, and glossaries issued independently, or within larger bibliographic units.
- N** for numerical data, whether represented by tables or graphs.
- Z** for bibliographies, subject catalogs, lists of references issued within larger bibliographic entities.
- Y** for map(s)/atlases issued independently or within larger bibliographic entities.
- R** for reviews of literature, i.e., for critical evaluation or interpretative surveys of progress within a scientific or technical discipline.

6. Field name : Physical Medium

CDS/ISIS Tag: 6

Definition: Physical medium is the medium of the document other than print medium, i.e., microfilm, microfiche, or computer media such as tape/disk.

Field Characteristics :

Length : 20 Type : X

Inversion Status : The field is not indexed.

Repeatability: Not repeatable.

Data Entry : The name of the media is entered in full.

Example : Microfiche, microfilm, computer tape, computer disk, CD-ROM.

7. Field name : Language of Record

CDS/ISIS Tag: 7 Mandatory

Definition: A three-character code for the language of publication of the document.

Field Characteristics :

Length : 7 Type : X

Inversion Status : Only the language of the text is indexed. This field has two subfields. The first subfield indicated by ^t is for the language of the text of the document. The second subfield indicated by ^s is to enter the language of the abstract or summary of the record.

Repeatability : The field is repeatable. The record could have more than one text language and/or more than one summary language.

Data Entry : Enter a three-character alphabetic code for the language of the publication. Language codes are given in Appendix 7.

If the text of the document is in more than one language, e.g., in French and English, then it is given in the database as **^tfre%^teng**. The % symbol is used to distinguish the two or more occurrences of a repeatable field.

If the text is in English and summary in French, then the subfield codes are ^t and ^s respectively and it is entered as **^teng^sfire**.

8. Field name: Title in English

CDS/ISIS Tag: 100 Mandatory

Definition : The title assigned to the document is at the lowest level. Thus if an analytical level document is being described (e.g., journal article) the title of the article is entered in this field.

Field Characteristics:

Length : 500 Type : X

Inversion Status : Word indexed. All significant words of the title find a place in the Inverted File.

Repeatability: Not repeatable.

Example : Toxic products in groundnuts. Biological effects.

9. Field name : Title in Original Language

CDS/ISIS Tag: 105

Definition : Title of the document in a language other than English.

Field Characteristics:

Length : 500 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

10. Field name : Authors/Editors

CDS/ISIS Tag : 200 Mandatory

Definition: Name(s) of the person(s) who is/are associated with the document as author(s)/editor(s), compiler(s), etc.

Field Characteristics:

Length : 50 Type : X

Inversion Status : Name(s) and initials are indexed.

Repeatability: The field is repeatable. Each occurrence of the field is separated from the other by a % symbol.

Data Entry: The subfield codes are ^a for first name or surname, ^b for initials and ^r for role. Role means intellectual association in the preparation of the document, e.g., editor, compiler, etc., other than an author.

Example : ^aCole^bR.J.%^aHill^bR.A.%^aBlankenship^bRD.
^aRodricks^bJ.V.%^aHesselta

11. Field name : Affiliation of First Author

CDS/ISIS Tag: 205 Mandatory

Definition : The organization or the university of the first author.

Field Characteristics:

Length : 500 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry : Affiliation of the first author is given in this field. The subfield codes are ^m for main body and ^s for sub-body of the organization to which the author is affiliated.

Example : ^mUniv. of Khartoum ^sDept. of Crop Protection, Faculty of Agriculture, Shambat, Sudan.

12. Field name : Corporate Authors

CDS/ISIS Tag: 300

Definition : Corporate authors are bodies (organizations) under whose auspices a document may have been issued.

Field Characteristics:

Length : 300 Type : X

Inversion Status: The main body is indexed.

Repeatability : The field is repeatable. Each occurrence should be separated by a % symbol.

13. Field name : Collation/Pages Book Chapters/Proceedings Papers

CDS/ISIS Tag: 400 Mandatory

Definition : This refers to the exact page numbers of an analytic in a book or a symposium/workshop proceedings.

Field Characteristics:

Length : 50 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry : In this field the starting page of the document and the ending page of the document are entered separated by -.

Example : If a particular paper occurs in a workshop proceedings from page numbers 279 to 287, then it is entered in the database as: 279-287

14. Field name : English Title/Higher Level Rec

CDS/ISIS Tag: 110

Definition : A title of a document at the monographic level-

Field Characteristics:

Length : 500 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry: The title of the proceedings of a symposium, conference papers, or book is entered in this field.

Example : Aflatoxin contamination of groundnut : proceedings of the International Workshop.

15. Field name : Original Title/Higher Level Rec

CDS/ISIS Tag: 115

Definition : The title of a document other than in the English language at the monographic level.

Field Characteristics:

Length : 500 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry : The title of the monograph level document in a language other than English is entered in this field.

Example : La contamination des gousses et des graines d'arachide par l'*Aspergillus flavus* Link.

16. Field name: ISBN

CDS/ISIS Tag: 111

Definition : International Standard Book Numbers (ISBN) are unique identifying numbers given by publishers to books and other nonserial publications.

Field Characteristics:

Length : 13 Type : X

Inversion Status : The field is not indexed.

Repeatability: Not repeatable.

Data Entry: An ISBN consists often digits divided into four groups, of which the last is a check digit which may be a number or the letter X. Separate the number groups with hyphens.

Example: 92-9066-144-5

17. Field name : Edition

CDS/ISIS Tag: 112

Definition : Number of the edition of the document.

Field Characteristics:

Length : 30 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry : Edition number is entered in arabic numerals.

Example : 2nd edn, 3rd edn, 4th edn.

When the edition is other than a numbered edition, render it as given in the publication. Abbreviate edition to "edn".

Example : Revised edn., 2nd revised edn.

18. Field name : Authors/Higher Level

CDS/ISIS Tag: 210

Definition : Author(s) of the document at the monographic level.

Field Characteristics:

Length : 50 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry : Author(s) names are entered as in field CDS/ISIS Tag 200.

19. Field name : Corporate Authors/Higher Level

CDS/ISIS Tag: 310

Definition : Corporate authors are bodies (organizations) under whose auspices the monographic document may be issued.

Field Characteristics:

Length : 500 Type: X

Inversion Status : Not indexed.

Repeatability : The field is repeatable.

20. Field name : Year of Publication

CDS/ISIS Tag : 600 Mandatory

Definition: The year in which a particular document was published.

Field Characteristics:

Length : 4 Type : X

Inversion Status : Whole field is indexed.

Repeatability: Not repeatable.

Data Entry : The year is entered in full.

Example : If a document has been published in a serial in 1970, then it is entered in the database as : 1970

21. Field name : Place & Publisher

CDS/ISIS Tag: 610 Mandatory

Definition : Name of the organization and the city or town in which the document is published.

Field Characteristics:

Length: 300 Type: X

Inversion Status : The field is not indexed.

Repeatability: Not repeatable.

Data Entry: The subfield codes are ^a for the city or town of publication and ^b for the name of the publisher.

Example : ^aUinois, USA^bPathotox Publishers, Inc.

22. Field name : Title of Serial/Series

CDS/ISIS Tag: 130 Mandatory

Definition : The title of the series in which a particular document is published.

Field Characteristics:

Length : 500 Type : X

Inversion Status : The whole field is indexed.

Repeatability: Not repeatable.

Data Entry : The title is entered in full.

Example : If a serial is published in Phytopathology then it is entered as **Phytopathology**.

23. Field name : ISSN

CDS/ISIS Tag: 131

Definition : The ISSN or International Standard Serial Number is a unique eight-character identifier assigned to a serial/series title.

Field Characteristics :

Length : 9 Type : P

Inversion Status : The field is not indexed.

Repeatability: Not repeatable.

Data Entry: The ISSN of a serial is usually found on the cover page of issues of serials. The eight-digit ISSN is recorded with the separating hyphen.

Example: 0300-514X.

24. Field name: Volume/Issue

CDS/ISIS Tag: 132 Mandatory

Definition : The volume and issue number of a serial level document.

Field Characteristics:

Length : 50 Type : X

Inversion Status : The field is not indexed.

Repeatability: Not repeatable.

Data Entry : The volume number and issue number of a serial are entered in this field. The subfield codes are ^v for volume number and ^i for issue number.

Example : For an article in Phytopathology vol 60, issue 4, this field will contain ^v60^i4.

25. Field name : Collation/Pages Journal Articles

CDS/ISIS Tag: 410 Mandatory

Definition : The collation pages of a document in a serial volume/issue.

Field Characteristics:

Length : 50 Type : X

Inversion Status : Not indexed.

Repeatability: Not repeatable.

Data Entry : The collation pages of a document that have been published in a serial/series are entered in this field.

Example : If a document in a serial has been published from pages 185 to 192 then it is entered as : 185-192.

26. Field name : University/Education Institution & Degree

CDS/ISIS Tag: 315

Definition : It is the name of the university/educational institution and the degree awarded.

Field Characteristics:

Length : 300 Type : X

Inversion Status : The whole field is indexed.

Repeatability: Not repeatable.

Data Entry : The name of the university or educational institution and the degree awarded for a thesis or dissertation is entered in this field. Subfield codes are ^n for the name of the university or educational institution and ^d for the degree awarded.

Example : ^nUniversity of Florida, USA^dPh.D. thesis.

27. Field name: Report/Patent/Project No.

CDS/ISIS Tag: 320

Definition : The report/patent/project number.

Field Characteristics:

Length : 50 Type : X

Inversion Status : The whole field is indexed.

Repeatability : The field is repeatable.

Data Entry : Enter in this field the most important report or patent number given on the document.

Example : Report G 70, T.P.I, London, U.K.

28. Field name : Meeting/Conference Name

CDS/ISIS Tag: 500

Definition : The name of the meeting or conference.

Field Characteristics:

Length : 500 Type : X

Inversion Status : Word indexed, All significant words find a place in the inverted file.

Repeatability: Not repeatable.

Data Entry : Enter in this field the name of a conference, symposium, workshop, seminar, group discussion, or any kind of meeting of which the documentary unit constitutes the complete proceedings or paper. This is entered as : ^n before name of conference, ^p before place where conference was held, and ^d before dates of conference.

Example : ^nAflatoxin contamination of groundnut: proceedings of the International Workshop, ^pICRISAT Center, India. Patancheru, A.P. 502 324, India : International Crops Research Institute for the Semi-Arid Tropics, ^d6-9 Oct 1987.

29. Field name : Notes

CDS/ISIS Tag: 620

Definition : Information on tables, graphs, and figures.

Field Characteristics :

Length : 100 Type : X

Inversion Status: Not indexed.

Repeatability: Not repeatable.

Data Entry : Used to enter the number of references of an article or chapter of a monograph, to enter the number of illustrations and tables as they constitute important parts of the document.

30. Geographical Area/Country Code

CDS/ISIS Tag : 630 Mandatory

Definition : The code for the country or geographical area of publication.

Field Characteristics:

Length: 30 Type: X

Inversion Status : The whole field is indexed.

Repeatability: The field is repeatable.

Data Entry : Enter a three-digit character code for the name of the country in this field (Appendix 8). The country of the publication is determined by the address of the publisher.

Example : Nigeria - NGA
 India - IND
 United Kingdom - GBR

31. Field name: Descriptors

CDS/ISIS Tag: 640 Mandatory

Definition : Thesaural terms which describe the subject content of the document being described.

Field Characteristics:

Length: 500 Type:X

Inversion Status : Each term in the field enclosed within angular brackets, <...> is indexed.

Repeatability: Not repeatable.

Data Entry : Keywords are to be entered within angular brackets.

Example: <Aspergillus flavus><Groundnuts><Aflatoxin>

32. Field name : Identifiers

CDS/ISIS Tag: 650 Mandatory

Field Characteristics:

Length : 500 Type : X

Inversion Status : Each phrase entered within the /.../ is indexed.

Repeatability: Not repeatable.

Data Entry : This category includes terms found useful, but not found in the thesaurus such as commercial names of pesticides, names of various international trials and nurseries, and project names.

Example: /SATCRIS/

33. Group/Category Codes

CDS/ISIS Tag: 660 Mandatory

Definition : The group/category code includes the broad subject area(s) to which a document belongs.

Field Characteristics:

Length: 10 Type :X

Inversion Status : The whole field is indexed.

Repeatability: The field is repeatable.

Data Entry : The group/category codes (Appendix 9) to which a particular document is categorized are entered in this field. If the document can be put in two or more categories, then the codes are separated by %.

Example: B00%B02

34. Field name : Abstract

CDS/ISIS Tag: 700 Mandatory

Definition : The abstract of the document.

Field Characteristics :

Length : 1600 Type : X

Inversion Status : Each significant word of the abstract is indexed.

Repeatability: Not repeatable.

Data Entry : The abstract is entered in this field.

Search Features

The search language of CDS/ISIS is based on Boolean algebra, which provides a convenient way of expressing logical operations between classes. Each search term associated with a given record can be viewed as representing the class of all those records associated with that term/Thus by expressing logical operations between search terms you can define precisely the class of records to be retrieved in response to your needs.

CDS/ISIS permits the following kinds of searches :

- **word searching**, e.g.: aflatoxin, detoxification, storage
- **phrase searching**, e.g.: seed infection, seed colonization, cultural control, chemical control
- **truncated searching**, e.g.: *Aspergillus*\$, this would retrieve *Aspergillus*jlavus, *Aspergillus parasiticus*, *Aspergillus niger* and *Aspergillus* spp., and any word with the stem *Aspergillus*. The '\$' symbol is used to truncate search terms.
- **free text searching**, e.g.: preharvest \$ infection, preharvest \$ \$ infection, preharvest \$ \$ \$ infection—these would search for terms adjacent to each other, terms separated by one word, and terms separated by two words respectively.
- **field-directed searching**, e.g.: Mixon\$/(200) would look for the name Mixon in the field 200, i.e., author field.

Note : To return to the menu at any time while searching, press Enter or Return key.

A search in a CDS/ISIS database can be for one or more of the above elements. When two or more elements are used in a search, they are combined using the Boolean operators ***(AND)**, **+ (OR)**, and **^ (NOT)**. For example, if you need to search for information on the estimation of aflatoxins in peanut butter by thin-layer chromatography (TLC), a possible Boolean expression could be:

(TLC * aflatoxins) * peanut butter

In this expression, the symbol * denotes the Boolean AND. Each term in the Boolean expression above, can further be qualified by a choice of one or more fields. For example, the expression

TLC/(640) * aflatoxins/(640) * peanut butter/(640)

will retrieve only those records which have the terms TLC, aflatoxins, and peanut butter in the field 640, i.e., the descriptor field.

To browse through records of the database, enter the option **B** in the Information Retrieval Services Menu. For dictionary browsing, select the option T. Each search results in the creation of a numbered set (Set #). A set can be referred to by its number and com-

bined with other set numbers. Thus, a search for data on aflatoxin analysis in peanut butter by TLC could have proceeded as follows :

Type TLC * aflatoxin (Set # 1)
Type Peanut butter (Set # 2)
Type # 1 * #2 (Set #3)

The Set # 3 will contain combined Set # 1 and Set # 2.

Each search expression (term or Boolean expression) produces a display indicating the number of items retrieved. For instance, the search expression : detoxification * groundnut cake may produce the following display (Set # 1)

P= 162 detoxification
P= 53 groundnut cake
T= 9 - #7 : detoxification * groundnut cake

where P = number of postings for each term, and T = number of records with the expression detoxification and groundnut cake. The retrieved records can be displayed on the screen by typing **D**.

Save the search results by typing **P** and giving your file name. The saved file automatically has the extension ". SAV". Print and sort procedures can be applied to a saved file to produce formatted outputs. (Please see Chapters on Information Retrieval Services and Sorting and Printing Services).

Information Retrieval Services

The Information Retrieval Services (ISISRET) module of CDS/ISIS provides all functions related to searching, display of records, and saving of retrieved records to disk.

At the prompt C:\ISIS> type **ISIS** and press **Enter** or **Return** key. This will open up the main menu. Type **S** (Information Retrieval Services). This will bring up the Information Retrieval Services Menu as shown below:

Service ISISRET	Information Retrieval Services	Menu EXGEN
-----------------	--------------------------------	------------

L	- Change dialogue language
B	- Browse Master file
T	- Display terms dictionary
S	- Search formulation
D	- Display search results
F	- Change display format
R	- Recall query formulations
G	- Execute previous search
P	- Save search results
X	-Exit

?

Typing **S** in response to the above menu results in a blank screen and a prompt at the top "Search expression?". A search expression can be a single word, a phrase, a truncated word or phrase, or word or phrase qualified by a field tag (e.g., detoxification/(640), a Boolean expression with words, phrases, truncated terms, or a free text expression, or any combination of one or more such terms. The formulation of a search expression is explained in the Chapter "Search Features".

The examples below illustrate some typical searches and the way you can display search results and/or save search results to a disk file.

1. Searching records in a group category **H06** (Resistance to seed infection and colonisation by *Aspergillus flavus* in groundnuts):

- a. Type the option **S** from the menu for search formulation.
- b. Type the term **H06\$** to search for all the records in the group category "Resistance to seed infection and colonization by *Aspergillus flavus* in groundnuts".

(Note : See Codes in Appendix 9 for any subject search.)

- c. Once the group code (e.g., H06) is entered, the software displays the total number of records in Set # to which the code H06 was

assigned. The records retrieved can be displayed one by one by pressing **D** (for display).

- d. The search result can be saved to a disk file by typing **P**. The program prompts you to enter a save file name (say **H06**) to store the search results on a disk file.
- e. Exit from the Information Retrieval Services Menu by typing **X** to return to main menu.

2. Searching the records on the groundnut aflatoxin problem in any specific country, e.g., Nigeria (for country codes please refer to Appendix 8)

- a. At the prompt **C:\ISIS>**, type **ISIS** and press **Enter** or **Return** Key. This will open the main menu.
- b. Type **S** to bring up the Information Retrieval Services Menu.
- c. Choose the option **S** from the menu for search expression.
- d. Type the term **NGA/(630)** to search for all records specific to Nigeria. These records can be displayed by typing **D**.
- e. Save the search results with the option **P** and give a suitable save file name (say **NGA**) for the search results.
- f. Exit from the Information Retrieval Services Menu by typing **X** to return to main menu.

3. Searching for all the references by a specific author (say **Mixon).**

- a. At the prompt **C:\ISIS>**, type **ISIS** and press **Enter** or **Return** Key. This will open the main menu.
- b. Type **S** to bring up the Information Retrieval Services Menu.
- c. Choose the option **S** from the menu for search expression.
- d. Enter the term **Mixon\$** to search all the records in the database with **Mixon**. Notice that you have used the truncation symbol, **\$**. This was done because you do not know **Mixon's** initials. An alternative to searching for **Mixon's** papers would be to enter **Mixon\$/(200)**. In this we are clearly stating that the search should be done in field 200 (Author field tag).
- e. Save the search results with the option **P** and give the suitable file name (say **Mixon**) for the search results.
- f. Exit from the Information Retrieval Services Menu by typing **X** to return to main menu.

4. Searching by subject, e.g., aflatoxins in peanut butter

- a. At the prompt C:\ISIS>V type **ISIS** and press **Enter** or **Return** Key. This will open the main menu.
- b. Type **S** to bring up the Information Retrieval Services Menu.
- c. Choose the option **S** from the menu for search expression.
- d. Enter the Boolean expression **Aflatoxin\$ * Peanut Butter** and press the **Enter** or **Return** key. In this expression the * symbol indicates that you want to combine Aflatoxin or Aflatoxins with a Boolean * operator with Peanut butter. Only those records in which both these terms are present will be retrieved. The above expression could have also been field directed, e.g., **Af-latoxin/(640) * Peanut Butter/(640)**. This will retrieve only those records in which the two terms are present but only if they are present in the descriptor field (640). Retrieved records can be displayed by typing D (for display).
- e. Save the search results with the option P and give the suitable file name for the search results.
- f. Exit from the Information Retrieval Services Menu by typing X to return to the main menu.

To print the output refer to the Chapter on Sorting and Printing.

Searches can also be done for all other fields with appropriate Boolean expressions. For details see Chapter "Search Features".

The other options of the Information Retrieval Services are :

B : Browse Master File. This option allows you to display a section of the Master File starting from any given MFN number.

Example : Starting MFN for browse ? 200/250. Press **Enter** or **Return** key.

F : Change Display Format. This option is used to edit and/or replace the display format with D or B option which is used to display the records. You may use the name of a pre-defined format or supply an actual format. Once selected, a format remains in effect until it is modified or re-selected. The default format for display is **ATOXIN**. The records may also be displayed using the **BIB** format. To do this, type F, followed by function key **F6** to delete the format. This will result in a blank screen. Now enter **@BEB** and press **Enter** or **Return** key. After changing the display format records browsed can be seen in BIB format. Atoxin format displays all information entered for a particular record, while BIB format displays author(s), year of publication, title of the publication and of the journal/book, and an abstract.

R: Recall Query Formulation. This option displays all the search expressions created during the current session. For each search expression CDS/ISIS displays the set number, the number of records retrieved, the name of the database to which the query was submitted, and the text of the corresponding search expression.

G: Execute Previous Search. This option allows you to re-execute a previously submitted search expression. You may use the G option to make a previously submitted search expression as the current one. Press **Enter** or **Return** key twice to display the search results.

The use of T option in the Information Retrieval Services Menu is advised when users do not know if certain terms exist, and would therefore like to browse in the Search Terms Dictionary before actually conducting a search.

T: Display Terms Dictionary. This option allows you to display the search terms dictionary on the screen and to select terms to be used in searching. When you select this option, the screen clears and CDS/ISIS prompts you to enter the initial search key. If you press **Enter** or **Return** key, the dictionary display will start from the first term. At this point you can select terms for searching as explained below. On the other hand, you can enter the same words of the search key (e.g., **st** if you want to see if **storage** is a search key). Subsequently, you can type :

T - allows selection of another section of the dictionary.

S - Type **S** to select the term. If you have selected another term, CDS/ISIS will automatically insert the logical + (**OR**) operator between this and the previous one. You can select terms from different pages provided you do not exceed the maximum search expression limit of 250 characters. After selection of term or terms, type **X** and press **Enter** or **Return** key to execute the search and type **D** for display of the search terms on the VDT screen. If you want to cancel the select term or terms, type **C** and come back to the submenu and type **X** to go to the main menu.

Terms Selection Keys:

Cursor keys - The <UP>, <DOWN>, <LEFT>, <RIGHT>, <HOME>, and <END> cursor keys position the cursor on the term to be selected in the page being displayed currently on the VDT screen.

Paging keys:

<Pg Dn> - this key displays the next page of dictionary terms.

Exit Keys:

C - exit and cancel search.

X - exit and execute search if any.

Sorting and Printing Services

The Sorting and Printing Services module of CDS/ISIS allows you to produce printed products using the entire Database, or a subset of it, or a previously saved search set.

The module is invoked by typing **P** in response to the opening menu of CDS/ISIS, The menu of the Sorting and Printing Services module is given below:

Services ISISPRT	Sorting and Printing	Menu EXPRT
------------------	----------------------	------------

L - Change dialogue language
S - User print worksheet
P - System print worksheet
X-Exit

?

The user is asked to choose either a user print worksheet (Option **S**) or a system print worksheet (Option **P**). User must specify Worksheet page layout and other characteristics, and the sorting sequences that are required in a printed product. It is possible to specify the following characteristics on a print worksheet: (the cursor can be moved forward by pressing **Enter** or **Return** key and backward by pressing **Tab** key)

- Name of the Database must be **ATOXIN**;
- MFN limits to be included in the printed product (example 100/201);
- the save file that is to be produced as a printed product (example H06.sav);
- the title of a search can be specified (title means heading for a printout);
- the display/print format to be used in formatting the output (enter for default or name);
- whether the printed product should be produced in a single column or in two columns, and if in two columns, the width of the columns and the gap between them;
- the number of lines on a printed page;
- whether there is need to sort the output file, and if so, the name of the Sort worksheet; and
- the name of the file that will contain the final printed product.

For the Aflatoxin Database, a special User Print Worksheet has been predefined. This worksheet is called **BYPR**T. Similarly, a Sort Worksheet called **SYBR**T has also been defined. The Sort Worksheet

specifies the primary and secondary keys to be used in sorting the output product.

This example assumes that you are printing a search set called Pnut.SAV that you have already created using the Information Retrieval Services Menu.

1. Type **S** from the Sorting and Printing Services Menu.
2. You will now be prompted to enter the name of a Print Worksheet. Type **BYPRT** and press the **Enter** or **Return** key.
3. You will find that the Worksheet **BYPRT** appears on the screen. Notice that some of the fields are already filled in, However, it is possible to modify existing entries in the fields or add new data before submitting the Worksheet to the actual print run. This is done by typing **M** (for modify). The moment you do this the cursor is positioned on the first field of the Worksheet and you can make required changes.
4. Normally you would only make changes to the field that specifies the MFN limits or to the field that specifies the name of the Save File or Output File. If for instance, you are wanting to produce a printed product from a save file called Pnut.SAV, you will simply type **PNUT** in the field for Save File Name. (Note : it is not necessary to give the extension **.SAV**). Notice that the worksheet **BYPRT** has specified that the print/display format to be used is **@BIB**. The **BIB** format produces output in the standard citation style used at ICRISAT and includes abstracts if the record contains one. Notice also that the **BYPRT** worksheet contains the name of a Sort Worksheet and that is **SYBRT**. Finally, observe that the Worksheet contains the name of an output file, viz., **BIBLO.OUT**. This is the disk file version of the final printed product. A separate file name needs to be given for each file printout. Enter title for specified document or press **Enter** or **Return** key to omit title.
5. After you have entered the name of the save file (or MFN limits) type the **Pg Dn (Page Down)** key followed by **X** (for exit).
6. You will now be shown the Sort Worksheet **SYBRT**. As explained, this Worksheet which is also already filled in specifies the primary and secondary keys on which the sorting is required to be done. The sorting sequence specified in **SYBRT** is author followed by date. There is no need to make changes to the entries in the **SYBRT** worksheet. Press the **Pg Dn (Page Down)** key followed by **X**.
7. The actual print run will now begin. You will first be asked if you want to keep the Save file after the print run. Answer **Y** or **N**.
8. The print run may take from 5 to 45 minutes depending on the volume of the output file and the extent of sorting specified. Once the run is completed, the message, 'Print run completed' appears on the screen.
9. The output file **BIBLO.OUT** or named **X.OUT** may now be printed using the DOS command, i.e., **Print Biblio.out** after exiting from CDS/ISIS in the normal way.

Appendix 1

Field Definition Table

Held Definition Table (FDT)

Data Base : ATOXIN

Tag1	Name	1Len	1Type*	1Rep	1 Delimiters /Pattern
- 1	Record Source	10	X		
- 2	Year and Month of Data Entry	4	P		9999
- 3	Bibliographic Entity	1	X		
- 4	Bibliographic Level	3	X		
- 5	Literary Indicator	2	X	R	
- 6	Physical Medium	20	X		
- 7	Language of Record	8	X	R	ts
- 100	Title in English	500	X		
- 105	Title in Original Language	500	X		
- 200	Authors/Editors	50	X	R	abr
- 205	Affiliation of First Author	500	X		ms
- 300	Corporate Authors	500	X	R	ms
- 400	Collation/Pages	50	X		
- 110	English Title/Higher Level Rec	500	X		
- 115	Original Title/Higher Level Rec	500	X		
- 111	ISBN	13	X		
- 112	Edition	30	X		
- 210	Authors/Higher Level	50	X	R	abr
- 310	Corporate Authors/Higher Lvl	500	X	R	ms
- 600	Year of Publication	4	p		9999
- 610	Place & Publisher	300	X		ab
- 130	Title of Serial/Series	500	X		
- 131	ISSN	9	p		9999-999X
- 132	Volume/Issue	50	X		vi
- 410	Collation/Pages Higher Lvl	50	X		
- 315	Univ./Educ Inst & Degree	300	X		nd
- 320	Report/Patent/Project No.	50	X	R	
- 500	Meeting/Conference Name	500	X		npd
- 620	Notes	100	X		
- 630	Geog. Area/Country Code	30	X	R	
- 640	Descriptors	500	X		
- 650	Identifiers	500	X		
- 660	Group/Category Codes	10	X	R	
- 700	Abstract	1600	X		

***X = Alphanumeric**

P = Numeric

R = Repeatable

ts = text* summary

abr = name, initials, role of an author

ms = main body, sub-body of the affiliation of the author

ab = name and place of publisher

vi = volume and issue number

nd = name and date of degree awarded

npd = name, place, and date of conference held

Appendix 2
Field Selection Table

Data Base Name : ATOXIN FST for Inverted File FST name : ATOXIN

?1	Tag1	IT	1Data extraction format
-	2	0	
-	3	0	MHU.V3
-	4	0	MHU,V4
-	5	0	MHU,(V5/)
-	7	0	MHU,(v7^t/)
-	100	4	MHU,V100
-	200	0	MHU,(v200^a: :v200^b/)
-	300	0	MHU.(v300^m/)
-	600	0	MHU.V600
-	130	0	MHU,vI30
-	315	0	MHU,v315^n
-	320	0	MHU,(v320/)
-	500	4	MHU,v500
-	630	0	MHU,(v630/)
-	640	2	MPU,v640
-	650	2	MPU,v650
-	660	0	MHU,(v600/)
-	700	4	MHU,V700

Appendix 3
Data-Entry Worksheet (ATOXIN)

Database: ATOXIN Worksheet: ATOXIN Page: I

Record Source: _____ Year & Month Data Entry: __. __ Bibl Entity: _____
Bibliographic Level: _____ Literary Indicator: _____ Phys Medium: _____

Language of Record: _____

Title of Record in English: _____

Title in Original language: _____

Authors/Editors: _____

Corporate Authors: _____

Affiliation of First Author: _____

Collation/Pages: _____

English Title/Higher Level Rec: _____

Database: ATOXIN Worksheet: ATOXIN Page: 2

Title in Original language: _____

Authors/Higher Level: _____

Corporate Authors/Higher Lvl: _____

Edition: _____ ISBN: _____ Year of Publication: _____

Place & Publisher: _____

Collation/Pages Higher Lvl: _____

Title of Serial/Series _____

Volume/Issue: _____ - ISSN: _____

Meeting/Conference Name: _____

Geog Area/Country Code: _____

Descriptors: _____

Appendix 4
Data-Entry Worksheet (JART)

Database: ATOXIN Worksheet: JART Page: 1

Record Source: _____ Year & Month Data Entry: __ Bibl Entity: . _____
Bibliographic Level: _____ Literary Indicator: _____ Phys Medium: _____

Language of Record: _____

Title of Record in English: _____

Title in Original Language: _____

Authors/Editors: _____

Affiliation of First Author: _____

Corporate Authors: _____

Journal Title: _____

Database: ATOXIN Worksheet: JART Page: 2

Volume/Issue: _____ pages: _____

Year of Publication: _____ ISSN: _____

Geog. Area/Country Code: _____

Descriptors! _____

Identifier**! _____

Group/Country Code: _____

Abstract: _____

Notes: _____

Appendix 5 Display Format

ATOXIN

"Master File Number : ".mf(4)/MDL."Title In English :
".V100(30.30)/"Original Title : ".V105(30.30)/"Authors/Editors :
",V200(30.30)+; :/"Affiliation, First Author: ",v205(30.30)/"Corporate Authors
: ".V300(30.30)+; :/"Collation/Pages : ",V400(30.30)/"In: Title. Higher Level
: ",V110(30.30)/"Authors/Editors, Higher Lvl: ",V210(30.30)+; :/"Corp Authors.
Higher Lvl :",V310(30,30)+; :/"ISBN : ".V111 /"Edition : ".V112/"Year
of Publication : ",V600/"Place, Publisher : ".v610(30.30)/"Title of
Serial/Series : ".V130(30.30)/"Volume/Issue
"MHL,V132^v(30.30),("V132^i")/"Collation/Pages: :
".mdl.V410(30.30)/"ISSN : ",v131/"Univ. or Educ. Inst & Degree:
",v315^n(30,30)", "V315-d(30,30)/"Report/Patent No :
",V320(30,30)/"Meeting/Conf Name : ",V500^n(30.30)". "v500^p(30,30).",
'V500^d(30.30)/"Geog. Area/Country Code : ",V630(30.30)+: :/"Descriptors
: ",v640(30,30)/"Identifiers : ",v650(30.30)/"Group/Category Code
: ".V660(30,30)+; :/"Abstract : ".V700(30,30)/"Notes :
".V620(30.30)/##

Appendix 6
Display Format

BIB

```
mdl, If p(v200) then !/E?,(&author('200')).!/F/ fi, " "v600 if p(vl05) then "["v100"].  
",vl05 else v100 fi. if p(v110) then "Pages "V400"" ,!/-1/. "In". !/-0/, "" .v110 if p(v210)  
then ' ',(mhl.v210+;, :),'). 'fi.if v4:'AM' then v610/# else mdl fi,fi,if v4:'AS' or  
v4:'as' then mhl.vl30" ",vl32^v, if p(vl32^i) then Tvl32^i)": ".else ' : '  
fl.v410/#,fi.mdl.if v4='M' then v610.v400/ fl,if v3:'F' then v320/# fi,if v3:'T' then  
v315/# fi.if V4:'MS' or v4:'ms' then ("v130" ",v132^i")"/#,fi.mpl.v700/#
```

Appendix 7

Language Codes

Language	Code
Arabic	ara
Bulgarian	bul
Cambodian	cam
Chinese	chi
Czech	cze
Danish	dan
Dutch	dut
German	ger
Italian	ita
English	eng
Amharic (Ethiopian)	eth
Finnish	fin
French	fre
Japanese	jpn
Hindi	hin
Hungarian	hun
Indonesian	ind
Gaelic (Irish)	iri
Korean	kor
Latin	lat
Malay	may
Nepali	nep
Polish	pol
Portuguese	por
Spanish	spa
Swedish	swe
Vietnamese	vie
Turkish	tur

Appendix 8
Country Codes

Country	Code	Country	Code
Afghanistan	AFG	Congo	COG
Albania	ALB	Cook Islands	COK
Algeria	DZA	Costa Rica	CRI
American Samoa	ASM	Cuba	CUB
Andorra	AND	Cyprus	CYP
Angola	AGO	Czechoslovakia	CSK
Antarctica	ATA	Denmark	DNK
Antigua	ATG	Djibouti	DJI
Argentina	ARG	Dominica	DMA
Australia	AUS	Dominican Republic	DOM
Austria	AUT	Dronning Maud Land	ATN
Bahamas	BHS	East Timor	TMP
Bahrain	BUR	Ecuador	ECU
Bangladesh	BGD	Egypt	EGY
Barbados	BRB	El Salvador	SLV
Belgium	BEL	Equatorial Guinea	GNQ
Belize	BLZ	Ethiopia	ETH
Benin	BEN	Faeroe Islands	FRO
Bermuda	BMU	Falkland Islands	FLK
Bhutan	BTN	Fiji	FJI
Bolivia	BOL	Finland	FIN
Botswana	BWA	France	FRA
Bouvet Island	BVT	French Guiana	GUF
Brazil	BRA	French Polynesia	PYF
British Indian Ocean territory	IOT	Gabon	GAB
British Virgin Islands	VGB	Gambia	GMB
Brunei	BRN	German Democratic Republic	DDR
Bulgaria	BGR	Ghana	GHA
Burma	BUR	Gibraltar	GIB
Burundi	BDI	Greece	GRC
Byelorussian SSR	BYS	Greenland	GRL
Cameroon	CMR	Grenada	GRD
Canada	CAN	Guadeloupe	GLP
Canton and Enderbury Islands	CTE	Guam	GUM
Cape Verde	CPV	Guatemala	GTM
Cayman Islands	CYM	Guinea	GIN
Central African Republic	CAF	Guinea-Bissau	GNB
Chad	TCD	Guyana	GUY
Chile	CHL	Haiti	HTI
China	CHN	Heard and McDonald Islands	HMD
Christmas Island	CXR	Honduras	HND
Cocos (Keeling) Islands	CCK	Hong Kong	HKG
Colombia	COL	Hungary	HUN
Comoros	COM	Iceland	ISL
		India	IND
		Indonesia	IDN
		Iran	IRN

Country	Code	Country	Code
Iraq	IRQ	Norway	NOR
Ireland	IRL	Oman	OMN
Israel	ISR	Pacific Islands	PCI
Italy	ITA	Pakistan	PAK
C6te d'Ivoire		Panama	PAN
(Ivory Coast)	CIV	Papua New Guinea	PNG
Jamaica	JAM	Paraguay	PRY
Japan	JPN	Peru	PER
Johnston Island	JTN	Philippines	PHL
Jordan	JOR	Pitcairn Island	PCN
Kampuchea	KHM	Poland	POL
Kenya	KEN	Portugal	PRT
Kiribati	KIR	Puerto Rico	PRI
Korea	KOR	Qatar	QAT
Kuwait	KWT	Reunion	REU
Lao People's		Romania	ROM
Democratic Republic	LAO	Rwanda	RWA
Lebanon	LBN	St. Helena	SHN
Lesotho	LSO	St. Kitts-Nevis-	
Liberia	LBR	Anguilla	KNA
Libyan Arab		Saint Lucia	LCA
Jamahiryia	LBY	St. Pierre and	
Liechtenstein	LIE	Moquelon	SPM
Luxembourg	LUX	Saint Vincent and	
Macau	MAC	the Grenadines	VCT
Madagascar	MDG	Samoa	WSM
Malawi	MWI	San Marino	SMR
Malaysia	MYS	Sao Tome and	
Maldives	MDV	Principe	STP
Mali	MLI	Saudi Arabia	SAU
Malta	MLT	Senegal	SEN
Martinique	MTQ	Seychelles	SYC
Mauritania	MRT	Sierra Leone	SLE
Mauritius	MUS	Singapore	SGP
Mexico	MEX	Solomon Islands	SLB
Midway Islands	MID	Somalia	SOM
Monaco	MCO	South Africa	ZAF
Mongolia	MNG	Spain	ESP
Montserrat	MSR	Sri Lanka	LKA
Morocco	MAR	Sudan	SDN
Mozambique	MOZ	Suriname	SUR
Namibia	NAM	Svalbard and	
Nauru	NRU	Jan Mayen Islands	SJM
Nepal	NPL	Swaziland	SWZ
Netherlands	NLD	Sweden	SWE
New Caledonia	NCL	Switzerland	CHE
New Zealand	NZL	Syrian Arab	
Nicaragua	NIC	Republic	SYR
Niger	NER	Taiwan	TWN
Nigeria	NGA	Tanzania	TZA
Niue	NIU	Tuvalu	TUV
Norfolk Island	NFK	Thailand	THA

Country	Code
Togo	TGO
Tokelau	TKL
Tonga	TON
Trinidad and Tobago	TTO
Tunisia	TUN
Turkey	TUR
Turks and Caicos Islands	TCA
Uganda	UGA
Ukrainian SSR	UKR
United Arab Emirates	ARE
United Kingdom	GBR
United States	USA
Upper Volta (Burkina Faso)	HVO
Uruguay	URY
USSR	SUN
Vanuatu	VUT
Vatican City State (Holy See)	VAT
Venezuela	VEN
Vietnam	VNM
Wake Island	WAK
Wallis and Futuna Islands	WLF
Western Sahara	ESH
Yemen	YEM
Yemen Democratic Republic	YMD
Yugoslavia	YUG
Zaire	ZAR
Zambia	ZMB
Zimbabwe	ZWE

Appendix 9
Database on the Groundnut Aflatoxin Problem
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