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THE FAP DATA BANK
PART 1: ORGANIZATION, CONTENTS AND MANAGEMENT

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FOREWORD

Understanding the nature and dimensions of the world food problem and the policies available to alleviate it has been the focal point of the IIASA Food and Agriculture Program (FAP) since it began in 1977.

National food systems are highly interdependent, and yet the major policy options exist at the national level. Therefore, to explore these options, it is necessary both to develop policy models for national economies and to link them together by trade and capital transfers. Over the years FAP has, with the help of a network of collaborating institutions, developed and linked national policy models of twenty countries, which together account for nearly 80 percent of important agricultural attributes such as area, production, population, exports, imports and so on. The remaining countries are represented by 14 somewhat simpler models of groups of countries.

To support the work, a data bank was organized at the very beginning of FAP. The FAP data bank has grown in size and complexity and now contains large volumes of data obtained from different sources.

Ulrike Sichra has described the organization, contents and management of the data bank in this paper. Methods and practice for updating and aggregation are described in an accompanying paper.

Kirit S. Parikh
Program Leader
Food and Agriculture Program

PREFACE

The FAP Data Bank is a large collection of data from different sources and constitutes a basic element in the modelling activities of the Food and Agriculture Program. This data bank was created at the very beginning of the Food and Agriculture Program and has grown ever since, in size and complexity. In order to better describe the FAP Data Bank and to document its contents, the vast amount of information has been split into two parts:

"Part 1:" Organisation, Contents and Management

"Part 2:" Updating and Aggregating - Methods and Practice

Part 2 is designed for those who will take care of updating of the FAP Data Bank. That volume not only assumes that the reader is familiar with Part 1, but also that she or he is an experienced computer user, preferably at IIASA.

Part 1, this document, is the introductory paper on which Part 2 is based. It addresses a general audience, interested in data for agricultural modelling, serving at the same time as a document for the FAP modelling activities. The term "aggregation" will frequently be used in this paper. To understand it in its whole complexity the reader is referred to:

"The Aggregation of the Agricultural Supply Utilisation Accounts", WP-83-42, IIASA.

In that paper the methodology and details of aggregations are described at length.

It is hoped that the two parts describing the FAP Data Bank, of which this is the first, will satisfy a long felt need for documentation and clarification.

ACKNOWLEDGEMENTS

The nature of this paper makes it impossible to list all the persons and organisations that helped towards its coming into existence. The main contributions to the wealth of data come from the following institutions;

* The Food and Agriculture Organisation of the United Nations (FAO) Rome, Italy,
* The International Labour Organisation of the United Nations (ILO), Geneva, Switzerland; and
* The World Bank, Washington DC, USA.

To these organisations the FAP is deeply indebted, recognizing that without their active support the FAP Data Bank would hardly have come into existence. Most of the past and present staff of the FAP has been helpful in one way or other to creating the FAP Data Bank, and thus originating this paper. Many suggestions from both leaders of the program, Ference Rabar and Kirit S.Parikh have contributed to the usefulness of the data bank. Numerous persons in the FAP Collaborating Network have made available new data for their country, or have updated the existing data for it. Our deep gratitude is addressed to them. Without the dedication of Guenther Fischer the Data Bank and its managing routines would not have evolved. Bozena Lopuch and Stefanie Hoffmann worked with big dedication on the CMEA and fertilizer data. The formatting efforts of Lilo Roggenland and Bonnie Riley can be directly seen. Without the careful reviewing done by Gerhard Kroemer and Laslo Zeold many parts would have remained unclear.

And last but not least we wish to thank all the users of the FAP data bank who by using the data, and with their questions, and correction of errors and have helped the FAP Data Bank to become a useful instrument in the modelling activities of the FAP.

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THE FAP DATA BANK
PART I: ORGANIZATION, CONTENTS AND MANAGEMENT

Ulrike Sichra

1. Introduction

The modelling activities of the Food and Agriculture Project at IIASA rely, among others, on an extensive set of data. Broadly speaking this data can be divided into time series and single items.

In this paper emphasis is given to the time series data and only in one instance factors are discussed, which do not change in time (nutritional values).

The purpose of the following pages is to present an overview of the data, mostly referring to agriculture, which is available in computerized form and can be accessed at IIASA with the help of staff members of the FAP.

The structure of the data files, its origin and contents is presented in the first sections. In some instances the methodology for arriving at the time series is presented in great detail. The next sections deal with the logistics of handling the data, like looking at data, extracting data, updating time series, plotting data, etc. As this publication is not only meant for readers outside FAP, but also for the staff who actually handle the data bank, some sections are included which should support them in their daily work.

This paper concludes with an overview of the data available at FAP in computerized form, its deviations from the original state, and the Institutions with whom FAP interacts for data gathering purposes. More details on some of the data origins and computations can be found in further working papers, listed in the references section.

In order to help the reader of this paper, and the user of the data, numerous appendices have been included, which tabulate countries, commodities, etc. or display sample outputs of the data bank.

A word of caution for the computer expert; the term data bank is used here, *not* for a sophisticated data base, relational or network like, obeying an even more sophisticated data base management system. In this document data bank is a set of sequentially organized time series, in machine readable form which obey an internal logic and can be manipulated by, for example, Fortran programs. The FAP chose this mode of data handling due to the lack of space on the inhouse computer for storing large amounts of data, and in order to gain maximum flexibility with respect to exchanging data with other collaborating institutions.

2. Organization

The FAP data bank consists of an arbitrary number of time series stored in an arbitrary number of files which can be located on disk and/or magnetic tape.

Independent of the physical location, the files are organised in the same way:
every record consists of 7 integers and 16 pairs of real and character*1 variables, which are stored sequentially, in binary (unformatted) mode in the file.

Therefore, the statement

```
read(iu,end=991) (icd(i),i=1,7),(x(i),s(i),i=1,16)
```

will always be used for reading, and

```
write(iu) (icd(i),i=1,7),(x(i),s(i),i=1,16)
```

is always the write statement; prior to any other statement the following declaration statement has to be made:

```
character*1 s(16)
```

One can imagine the data being stored on tape or disk in the following way:

|icd(1)|icd(2)|.....|icd(7)|x(1)|s(1)|x(2)|s(2)| .....|x(16)|s(16)|

Codes and data have the following meaning:

icd(1)	system code, 2 digits, value mostly 11, not used
(2)	country code, 1 to 3 digits, e.g. 9,11,231 (see Appendix 1)
(3)	commodity code, 1 to 4 digits, e.g. 1,15,882,1532 (see Appendix 2, 2a)
(4)	element code, 1 to 2 digits, e.g. 3,15 (see Appendix 3, 3a)
(5)	dimension code, 1 digit; 1,2,3 or 4 (see Appendix 3, 3a)
(6)	first year indicator, 2 digits, e.g. 61,65,66
(7)	creation date, 1 to 4 digits, not used, often set.
x(1)	data of year "first year indicator"
(2)	data of year "first year indicator", +1
(3)	data of year "first year indicator", +2
.	
.	
.	
x(16)	data of year "first year indicator", +15
s(1)	status indicator for year of "first year indicator"
(2)	status indicator for year of "first year indicator", +1
.	
.	
.	
s(16)	status indicator for year of "first year indicator", +15

2.1. System Code icd(1)

The system code icd(1) is used at FAO for file keeping purposes, but has not been taken into account at IIASA. The location however is reserved, and the code from FAO is generally taken over, but no program takes it as a parameter.

2.2. Country Code icd(2)

The country code icd(2) is taken directly from FAO with the exception of 3 codes:

* Country code 0 is used at FAO only for international factors (e.g. nutrients). In the FAP data bank it also stands for aggregates, e.g. all FAP countries to "one" country, for the country code in the world market prices, or in the file with the averages over all countries.
* Code 888 is used for the EEC aggregate, and
* 777 for the CMEA aggregate.

In Appendix 1 a list of all countries and their codes is given.

This list covers all possible FAO country codes, which does not mean that the FAP Data Bank contains information for each of these countries. Only a subset of the FAO countries in Appendix 1 is dealt with at FAP. The selection was done on the basis of major economic indicators like production, imports and exports of agricultural products, and population and area. The modeling activities at FAP also influenced the choice. The aim was to choose a minimum set of countries which jointly cover at least 80% of the world's total of any given indicator. Together with the constraints of availability of data and the range of FAP's collaborating institutions, the countries listed in Appendix 1a, called the FAP4 countries, were chosen. For the countries with an '*' there are Supply Utilisation Accounts (SUAs) available at all stages of aggregation for all time spans . For the countries without the marker only some aggregations are covered in the FAP Data Bank.

The data dictionary for countries is stored in the file nfao.2. This is the file used when producing data listings. Any new country codes which will be printed in full text have to appear in the file nfao.2. If no entry is there the data record is stored, but the deciphered listing will have "******" entries instead of the country's name. This same comment applies for commodities icd(3), elements icd(4) and dimensions icd(5).

2.3. Commodity Code icd(3)

The commodity codes icd(3) are partly taken from FAO (main commodities and derived products) and partly designed at FAP (aggregations to 27 and 16 commodities, macro data, etc). In Appendix 2 one finds all possible commodity codes and their corresponding text.

The first few lines of this appendix are:

icd(3)	"group"	text
0001	01	population
0002	14	macroeconomics 1
0003	14	macroeconomics 2
0010	03	total trade
0012	17	land use
0013	17	irrigation
0014	16	land use
0015	02	wheat
0016	03	flour

The first 4 digits in each line above are the commodity code, i.e. 0001=population, 0003=total trade, etc; the last 2 digits are the "group" a commodity belongs to. This information is only stored in the dictionary file nfao.3.1 (or nfao.3.22) (see also Appendix 2 and Appendix 2a) to be used in the listing program, when the text for the elements is selected, and is not included in the data record itself.

The "group" codes give further information about the commodity: main crop commodities belong to group 02, derived crop products to group 03, etc. In the element list (Appendix 3 and 3a), element 4 (yield, extraction rate) has the same code, whether in group 02 or 03, but the text that goes with it is different, for convenience of the reader.

Programs which write text for the data and their codes take the commodity text from the file nfao.3.1 and nfao.3.22. The second file is a subset of the first, and helps to speed up processing when very aggregated data has to be printed, as the commodity choice is much smaller then.

2.4. Element Code icd(4)

The meaning of the element codes icd(4) is listed in Appendix 3 and 3a. The first 2 digits are the commodity group these elements belong to, the last 2 digits are the actual element codes.

As an example take a main crop product, and a main animal product. The elements can be 1, 2, ... until 17, the corresponding text is:

element	text	
	crop	animal
01	opening stocks	opening number
02	area sown	potential number of females of reproducing age
03	area harvested	actual number of females reproducing
04	yield	birth rate
05	production	births
06	imports	live imports
07	from stocks	from stock
08	to stocks	to stocks
09	exports	live exports
10	feed	----
11	seed	----
12	waste	natural deaths
13	processing	number slaughtered
14	food	----
15	non-food	other utilisation
16	closing stocks	closing stocks
17	seeding rate	take-off rate

The data dictionary design is such that there may not be more than 17 elements in each group. This has historical reasons and is related to the FAO data files design.

2.5. Dimension Code icd(5)

The fifth code icd(5) in a data record is called dimension. It carries information on the unit of measurement of the data which follows. There can be up to 4 dimensions, and in general the following convention is active:

icd(5)	text
1	quantity measure
2	value measure
3	unit price
4	unit price

There are some exceptions however in the aggregations for FAP, which will be discussed later.

In Appendix 3 and 3a the text for the 3 dimensions is also given (in columns 3 to 5). There is no text for icd(5)=4 due to programming reasons. In the same way as the elements the dimensions also have different text, depending on the group a commodity belongs to. The data dictionary for the dimensions is the same as for the elements, i.e. the file bin.1 (bin.22), which are random access files in binary format.

2.6. First Year Indicator icd(6)

The first year indicator, stored in the 6th position of the code field (icd(6)), is used for the mapping between the data which follows and the years of the calendar. It has no text associated with it.

2.7. Creation Date icd(7)

The last code icd(7) is not meaningful for FAP purposes.

2.8. Status Indicator

Each year of data has, immediately following it, an indicator for the status of the data. These are s(1), s(2), ... s(16). This one character can be;

s(i)	text
0 or blank	official figure
*	unofficial figure
F	FAO estimate
C	calculated

After going through some of the aggregation programs other status indicators may be found, but similar to icd(1) and icd(7) this information is not relevant when processing the data in FAP.

It has already been pointed out that the records are written sequentially into a file, and that any number of records can be organized into a file. The order of the records must be by increasing code numbers icd(2), icd(3), ..., icd(5), with icd(5) (dimension) changing first. This is a must because most programs rely on the fact that the data is sorted in this way, and would otherwise report on missing data, or do wrong things. From the data point of view however it is irrelevant in which sequence data is stored.

As a consequence of this ordering scheme the time series on a specific file are ordered by increasing country code icd(2), within a country by increasing commodity code icd(3), withing a commodity by increasing element code icd(4) and within an element by increasing dimension code icd(5). An example of some time series could be:

icd(1)	icd(2)	icd(3)	icd(4)	icd(5)	icd(6)	icd(7)	data
22	9	15	3	1	61	999	153240. 0 160011. * 23451. .....
22	9	15	5	1	61	999	.....
11	9	15	5	3	61	383	....
12	9	15	9	1	61	999	....
11	9	15	9	2	61	999	....
22	9	15	15	1	61	282	....
22	9	16	3	1	61	999	....
22	9	16	4	1	61	999	.....
12	10	27	6	1	61	9999	....
12	10	27	6	2	61	9999	....

The data records are designed such that they can only contain exactly 16 years of data. If for any number of years between the "first year indicator" year and "fist year indicator"+15 data does not exist, zeros are filled in. Therefore, zero can mean that either data is not available, that it has not been inputted, or that it is really zero. In general it is clear form the type of series what a zero entry could mean. In the case of element 8 (to stocks), a zero entry can frequently be found. Production (element 5) of a commodity might be zero as of a certain year, or up to a certain year, if that product has been newly introduced or its production given up. Time series with only zeros as data are generally not to be found in the data bank.

All existing data management programs see to it that no 2 records with the same code are created. If there should be such 2 records however, search programs would only pick up the first.

From the logical and data organisational point of view it does not make any difference whether there are 16 years in each time series, or less, or more, or if the number of years is variable. But the computer programs that handle the data are designed such that they require exactly 16 years, and most programs even rely on the fact that the first year indicator is the same for all series in one file. The logic of the search programs also suggests this.

In the future, with more data coming in, it would be useful to adapt some of the programs (printing, reading, merging) to allow for variable number of years. For this purpose the first entry in the code field (icd(1)) or the last entry (icd(7)) could be the number of years in the time series.

The read and write statements would then look somewhat like this:

```
read(iu,end=999) (icd(i),i=1,7),(x(i),s(i),i=1,icd(1))
```

Aggregation and price producing programs should probably be left with the fixed number of years per time series (16 currently), and series starting in different years should not be put into the same file as the programs do not check for each read data record the first year indicator.

Currently there are time series available which start in 1961, 1965 and 1966. The series starting in 65 have the average 1961-1965 data as an entry for 1965; the other series always have yearly data. As a consequence of its Data Management System, FAO only reports on integer time series (no digits after the decimal point). For this reason the 4th element icd(4)=4 (extraction rate, yield, exchange rate, etc) are expressed in other units than expected; they have to be divided by 10**4 in order to arrive at the right order of magnitude.

This exception applies to element icd(4)=4 in groups 1 to 17 and group 24. A further exception is element icd(4)=13 in groups 23 and 29 (exchange rates). As an example, production is reported in metric tons, area harvested in hectare, yield in 100gr/ha.

The data files at FAP (IIASA) can be found on disk and on tape. Tapes can be "mt-tapes", which is generally the case for small data files, which easily fit on disk, and which can be quickly restored from tape. There are some tapes which have only one data file on them. These have been put onto tape by using the UNIX command dd, without any blocking or converting. This is generally done with large data files (1000 blocks or more), which can then be processed directly from tape and do not have to be written to disk first (for extraction, aggregation, etc).

3. Types of Data Files

It can easily be seen that there are a number of classification methods for the different files of the FAP Data Bank. They can be sorted depending on their origin, their contents, their time span, etc.

3.1. Data Files by Origin

Taking the origin of the data files as a classification criterion, one can divide the FAP Data into three main groups:

1. Original FAO files;
   e.g. Production and Trade Yearbooks,
   original Supply Utilization Accounts,
   FAO population data, producer prices, nutritional values.
2. Aggregated data, created at IIASA;
   e.g. ag, ag27, ag9, vavo27, vavo9.
3. Other Origin:
   e.g. land data, labour force data, ILO data, macro data

This grouping is useful from the user's point of view, as the data can thus be understood by origin, and the search for mistakes (e.g. wrong code or data) can be made more efficient (is the source FAO, ILO, a computer program at IIASA, the aggregation logic, etc ??). On the other hand some programs need to know the origin of the data in order to produce correct results.

In the data files of group 1 (original from FAO) the dimensions (stored in icd(5)) have a different meaning than in the data of group 2 (results from aggregations) created at IIASA.

In group 1 (original FAO data) the dimensions and their meanings are

dimension (icd(5))	text
1	quantity in mt
2	value in 1000 current US
3	price in NC/mt

In group 2 (aggregations made at IIASA) the corresponding table reads:

dimension (icd(5))	text
1	quantity in 1000 US
2	quantity in mt "equivalent"
3	price (unit see later)
4	price (unit see later)

The value dimension of all commodities are left out in the files of this group. The first level of aggregation, although created at IIASA, follows the dimension conventions of group 1. It is important to be aware of this. Plain data files (without text) might be interpreted wrongly without the information. The program which adds text to the raw data (suputa.f) needs the parameter 1" for files in group 1 and "22" for files in group 2. The files in group 3 can be treated as if they belong to group 1.

3.2. Data Files by Content

Very broadly, the FAP Data Bank can be divided, by content,into:

- Production and Trade Yearbooks
- Supply Utilization Accounts and Prices
- Population Data
- Macroeconomic Data (also includes population and fertilizer data)
- Fertilizer Data
- Area Data
- Nutritional values

The grouping of the FAP Data Files by content is closely related to establishing the sources of the different data. The FAP Data Bank has been put together from various sources:

- The UN Food and Agriculture Organization (FAO) in Rome,
- The International Labour Organization (ILO) in Geneva,
- The World Bank in Washington DC,
- various reports, statistical yearbooks, calculations, etc.

From the FAP's modeling point of view the most interesting block of data was the one from FAO. This is constituted by the Production and Trade Yearbooks (on magnetic tape) first used by FAP to clearly identify the modeling work, its coverage, scope, etc; and the Supply Utilization Account (SUA), which have since constituted the basis of the FAP models. Consequently the greatest efforts were invested in these parts of the FAP Data Bank. Time series on prices and nutritional values also belong to this group.

The ILO data on population, labour force and labour participation rates are the basis for the population data. FAO also provided some input to this section, on which will be reported below.

The World Bank data for macroeconomic indicators is the basis for the FAP time series on GNP, expenditures, etc in current and constant values.

And finally a number of reports, statistical yearbooks, etc were used to fill gaps in years, definitions, commodities, etc.

3.2.1. Production and Trade Yearbooks

A number of time series between 1961 and 1976, from which the Production and Trade Yearbooks are printed at FAO, are available in computerized form at IIASA. These time series served as a basis for FAP's modelling work. In the meantime more than one update of Supply Utilization Accounts have arrived at IIASA and the original Production and Trade Yearbook time series from FAO have become less important.

All trade and production of agricultural products can be found in the SUA time series, and in much finer detail. There are, however, further time series in inputs to agriculture in the Production Yearbook files which cannot be found in the SUA files.

Most of the FAO countries listed in Appendix 1 and the commodities shown in Appendix 2 are included in the Production and Trade Yearbook series. The Production Yearbook file only gives numbers on production (in mt, e.g. wheat, or number e.g. tractors, cattle). The Trade Yearbook file reports on imports and exports in quantity and value. The original files did not have the sophisticated structure of the FAP data bank, but were subsequently adapted in order to have a uniform structure. These two time series are not actively used by the FAP any more.

3.2.2. Supply Utilization Accounts

The Supply Utilisation Accounts are an extremely important source of information for the FAP modeling work because with their data it is possible to trace in detail the supply and demand of agricultural goods, not only for natural products such as maize, apples, cattle, but also for processed or derived products such as starch, canned fruits or sausages. In Figure.1 one can see how the chain of supply and demand (utilisation) is built, always keeping in mind that the balance between supply and demand has to be met.

It is evident that the amount of information in the SUA is very large and not easily storable in one file. The agricultural models developed at IIASA do not have as detailed a commodity classification as FAO. Therefore it was necessary to arrive at a much smaller commodity classification which could be used in the national models. A number of computer programs were developed to reduce the amount of information available to a manageable number (Figure.2).

A short example here should make the method of the aggregation, as applied to the SUA's, clear. In Figure.3 the so called "wheat tree" is shown. Each box represents a commodity (wheat, flour, bran, cake, etc), the connecting flows show the dependencies. Flour and bran result simultaneously from wheat. Cakes, pastry and macaroni are made each from a separate amount of flour(*). The subdivision of each box shows, in scale, the amounts of the various supply (production, import, from stock) and demand elements (to stock, exports, feed, seed, waste, processing, food, other utilisation)(+). The width of the streams corresponds to the extraction rate of the various products (e.g flour=0.25, bran=0.75). The SUA's are calculated such that demand and supply are equal,

(*) The other products contained in a cake, e.g. eggs, milk, etc. are not reported in the SUA's.
(+) The scaling corresponds to Argentina, 1970 values.

Figure 1:

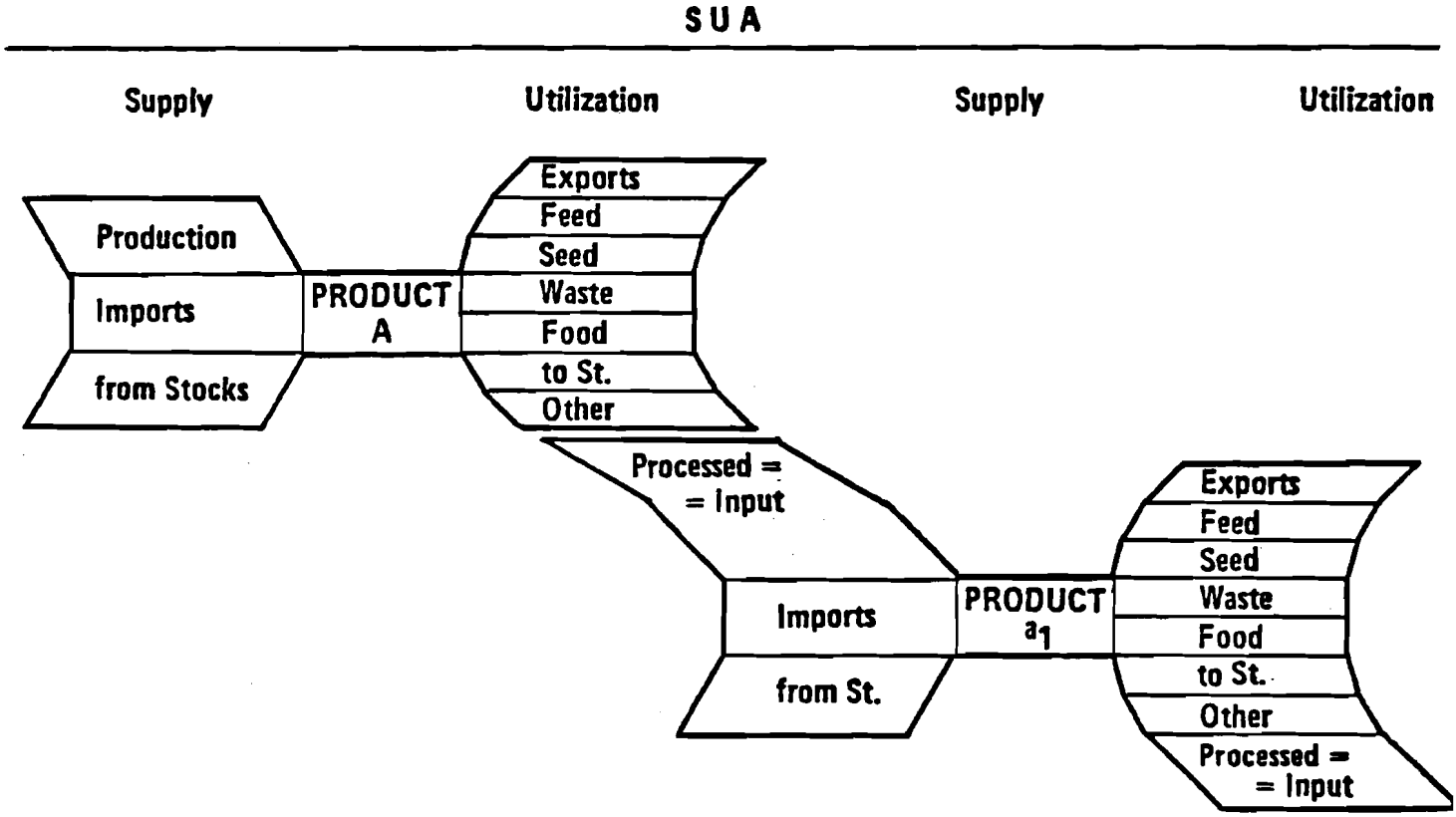

SUA
Supply
Utilization
Supply
Utilization
Production
Imports
from Stocks
PRODUCT A
Exports
Feed
Seed
Waste
Food
to St.
Other
Processed = = Input
Imports
from St.
PRODUCT a1
Exports
Feed
Seed
Waste
Food
to St.
Other
Processed = = Input

Figure 2:

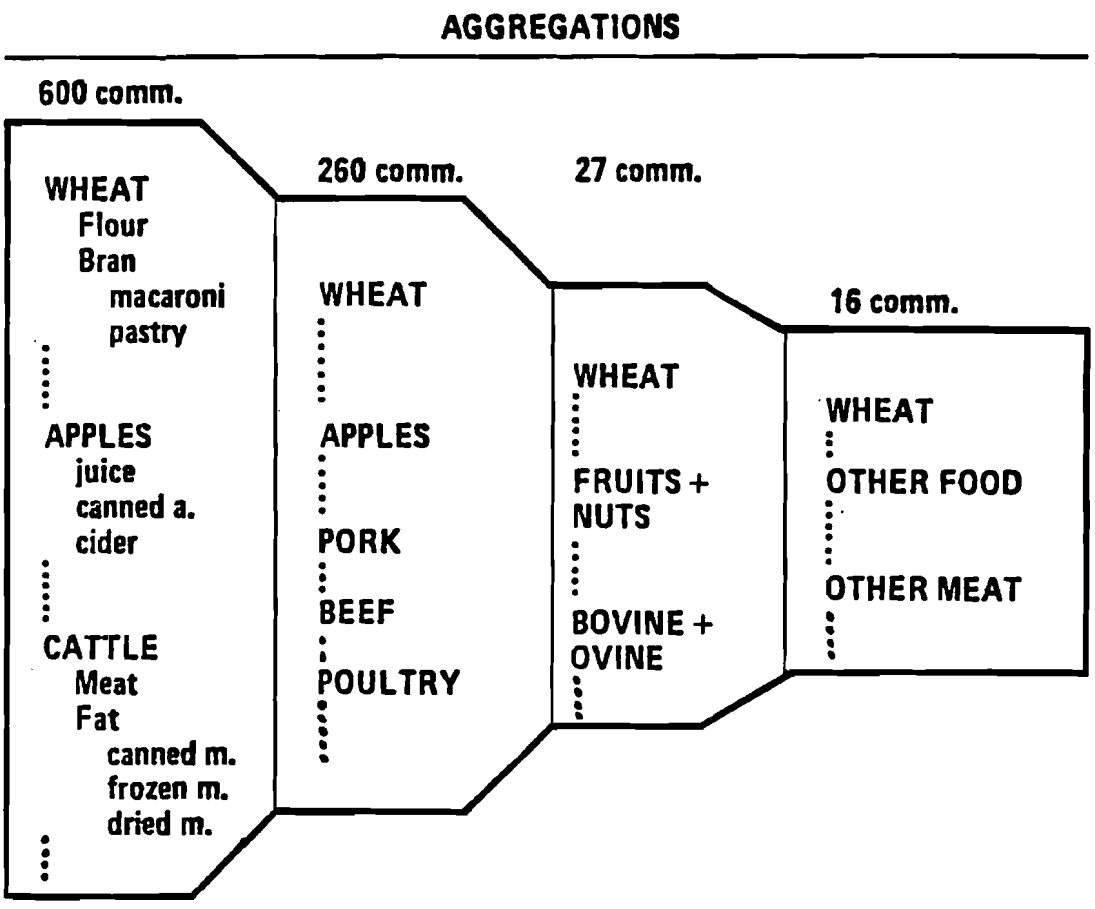
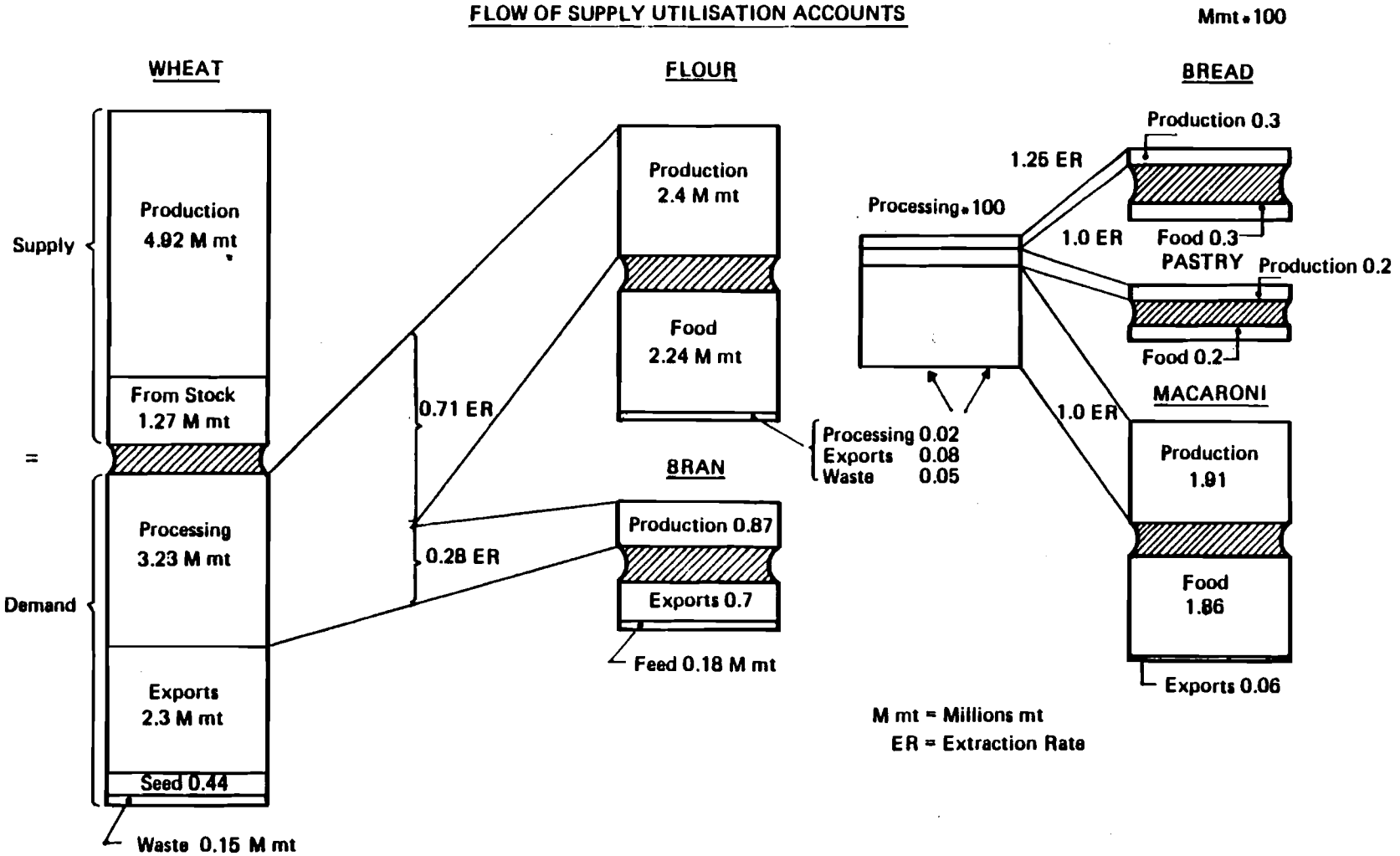

AGGREGATIONS
600 comm.
WHEAT
Flour
Bran
macaroni
pastry
APPLES
juice
canned a.
cider
CATTLE
Meat
Fat
canned m.
frozen m.
dried m.
260 comm.
WHEAT
APPLES
PORK
BEEF
POULTRY
27 comm.
WHEAT
FRUITS + NUTS
BOVINE + OVINE
16 comm.
WHEAT
OTHER FOOD
OTHER MEAT

Figure 3:


ARGENTINA 1970
FLOW OF SUPPLY UTILISATION ACCOUNTS
Mmt • 100
WHEAT
FLOUR
BREAD
Supply
Production
4.92 M mt
From Stock
1.27 M mt
=
Demand
Processing
3.23 M mt
Exports
2.3 M mt
Seed 0.44
Waste 0.15 M mt
0.71 ER
0.28 ER
Production
2.4 M mt
Food
2.24 M mt
BRAN
Production 0.87
Exports 0.7
Feed 0.18 M mt
Processing 0.02
Exports 0.08
Waste 0.05
Processing • 100
1.25 ER
1.0 ER
1.0 ER
Production 0.3
Food 0.3
PASTRY
Production 0.2
Food 0.2
MACARONI
Production
1.91
Food
1.86
Exports 0.06
M mt = Millions mt
ER = Extraction Rate

the discrepancy is generally attributed to waste.

The aim of the aggregation is to express all demand and supply, of wheat and its products in this case, in wheat terms only. This means that with the help of extraction rates the demand of derived products can be "converted back" to the main product. In Figure.4 this is shown graphically, also in scale, for the same products as in Figure.3. The production amount of wheat must not change after aggregation, but all other elements may, if somewhere in the chain of derived products such an element occurs.
The element "processing" disappears completely from the aggregated product, as all is expressed in terms of wheat, and no processing is necessary.

In the aggregated accounts it is no longer possible to identify the origin of, for example, imports. They can stem from imported pure wheat, or from pastry, being imported. Similarly it is not possible to see in the original (disaggregated) accounts which flour is taken for cake production, the nationally produced or the imported one. The "wheat tree" is a rather clear and easy flow of quantities. If one looks at other commodities, like milk, oil seeds, etc., the flow becomes more complicated but the same philosophy is applied for their aggregation.

The next aggregation steps, from 260 main commodities to 27 commodities in the detailed FAP4 list, and 16 commodities in the small FAP4 list, are very similar as can be seen in Figure.5. The differences are that here the production of the aggregate is composed of the production of all participating commodities, and that instead of extraction rates appropriate weights are used to express the participating element (e.g. pork in mt) in terms of the aggregate (other meat in mt protein). Also in this last figure the boxes for other meat, poultry and eggs, pork and fish are drawn in scale for Argentina in 1970.
The aggregations were carried out for each country which participates in the FAP modeling effort. All details for it can be found in [1] and [2].

FAO has accounts for all its member countries, starting with 1961. The aggregations however have only been carried out for a selected number of countries (the FAP4 countries listed in Appendix 1a). The reason for this is that each country might have its own commodity trees and would need separate checking, for which there is neither time nor manpower available at FAP, if it was to be done for all FAP countries.

The price data for the various commodities of the SUAs, at all levels of aggregation, is also part of the SUA files. The details of their origin and calculation methods are discussed at length in [2].

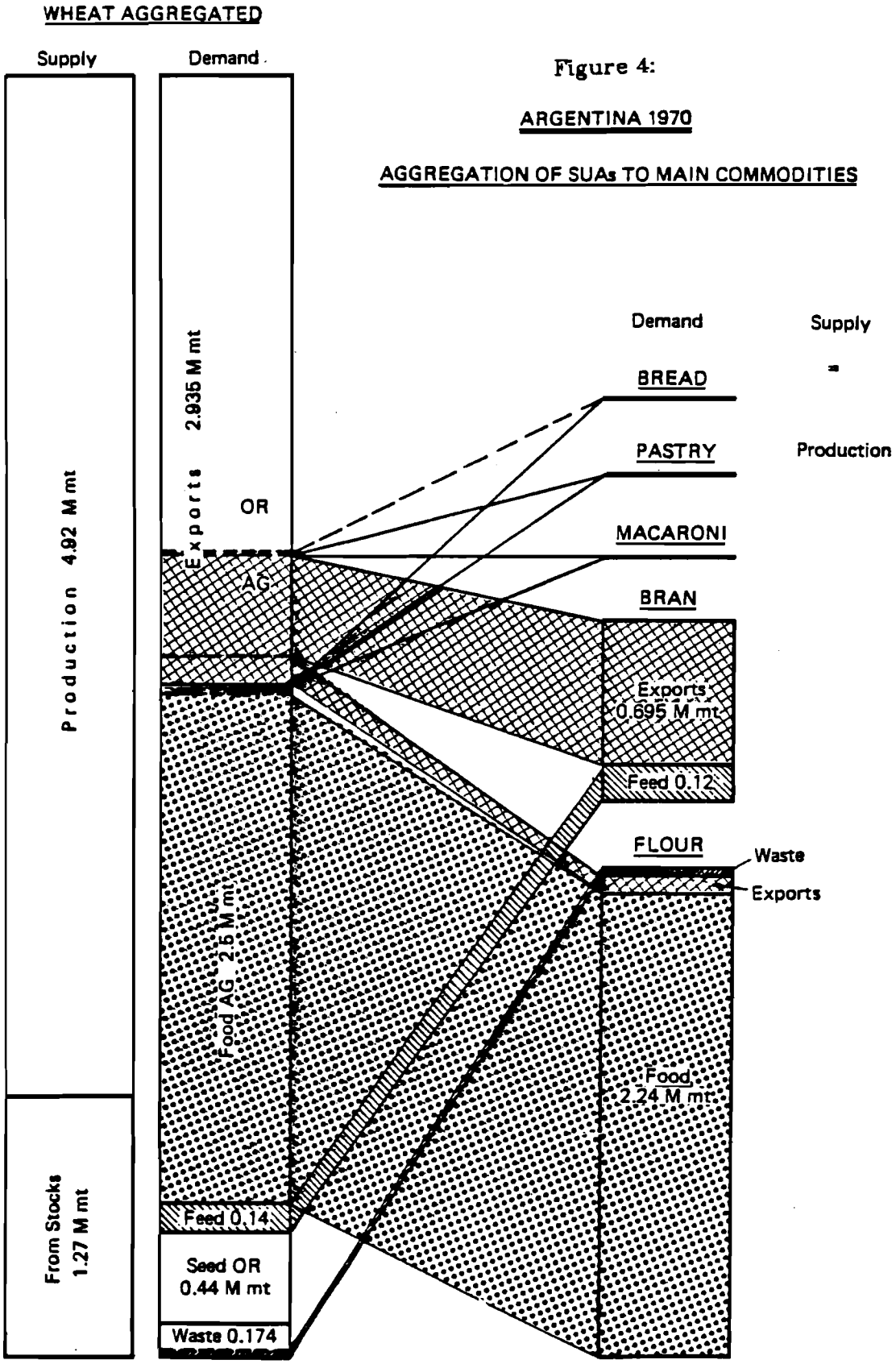
There are the following types of prices:

type	element code icd(4)	dimension code icd(5)
producer prices	5	3
import prices	6	3
export prices	9	3
world prices	9	3
feed prices	10	3
food prices	14	3
other util. prices	15	3

Figure 4:

ARGENTINA 1970

AGGREGATION OF SUAs TO MAIN COMMODITIES



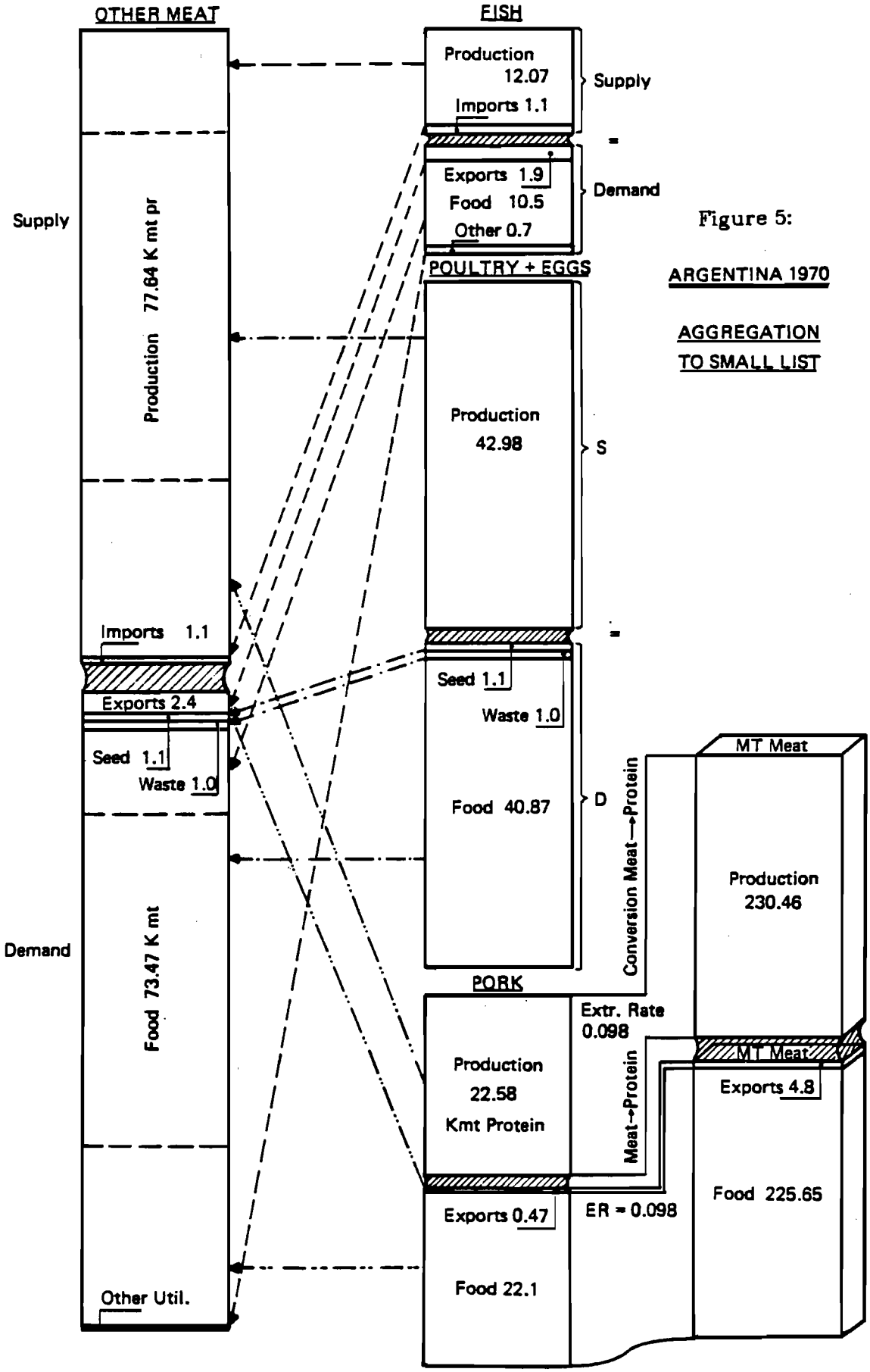


Figure 5:

ARGENTINA 1970

AGGREGATION TO SMALL LIST

For the commodities of the 2nd level of aggregation (ag27) there exist also prices with dimension code = 4. This is due to the fact that for some commodities the elements are measured in 2 dimensions:

1... = 1000 US 70 and 2...= mt

The computer programs which deal with these data know about these peculiarities.

3.2.3. Population Data

The data on population and its derived quantities like labour force and rural population can be found in several files. There is a file called pop.fap4 which contains only these time series, and the same population data records are also in the file which contains the macro data (all.fap4)

The "commodity" population (icd(3) = 1) is stored in one dimension (icd(5) = 1) in the FAP data bank and consists of the following 4 elements:

element	text
icd(4)	
1	Total population
14	Total labour force
16	Agricultural labour force
17	Nonagricultural labour force

In all cases the unit of measurement is 1000 persons.

3.2.3.1. Sources

The largest quantity of homogeneous population data is from ILO. Originally the format of these time series was different from the rest of the data in the FAP data bank. After going through a transformation this data is now accessible in the same way as the SUAs.

The population data from ILO covers the following aspects:

* population, total, agriculture, non-agriculture, by age group, sex;
* activity rates by age group, sex and sector;
* labour force, total, by age group, sex and sectors.

All this is given in 5 year steps from 1955 to 2000 (with some exceptions). The time series are not from a census, but are estimates and projections. The methodology is described in [4]. Most countries of the world are covered by ILO. Currently the country code in these time series is the same as the one from FAO, due to conversion done at FAP. Further one can find population data in the SUAs (total population all original from FAO). This is yearly data, and is expected to be consistent with the rest of FAO's statistics.

For the time period covering 1966 to 1981, (the latest release of the SUAs) besides population data on total, the following elements are also found on the original SUA tapes:

commodity icd(3)	element icd(4)	dimension icd(5)	text
1	14	1	ag.pop/tot.pop
1	15	1	rur.pop/tot.pop
1	16	1	tot.lab/tot.pop
1	17	1	ag.lab/tot.lab

3.2.3.2. Method

The first time series (total population) can be copied from the SUA tape without further processing. The three other elements require some calculations and recoding before they can be incorporated into the data bank. The ILO time series are the basis for calculating participation rates and rural population. The following assumptions were made:

- The labour force splits between agriculture and non agriculture in the same way as population splits between rural and urban.
- The development of labour force (total, agriculture and non-agriculture) follows a linear trend between the years reported by ILO (5-year steps).

The reason for these assumptions is that data is available on rural and urban population for a number of years, whereas the labour force data for the different sectors can only be retrieved for a few years from the ILO data. On the basis of these assumptions and on the available information from FAO and ILO the following steps were performed:

1. Take the time series for total population (1961 - 1976) for each country from the original SUA data file.
2. Take the time series (1950-2000 in 5 year steps) for total labour force for each country from the ILO data file.
3. Take the time series (1950-2000 in 5 year steps) for total, urban and rural population for each country from the ILO data file.
4. Apply the ratio urban/total and rural/total population to the total labour force in order to arrive at agriculture and non-agriculture labour force:

$$lag = ltot * prur/ptot$$
$$lnag = ltot * purb/ptot = ltot - lag$$

where

lag	=	labour force in agriculture
lnag	=	labour force in non-agriculture
ltot	=	total labour force
ptot	=	total population
prur	=	rural population
purb	=	urban population

5. Interpolate linearly between each pair of "5-year steps" (i.e. 60-65, 65-70, 70-75, 75-80) and thus complete the required time series on a yearly basis for 1961 to 1976.

A comparison between the time series generated by the above method, and the series on the 66-81 release of the SUA shows that both ILO and FAO base their calculations on similar assumptions of ratios. Therefore the calculations of the new years become easier. They can be done on a yearly basis by using the rates given in the SUAs and applying them to the total population figures. The program po60.f can be used for this purpose. The data in all four time series is complete for all FAP4 countries.

3.2.4. Macro Data

In the FAP Data Bank the term Macro Data is used for macroeconomic data, i.e. GDP, expenditures, etc., but also for population, fertilizer and exchange rates.

Unfortunately there is no comprehensive publication available, which would contain all macroeconomic data required for all years and all countries. It was therefore necessary to rely on a number of sources for the data collection.

3.2.4.1. Sources

These were the main sources for the times series:

(a) Labour force estimates and projections from the International Labour Organisation (ILO) in Geneva and Supply Utilisation Accounts (SUA) from FAO, Rome (see previous section).
(b) World Tables from the World Bank, Washington DC.
(c) National Account Statistics, from the United Nations.
(d) National Accounts for the OECD countries.
(e) FAO Trade Yearbooks.
(f) Fertilizer Yearbooks from FAO.
(g) Experts from the countries being modeled.

Data on labour force and population was retrieved from Source a. and has been discussed in the previous Section. Source b. is the origin of most macroeconomic data. In source c. information for developing countries could be found. Sources d. and e. were consulted to retrieve information for developed economies. The FAO Trade Yearbooks and the World Tables were the source for the exchange rates from national currency to US and vice versa. Information on fertilizer consumption and fertilizer prices was taken from the corresponding yearbooks. These elements will be discussed in the next Section.

And finally experts from different countries were consulted in cases where the data available so far was not complete enough or did not match their national information.

3.2.4.2. Grouping and Methods

The commodities, elements, and dimensions of the different times series included in this part of the data bank are listed in Appendix 2a. Of these commodities (and their elements) population (1) and fertilizer (3110) are reported by all FAP4 countries. The other, purely macro data, is only covered by a country if its economic reports match the classification. In other words, GDP resources + expenditures, deflator + index, capital will only be found in market economies, whereas macro economic CMEA (at current and constant prices) is reserved for the centralized economies, i.e. the countries which constitute CMEA and the aggregate.

In all time series except Population Deflator and Index the data is expressed in millions of national currency. Population is in 1000, deflator and index are rates multiplied by 10**4. As the year 1970 was taken as base year for the constant prices time series it was sometimes necessary to convert from other base years by using the formula:

$$x70(t) = xT(t) * x70(70) / xT(70)$$

where

x70(t) = datum at 70-constant-prices for year t
xT(t) = datum at T-constant-price for year t
xt(t) = datum at current prices for year t

Each of the GDP groups, current and constant 1970 has two time series:

Total GDP (at market prices) and
Agricultural GDP (excluding forestry).

These four time series have been taken over from the corresponding sources, bearing in mind that forestry had to be deducted from agriculture. In some cases it has been necessary to convert the data from other base years to 1970 with the above formula. Resources and Expenditures, Current and Constant 1970 have the same type of time series under both prices (current and constant). They are seven;

- Private Consumption
- Government Consumption
- Total Resources (= Private Consumption + Government Consumption + Gross Capital Formation)
- Gross Capital Formation (= Gross Fixed Investments + Stock Formation)
- Gross Fixed Investments
- Stock Formation (= Change in Stocks)
- Net Exports (= Exports - Imports)

The commodity Deflator and Index only has one entry, exchange rate expressed in national currency per US ,multiplied by 10**4. At 1970 prices the Capital group should consist of the following time series:

- Total Capital Stock (= Agriculture + Non-Agriculture)
- Agriculture Capital Stock
- Non-Agriculture Capital Stock
- Agricultural Investments

The Capital Stocks (Total, Ag and Non-ag) were calculated using a computer program which, depending on the availability of data, uses different methods.

Method 1

Known:

DT(t): absolute depreciation at constant prices for the whole economy

IT(t), IA(t): Gross investments total and into agriculture, at constant prices

Assumptions:

dT: depreciation rate for the whole economy

β: proportion of total capital stock being used in agriculture ($KA = \beta * KT$)

ε: the relation of depreciation rate of the whole economy to that of agriculture ($dA = \varepsilon * dT$)

For the base year (1970):

$$KT(70) = DT(70) / dT$$
$$KA(70) = \beta * KT(70)$$
$$KNA(70) = KT * (1-\beta) = KT(70) - KTA(70)$$

and for all other years:

$$KT(t) = KT(t-1) - DT(t-1) + IT(t)$$
$$KA(t) = KA(t-1) * (1-\varepsilon * dT(t-1)) + IA(t)$$
$$KNA(t) = KT(t) - KNA(t)$$

if DT(t) is not given then:

$$DT(t) = KT(t) * dT$$

Method 2:

Known:

DT(t)

Assumptions:

β: proportion of total capital stock being in agriculture $KA(t) = \beta * KT(t)$

dT: the depreciation rate of the whole economy

Calculate for all years:

$$KT(70) = DT(t) / dT(t)$$
$$KT(t) = KT(t-1) - DT(t-1) + IT(t)$$
$$KA(t) = \beta * KT(t)$$
$$KNA(t) = (1-\beta) * KT(t)$$

The minimum data required for both methods is: DT(70), d, β and IT(t) and GDP(t) at current and constant prices in order to arrive at the necessary deflators for the depreciation. In Table 1 below the factors used for the different countries are shown. The time series on Fertilizer and Pesticides are explained in the next section.

3.2.5. Fertilizer Data

The data on fertilizer is included in the file with macroeconomic data. There are a number of remarks to be made about these time series. It would be very useful to have information on fertilizer consumption for the different kinds of crops in terms of quantity and money, as well as some information on the subsidization of this means of production. This need is sometimes satisfied in the detailed country models, which operate with data provided by the home institutions of the corresponding modellers. In this case, however, the aim is to provide consistent time series for a number of countries which are more or less comparable.

The experienced collector and user of actual data in agriculture might be aware of the difficulties one runs into by the above mentioned aim. In order to ease the work efforts have been concentrated on two of four types of time series, and even these two types cannot be computed or collected for all FAP4 countries. For the Basic Linked System information on quantity and value of fertilizer consumed in a country, for all types of land (agricultural and pasture) is needed. There are many different kinds of fertilizer, which can be grouped according to their main components into nitrogenous, phosphate and potash fertilizer. In most countries the nitrogenous fertilizer plays the most important role, although there are some exceptions. Therefore information on nitrogen consumption in the countries to be modelled has been collected, on a yearly basis, measured in metric tons. Similarly it has been tried to arrive at the yearly total expenditure of all three kinds of fertilizer by the farmers. The ratio of total expenditure divided by consumption of nitrogen was then computed as "fertilizer price".

The aim in the fertilizer section of the FAP Data Bank was to arrive at four types of series (covering the years between 1961 and 1976):

1. Total fertilizer consumption measured in 1000 units of national currency
2. Nitrogen consumption measured in metric tons
3. Fertilizer price in units of national currency per metric ton (as explained above)
4. Intermediate consumption of nonagricultural goods in agriculture in 1000 units of national currency (e.g. water, electricity, machinery, fertilizer, etc.)

Table 1. Factors for Calculating Capital Stocks

code	Country	d	beta
9	Argentina	2.03	.13
10	Australia	2.5	.061
11	Austria (*)		
15	Bel-Lux	2.8	.05
16	Banglad.	1.5	.354
21	Brazil	2.5	.12
27	Bulgaria	-	-
33	Canada	4.1	.042
41	China	-	-
51	CSSR	-	-
54	Denmark	2.9	.7
59	Egypt	2.2	.034
68	France	2.8	.063
77	GDR	-	-
78	FRG	3.1	.038
84	Greece		
97	Hungary	-	-
100	India	-	.297
101	Indonesia	1.9	.377
104	Ireland	2.5	.136
106	Italy	2.7	.085
110	Japan	3.0	.055
114	Kenya	2.2	.265
138	Mexico	3.3	.113
150	Netherlands	2.8	.068
156	New Zealand	2.5	.061
159	Nigeria	2.0	.384
165	Pakistan	1.8	.221
173	Poland	-	-
174	Portugal		
183	Romania	-	-
203	Spain		
210	Sweden (*)		
216	Thailand	1.9	.256
228	USSR	-	-
229	UK	2.34	.036
231	USA	3.0	.030

(*) time series on capital stock provided by country experts

3.2.5.1. Sources

The search for data has been limited to a small number of publications from FAO, so that the time series remain somehow comparable. The most recent publications were taken when available, otherwise older issues were also used. Sometimes this method caused some conflicts, as the data differed drastically from one publication year to the next. This problem was encountered in the 4th time series (intermediate consumption of nonagriculture to agriculture) and sometimes also in the first (total consumption of fertilizer).

Series 1 and 4 were taken from the Economic Accounts for Agriculture, FAO, Issue 1 (1961 to 1971) and Issue 2 (1965 to 1977). Although these issues claim to cover all years of interest, this is not the case for all countries. Only seldom data for 1978, the last year of the time series, could be found.

Series 1 was sometimes computed by other methods, if it could not be found in the above mentioned sources, or it was left out altogether, since it does not play a crucial role in the modelling work.

Series 2 (consumption of nitrogen fertilizer measured in metric tons) was taken from the Fertilizer Yearbooks of FAO, issues 1980, 1979 or 1978 (depending on the year needed), and earlier issues, called Annual Fertilizer Review, also by FAO, for the years 1977 back to 1960.

Series 3 (fertilizer price) was computed at FAP, and the sources used were numerous. All the publications mentioned above were consulted, as well as Production Yearbooks and Trade Yearbooks of FAO (issues between 1963 and 1979). The World Tables, of the World Bank, were consulted for appropriate exchange rates. Participants of the FAP collaboration network calculated the time series needed for some countries, adapting them to the specific characteristics of these countries.

3.2.5.2. Methods

In the ideal case one would have preferred to use only one method for each of the four series. Then the data would also be comparable across countries. Unfortunately this was not possible due to the lack of information found in the sources consulted. For each time series appropriate methods were chosen and used accordingly, as data were available. This procedure was applied to each country independently. In Appendix 6 (Country table of sources and references) one can find the details for each country.

Series 1:

Total Fertilizer Consumption in 1000 units of National Currency

Not much efforts were invested in this series, as it is not being directly used in the modelling efforts. Besides, in the ideal case, the product of Series 2 (consumption of nitrogen in mt) and Series 3 (fertilizer price) leads to Series 1. If some years are missing it stems from the fact that the mentioned source does not report on those years, or that the time series in different issues are too different from each other.

Series 2:

Consumption of Nitrogen in Metric Tons

This was the easiest series of all to assemble. The sources mentioned before have rather detailed and complete information on this item.

Series 3:

Fertilizer Price in National Currency per Metric Ton

The biggest effort has been invested in this series, as homogeneous data for all countries could not be found, and even within a country all the years needed could not be covered. Depending on the availability of data one (or more) of the following methods was used, giving preference to the first, then the second,

third, etc.

Method 1: Calculate the "fertilizer price" (total fertilizer consumption in units of national currency by total nitrogen use in mt) for one year (t) and for all the other years multiply this price by the corresponding fertilizer price index (reported in the Fertilizer or Production Yearbooks).

$p(t) = \text{series 1 } (t) / \text{series 2 } (t)$

$p(t+n) = p(t) * \text{index } (t+n) \quad n=\ldots,-3,-2,-1,1,2,3,\ldots$

This is the "cleanest" method, but it could only be applied to the most developed countries, and not even here to all (see Appendix 6).

Method 2: Not only for one year, as in Method 1, but for all years, calculate the price as ratio of total consumption of fertilizer in national currency by total use of nitrogen in metric tons.

$$p(t) = \text{series 1 } (t) / \text{series 2 } (t) \quad t=1,2,3\ldots,16$$

In some cases this method was used for all years available, and the missing years were calculated with method 1. It also proved useful to apply this method for checking purposes.

Method 3: This procedure involves a fair amount of calculation and assumes that information needed for the first 2 methods is not available, or that it is not very reliable or gives "strange" results. In the Fertilizer and Production Yearbooks from FAO one can sometimes find prices paid by farmers for different kinds of fertilizers, as well as the consumption figures of these kinds. The prices are sometimes reported in national currency, sometimes in US (therefore the need of exchange rates).

$$x(t) = \sum_i (pNi(t) * consNi(t)) + \sum_j (pPj(t) * consPi(t)) + \sum_k (pKk(t) * consKi(t))$$

$$y(t) = \sum_i (consNi(t))$$

$$p(t) = x(t)/y(t) \quad t = 1, 2, 3, \cdots, 16$$

where

$\sum_i$ = sum over all i

pNi = price of kind i of nitrogen fertilizer,

pPj = price of kind j of phosphate fertilizer,

pKk = price of kind k of potash fertilizer, and

consNi = consumption of kind i of nitrogen fertilizer,

consPj = consumption of kind j of phosphate fertilizer,

consKk = consumption of kind k of potash fertilizer,

Also this method was used for checking purposes when other methods gave rise to doubts, or all years could not be completed and there was too big a difference between methods. This is also a suitable method to arrive at Series 1 (total fertilizer consumption in national currency) when needed.

One should not forget that "price paid by farmers" sometimes includes subsidies, sometimes not. As there is no consistent information for all countries on subsidies this problem has been neglected. The "policy module" is expected to tackle it when necessary.

Method 4: For some countries, especially developing countries, neither information on price index nor prices paid by farmers could be found. Further most of these countries are mainly importers of fertilizers. From the Trade Yearbooks information on total imports of fertilizers in value terms could be compiled, and in the Fertilizer Yearbooks information on total imports in quantity terms was available. On the assumption that the import price would be charged to the farmer one could then calculate the "FAP fertilizer price".

$$x(t) = (ImvaC(t) + ImvaM(t)) / (ImquN(t) + ImquP(t) + ImquK(t))$$
$$y(t) = x(t) * (ConsN(t) + ConsP(t) + ConsK(t))$$
$$p(t) = y(t) / ConsN(t) \quad t = 1,2,3,\ldots,16$$

where

ImvaC = import value of crude fertilizer

ImvaM = import value of manufactured fertilizer

ImquN = import quantity of nitrogen fertilizer

ImquP = import quantity of phosphate fertilizer

ImquK = import quantity of potash fertilizer

ConsN = consumption quantity of nitrogen fertilizer

ConsP = consumption quantity of phosphate fertilizer

ConsK = consumption quantity of potash fertilizer

It is conceivable that this method might introduce a large error in the "fertilizer price". At the same time this is the last resource of information one has and thus the last chance. When the price was calculated in this way, every effort was made to arrive at the complete time series (1961 to 1976). In case of missing years other methods were used and cross-checked with several other years to be sure that the error was not too great.

Series 4:

Intermediate Consumption of Nonagriculture in Agriculture

This time series was taken over from the Economic Accounts for Agriculture, when available, otherwise the series was left out for the country and/or years which were not reported on. The term "year" generally refers to the crop year from July 1 to June 30, and is counted for the year into which the starting month falls. In the reference books used one can sometimes find data for 1961/62 for example. In such cases the datum was assigned to the first year (1961). For more details on subsidies, reference period, etc., consult the notes in the sources of the data.

3.2.5.3. Organization of the Time Series

The time series on fertilizer are organized in the same way as the other time series in the FAP Data Bank. For each country there are up to 4 records of data (one for each series).

The fertilizer (and related series, i.e. intermediate input of nonagriculture) all have the same commodity code: 3110.

The different element and dimension codes are:

element	dimension	
1	2	total consumption of fertilizer (1000 national currency)
2	1	consumption of nitrogen fertilizer (mt)
2	3	consumer price of fertilizer (nc per mt)
6	2	intermediate consumption of nonag in ag (1000 nc)

The creation date is only sometimes set, and of no importance to us here. The status indicator has no meaning here. When a datum has a zero entry it can mean that either no data are available, or too small an amount. Usually it means the former. In Appendix 6 one can identify for each country and type of time series from which source it stems and/or which method was used for calculating it. The missing years (between 1961 and 1976) are also identified. The time series for the EC (icd(2)=888) has been calculated by adding up all time series of the corresponding member countries. Each national currency has been converted into EUROs, which is the "EC currency".

3.2.6. Data on Area

Currently the FAP Data Bank has only one file with data on area. This file starts with 1961 and covers 16 years.

There is only one commodity in the area file:

icd(3)	text
12	land use

and it has 4 elements:

element icd(4)	text
1	total area (including land and area under inland water bodies)
6	arable land and under permanent crops (7 + 12)
7	arable land (temporary crops counted once, temporary meadows and pastures, market and kitchen gardens, temporarily fallow or lying idle)
12	under permanent crops (crops need not be replanted every year, excludes trees for wood or timber)

All elements are given in one unit of measurement, icd(5)=1; and are expressed in 1000 ha. At this moment there are only complete time series for the total area of the countries, the other three types of time series (arable&perm crops, arable land and permanent crops) start at the year 1964. The data has been taken from Production Yearbooks from FAO. There are 4 countries where exceptions have been made. For Netherlands, Kenya, Tanzania and Philippines the areas reported in different Production Yearbook differ considerably (there seems to have been a revision of the data at one point). As it was not possible to find data for all years, the missing ones were interpolated.

3.2.7. Nutritional Values

The nutrient content of all edible commodities in the SUAs has also been made available by FAO. These are:

value	unit
calories	Kcal/100gr
protein	gr/100gr
fat	gr/100gr

These factors are given for the country "world" (icd(2) = 0) i.e. without taking into account the peculiarities of a country, and for separate countries as well. The last group does not cover all commodities of the SUAs. The above factors are fixed in time, the format of the data thus being different form the other time series (see [2]). The nutritional factors are stored in the files "nutc.bin.w" (world) and "nut.bin.n" (country-wise). A further set of nutritional values has been compiled at FAP. It contains only "world" factors, for all SUA commodities, and is also fixed in time (no time series). The following factors are included in this file:

value	unit
calories	kcal/100gr
protein (low)	gr/100gr
protein (high)	gr/100gr
fat	gr/100gr
calcium	mg/100gr
iron	mg/100gr
vitamin a	iu/100gr
thiamin	mg/100gr
riboflavin	mg/100gr
niacin	mg/100gr
vitamin c	mg/100gr

All the above values are stored in the file mix.nut

By combining the various items of the SUAs with the nutritional values interesting figures like food intake, calories availability, per capita consumption of protein, etc. can be calculated. Such time series, for the small and the detailed FAP commodity lists can be found in the files fovavo.9 and fovavo.27.

3.3. Data Files by Time Span

It has been explained earlier in this paper that the data records are designed such as to permit storage of exactly 16 years of data. At the same time it was pointed out that a number of programs rely on the fact that there are only time series of the same time span in one file. Thus care has been taken to separate records with different starting years (icd(6)) from each other. In general one can gather from the file name which time span is covered by the time series in that file. Another method would be to list the beginning of a file and thus get the needed information.

Currently there are 4 time spans available at FAP:

- Series starting 1961, ending 1976, old FAO version (file.61)
- Series starting 1961, ending 1976, updated from 1965 onwards (file.61-65)
- Series starting 1965, ending 1980, FAO version (file.80)
- Series starting 1966, ending 1981, latest FAO version (file.66)

It is important to remember that the series starting at 1965 do not have yearly data for 1965, but the average 1961-1965. All other data is yearly data. The last series, ending in 1981, frequently only has data up to 1980 in it.

Although it would look unproblematic to simply update all old versions of time series with newly available data, great caution should be exercised when doing so. It frequently happens that new SUAs have changes of 5% or more in some commodities as compared to the old ones. The crucial years are the ones where new series start, as there should be no jumps from old to new accounts. But it is not only a matter of changing everything by 5%, as the balance of supply and demand has to be kept, and not only in the original commodity but also in further stages of aggregation.

A big problem is also presented when the processing item of a product changes, or a new branch of a commodity tree is introduced. In such cases it is advisable to correct by hand all elements of that commodity and of its derived products. In general it can be said that, unless the differences from one release of SUAs to the next are not too big, it is best to keep each version of the SUAs separate.

4. Data Handling

All data has been stored in files using FORTRAN programs, and all programs which deal with the data are consequently also written in FORTRAN. Most of the programs have first been written for the PDP 11/70 and also used there, and were later transferred to the VAX 11/780. There is one program which still can only be executed on the PDP because of the space problems on the disks. In general, any job which requires writing binary data directly to tape has to be performed on the PDP (unless a new 77 compiler permits to do so).

On the PDP the programs have to be compiled with ftn, using the switches -ls and -lv. This has been done at the beginning and has to be kept now, as the resulting time series would not be compatible with the older ones if the switches were not used.

The binary representation for data on the PDP and the VAX (ftn and f77) is different. There is a routine on the PDP, called "vax", which makes binary VAX-files out of binary PDP-files. Correspondingly there is a program, also on the PDP, which converts binary VAX-files to binary PDP-files. These programs (and

subroutines) only work on the standard FAP Data Bank records, but are easy to convert to any other type of binary record. The programs which handle the files of the FAP Data Bank can be divided into 3 groups:

1. Frequently used programs
2. Aggregation programs
3. Other programs

In this paper only the frequently used programs will be discussed. The aggregation programs are dealt with in a separate paper [1]. Other programs are too application and user dependent to be described here.

A relatively small set of programs is generally used to deal with the data. There are programs readily available to perform the following actions:

- Extract
- List
- Correct
- Merge
- Make binary
- Make formatted
- Get one record (subroutine)

4.1. Extract

The extraction program is designed to select certain time series from a specified file (disk or tape) and write them (in binary format still) to another file. The selection is by country, commodity and element. There will always be taken all dimensions and the full time series in any request. The resulting subset of data has the same structure as the original file.

Source Program:	extr.f
Input: unit 1	= data file or /dev/rmt [0,1]
unit 5	= control file (in.ex.some)
Output: unit 2	= output file assigned automatically in the control file ex.some (for the binary data)
unit 6	= control output

Sample call: extr 1=/dev/rmt0 5=in.ex.eec 6=che.extr

Structure of the control file in.ex.some:

```
                        file    comment
ctl /tmp/sichra/ex.some         after ctl comes file name
                    ctr y       y: inclusive, n: exclusive
                    9 11        i4  country codes
                       %        indicates end of country codes
                   com y        y: inclusive, n: exclusive
               1  15 1523       i5  commodity codes
                  27 116
                       %        indicates end of commodity codes
                    el  n       y: inclusive, n: exclusive
                                 i4 element codes
                       %        (no codes, means that all are taken)
```

4.2. Listing

After the extraction of data has been made the records have sometimes to be made "readable" for humans. This request can also be forwarded for whole files, but care should be taken not to use the line printer for too long a time, as the print versions of binary files tend to get rater large. The simple printing routine produces files which are approximately 3.5 times larger than the binary files.

There are 3 list programs which convert binary records into ASCII records, which can then be listed on the screen or the line printer. One program only prints the codes and time series, the other programs add text to the codes.

4.2.1. Print Codes and Time series

Source Program:	supbinr.f
Input: unit 5=	binary data file (disk or tape)
Output: unit 6=	ascii data file, in the following format: (7i5,8f12.0/35x,8f12.0)

Sample call: sb < binary.argentina > list.argentina

There is a slightly different version of this program, called sb.2 , which prints 2 decimals of each datum. Original FAO data, and thus the aggregates made in FAP, do not need decimals as the accuracy is enough, or has been taken care of by changing the units of measurement (yield, extraction rate). But when national producer prices are computed at IIASA, the number of digits before the decimal point is sometimes too small. Therefore the option exists to print more digits. The binary representation has all possible digits and no precautions are therefore necessary when using the binary data files.

A sample output of this program is given in Appendix 10. It shows the first few records for Argentina (icd(2)=9) in the most aggregated form.

4.2.2. Print Codes, Time Series and some Text

This program is only suitable for printing data which have small number of digits (e.g. prices, extraction rates).

Source Program:	prrd.f
Parameter 1:	binary data file
Parameter 2:	1 or 22(*) (depending on the data belonging to group 1 or 2 of data; see earlier description).
Output:	standard output, can be piped to printer, written to file, etc.

(*) 22 is a "magic" number, has historical reasons.

Sample call: prrd bin.argentina 1 > list.argentina
In Appendix 11 prices for the most aggregated commodities in Argentina are shown.

4.2.3. Full Listing

There is a program which produces an output similar to the FAO turnaround document, with all codes deciphered, and the status indicator of the data also displayed. Zeros are not printed, but blanks are filled in instead.

Source Program:	suputa.f (suputal.f., suputailo.f, etc)
Parameter 1:	binary data file
Parameter 2:	1 or 22 (as before)
Parameter 3:	blank or l or ilo
Output:	standard output, which can be piped directly to the line printer.

Sample call: sup bin9.argentina 22 '' > list9.argentina

The normal listing requires an empty string as third parameter. If one wants a new page to start after each commodity and country, "l" is the needed third parameter. If population and labour force data from ILO is to be listed, the corresponding parameter should be "ilo".

In Appendix 4 a short explanation of possible abbreviations of the displayed output is given. This is helpful for reading the example of a long listing printed in Appendix 12.

4.3. Merge

In order to add some time series to an existing data file (at the end or at any other place), to merge two data files; or to replace old time series by new time series, it is necessary to run a program which from 2 data files makes a third data file. This can then be copied onto the original file if so wanted. (Do not merge file1 and file2 to file1 directly!!). There are 2 merge programs at the moment which produce the same results but give different reports of the events.

The first program (mer) lists all records which have the same codes icd(2) to icd(5) in the old and new data file and also outputs both complete time series, whereas the second program (mergsua) lists the codes of same time series records, and only lists the corresponding time series in case they differ, and then also their absolute and relative difference. At the end statistics on the number of records in and out are also printed.

Source Program:		mer.f and mergsua.f
Input:	unit 1	= old binary data file
	unit 2	= new binary data file
Output:	unit 3	= resulting merged file
	unit 6	= list of differences, and nr of records merged

Sample call: mer 1=bin.old 2=bin.update 3=bin.new > checkfile

The program "mergsua" can be suitably used to compare time series, in cases of updates for example. If the programs are used in the currently stored mode, they will only give good results if all the time series involved have the same starting year. In order to compare new series (e.g. starting 1966) with old series (e.g.starting 1961) program merdiff can be used. It only lists differences for the overlapping years.

Source Program:		merdiff.f
Input:	unit 1=	old data file, e.g.starting at 61
	unit 2=	new data file, e.g.starting at 66
	unit 8=	eps, relative level as of which difference will be reported (e.g. 0.05)
	Output:	on standard output the differences,
	unit 3=	binary file with differences

Sample call: merdiff 1 = 1 bin.old.61; 2 = bin.new.66; 3 = bin.diff > check diff

4.4. Correction of data

One can think of changing whole time series, or only single years. In the latter case the above merge programs could be adapted to meet the purpose. As each of these cases might be very special, there is no general program which can perform this. However, there are a number of programs called adsome*.f as they are able to combine existing binary data with corrections inputted in ascii code. They have been tailored to meet specific purposes.

If whole time series should be changed, or new ones inputted, the solution is easier. For this:

Source Program:		in.f
Input:	unit 5	= ascii file with codes and time series
Output:	unit 2	= binary data file converted from unit 5
	unit 6	= control output

Sample call: a.out < ascii.argentina 2=bin.argentina 6=check.in

The format of the ascii input records must be:

line	format	explanation
line 1:	7i6	codes of the time series
line 2:	8f13.0	data for year 1 to year 8
line 3:	8f13.0	data for year 9 to year 16
line 4:	7i6	codes of the time series
line 5:	8f13.0	data for year 1 to year 8
line 6:	.....	

In both cases the resulting binary files will have to be merged to the final data file using mer or mergsua from above.

4.5. Make Binary Records

The program in.f used for correcting whole time series can also be run to create binary data records (see above).

4.6. Make Formatted Records

As binary data records can only be properly read by the computer that wrote them, it is necessary to change the data representation of these records if one wants to use them on other computer installations. Experience has shown that many operating systems do not encourage different blocking factors on one input tape. There is also a standard format for moving programs and/or data between different installations. This format is 80 characters/record (and 10 records/block). Thus, in order to have the most widely acceptable format, the data records will be converted from binary to the following formatted form:

line	format	explanation
1:	7i5	codes
2:	6f12.0	data year 1 to year 6
3:	6f12.0	data year 7 to year 12
4:	6f12.0	data year 13 to year 16
5:	7i5	codes
6:	6f12.0	.....
		....

The g-format can also be used instead of the f-format. The program to perform this and its input/output units are:

Source Program:	cvt.f
Input: unit 1	= binary data file (disk or tape)
Output: unit 6	= ascii data file

Sample call: cvt 1=bin.argentina > ascii.argentina

The command

dd if=file.ascii cbs=80 obs=800 conv=ebcdic of=/dev/rmt[0,1]

makes a file on the magnetic tape which will be readable on most installations, and whose specifications are:

NT, 1600bpi,
no label
ebcdic
80 char/rec
800 char/block

(the system call 'mtibm' can also be used for this purpose).

The data listed in Appendix 7 (Argentina, most aggregated mode) have the form shown in Appendix 10 after having been processed by the above program.

4.7. Get One Record

In many programs there is the need to find one specific record of a data file without searching too long for it (rewind each time). For this purpose a subroutine has been written which avoids frequent rewinds.

Source program: geta.f
Call: call geta (iu,ictr,icom,iel,id,x,iy,ly,undef,ipo,irew)

This is the meaning of the parameters:

iu	unit number of data input file (INPUT)
ictr	country code of wanted record (INPUT)
icom	commodity code of wanted record (INPUT)
iel	element code of wanted record (INPUT)
id	dimension code of wanted record (INPUT)
x	output array with found time series, or undef if not found (OUTPUT)
iy	first year of data wanted (e.g.61) (INPUT)
ly	last year of data wanted (e.g.76) (INPUT)
undef	value given x, in case time series is not in input file (INPUT)
ipo	requested time series is not in input file (OUTPUT) = 0: time series has been found = 1: time series has NOT been found
irew	read, do not rewind (INPUT) = 3: rewind iu only ≠3: read

5. Graphs

There does not exist a standard routine in the FAP Data Bank to automatically plot the available time series. This can be done on a case by case basis. The reason being that each user generally wants a different type of plot.

On the VAX 11/780 there is currently available a plotting package called NEWPLOT which offers a fast and easy method to plot any desired time series from the FAP Data Bank.

A few actions are needed before a plot can be made. These are:

1) Select the data to be plotted, preferably convert them to ascii format (from the binary storage more) for checking purposes.
2) Prepare the plot control file with titles, axes, minima, maxima, etc.
3) Create plot files with the package NEWPLOT
4) Make hard copies of these plot files on the plotter.

5.1. Select Data for Plotting

The data selection is preferably done by first extracting the wanted data onto a separate file with the program "extr". From here the plot routine can immediately read the data (binary) read. But a better method is to make first an ascii file, with the program "sb" or "cvt". An example of such an ascii data file is shown in Appendix 14.

5.2. Prepare Plot Control File

The contents of the plot control file depends completely on the application. A sample plot control file is shown in Appendix 11.

5.3. Create Plot Files

Unless otherwise specified NEWPLOT creates plot files (binary) which are suitable to be listed (plotted) directly on a video terminal. These files can be generated interactively or in the background. It depends on the mode in which NEWPLOT is started.

5.4. Make Hard Copies

The plot files generated by NEWPLOT can be converted to a format suitable for the Varian printer with the command

```
di-vn < plotfile | vnsort > varianfile
```

The format suitable for the BBC plotter results from

```
di-bbc < plotfile > bbcfile
```

Each of the two files can be printed with the commands

p -pri:varian varianfile (on the PDP), or
pv70 varianfile (on the VAX); and
cat bbcfile >/dev/bbc (on the VAX).

6. Possible Requests

In this section an attempt is made to find answers to possible questions and request from customers of the FAP Data Bank. It is clear that these answers will not cover all questions, but hopefully the most frequent ones.

6.1. Is there data on ...?

See Appendix 5 where an overview of the existing data files and their storage and contents is given.

6.2. I need the following data ...!

After checking in Appendix 7 and the next section whether the data is available, it is necessary to find out from the customer how the data is wanted:

- hard copy (listing, short or long)
- binary
- on magnetic tape

6.2.1. Hard Copy

This request can be satisfied by running an extraction on the relevant data file and later one of the listing programs. One can save some paper if the user only needs the ascii listing with the codes and no text is required. If only prices are needed, the intermediate listing program should be used.

The full listing should only be run on relatively short files, e.g. extractions from ag9, ag27, or at most ag (main commodities). A complete listing of the original data of one country could mean 1500 blocks of printout. The customer should be asked if that amount of printout is really wanted. There are no copyright problems (see later) with giving away printouts.

6.2.2. Binary Data

If requested data is to be processed later by computer programs it is best to provide the customer with a binary data file (the plain result from the extraction program), and explain the organisation of the file, its codes, etc. Section 1 of this paper gives the necessary details.

If complete data files are needed (e.g. ag9, all prices) it is best not to make a copy but to tell the user where the file can be found, and explain the use of the subroutine geta.

6.2.3. Magnetic Tape

There are occasions when members of the collaborating Institutes, or also unrelated customers, request time series to be taken away. In such cases the extraction program should be run to get the requested data. If a whole file is wanted, no extraction needs to be run. The time series can be put on tape using the program "cvt". Information on the organisation of the data and the meaning of the codes should be provided as well. *Attention!!* The original SUA and the original producer prices may *not* be given away on magnetic tape unless the customer has a written permission from FAO. The different levels of aggregation are not subject to this restriction, but the program leader of FAP should be consulted to avoid authorship problems. See section 8 for more details on this.

6.3. Correct the Following Data

There have been numerous cases when experts from different countries have found single years of time series, or even complete time series in the FAP Data Bank to be wrong, or not suitable for their modeling work.

The policy up to now has been to include these corrections into the Data Bank as far as possible, specially if they do not interfere with the aggregation procedures (too many exceptions). Major corrections should be documented as far as possible.

If only single years are to be corrected the program adsome.f can be adapted and used, the resulting time series should be merged with the old data ("mer"). For whole time series to be corrected the program "in.f" is most suitable.

6.4. Include New Time Series

In general this activity should be in line with the overall FAP modeling work. The program in.f, or a customer-made program can be used for this purpose. It is important to check now that the country, commodity and element list (Appendices 1 to 3) know about possible new codes, otherwise they should be updated. Documentation for new time series is essential.

6.5. Aggregations

Any request for different aggregations than the standard FAP aggregations (ag, ag27, ag9) should be discouraged. The reason for this is

* confusion about the different aggregation patterns
* labour intensive activity
* theoretically any combination of commodities to "special aggregations" is possible, thus ... ?????

These requests have only been fulfilled when relatively little changes were necessary in the aggregation programs, control files, procedures, etc. See [1] and [2] for details. Again here, documentation is essential. It is best to create separate directories for these activities, and use a complete set of programs and input files exclusively for each such exercise.

6.6. Compare Different Time Series

It seems reasonable to compare a number of time series with others (across countries, commodities, years, etc). So far the only ready made programs to do this are mergsua and merdiff. Both programs differ in that the first, mergsua, can only compare 2 time series with same beginning years (icd(6)), and mer66.1 can compare data that start 1961 with data starting 1966. In both cases country, commodity, element and dimension codes have to be identical.

Any other types of comparisons would need separate programs, which could be based, however, on the above programs.

7. Data Files and their Contents

The FAP Data Bank is a set of files, ordered by different criteria, stored on magnetic tape and/or disk, sometimes readily available in printed form. There is no procedure similar to commercially available data banks by which the user logs into the data bank and starts queries. There are several reasons for this state of the art;

copyright regulations
lack of storage space
lack of demand

The following summary of the availability of data, its coverage, storage mode and filename of the place were it can be found is meant both for the FAP and the non-FAP reader. It will always remain true, however, that any query and extraction of data must be done by FAP staff members and cannot be made independently. In general, the easiest way to find out whether a certain time series exists at all is to try to extract it (have it extracted). If it is not there nothing will result from the extraction other than the message

"0 records have been extracted to file ....".

The certainty, however, can be narrowed down to the following countries, commodities and types of data:

7.1. Countries

In the FAP data bank there is some data available for all FAO countries (Appendix 1), as far as FAO reports on them. All data (SUAs, Population, Macro Data, Area, Prices) exists for all FAP4 countries (Appendix 1a).

7.2. Commodities

The Supply Utilisation Accounts (SUAs) cover all FAO commodities listed in Appendix 2. As data is aggregated the list becomes smaller, and at the final level of 27 (ag27) and 16 (ag9) commodities the list is much smaller (Appendix 2b). The relevant elements and dimensions are in Appendix 3 (for FAO commodities) and Appendix 3a (for FAP commodities). In Appendix 2a the commodities for the macro files are listed, together with their elements and dimensions.

7.3. Files

The major types of data, the files where they can be found and the coverage period are tabulated in Appendix 5. In order to understand the meaning of producer prices, world market prices, FAP prices, etc. the reader is referred to [1], [2] and [3].

8. Exceptions and Corrections

Up to now a number of exceptions and corrections have been included in different files of the FAP Data Bank.

8.1. Exceptions for Feed Programs

The special aggregation run to be used in the feed allocation model has not been documented at length. On the other hand there is no plan to repeat the exercise. But in case this should happen (so many things have), a few remarks are necessary.

Most of the programs and files related to this exercise have a suffix "kl" somewhere (wei.conv.kl, ag9.kl, etc). Some files and programs are unique to the exceptions for feed programs. These are feedfac.f and the resulting outputs feedfac9.bin and feedfac27.bin, as well as a program to calculate yield of eggs (eggqu.f).

The resulting aggregations ag9.kl and ag27.kl have special codes, ag27.kl starts with 3701, ag9.kl with 3801. The corresponding texts are included in the files nfao.3.1 and nfao.3.22, therefore the normal list programs can be run on these files.

8.2. Exceptions for Kenya

The detailed country model of Kenya needs also some special aggregations, which have all been made in a subdirectory called shah. As the use of the resulting output is different than in the exceptions for the feed programs, the special codes have not been included in the text files, it is not possible to run a meaningful listing on the output. Also here the documentation is very bad (nonexistent) and any repetition of the exercise should be discussed with the user of that data first.

8.3. Exceptions for Australia (and New Zealand)

In order to take account of the importance of ovine production in Australia (and New Zealand) the detailed and simplified FAP commodity lists have been adapted in the following way:

detailed		simplified	
3407	bovine meat	3304	bovine meat
3428	ovine meat	3317	ovine meat
3429	wool and hides from ovine	3318	wool and hides from ovine
3430	ovine fat	3319	bovine fat

All other commodities stay the same, but start with 34.. in the detailed list and 33.. in the simplified.

8.4. Exceptions and Corrections for New Zealand

In New Zealand a further exception was made, and the new classification has been used in the detailed model for that country. The following Table 2 shows this special commodity grouping:

Table 2: Commodity Classification for New Zealand

code	text	code	text
3201	wheat	3216	bev.dist.alcohol
3202	rice	3217	fibres
3203	coarse grains	3218	ind.crops
3204	veg.oil	3219	offals cattle
3205	prot.feed	3220	offals sheep
3206	sugar	3221	pig fat
3207	bov meat	3222	poultry fat
3208	---	3223	fish oil
3209	pig+pltry+egg	3224	meat meal
3210	milk	3225	fish meal
3211	---	3226	sil+hid.cat+ov
3212	veg+rts+frt+nut	3227	pig hides
3213	fish products	3228	ovine meat
3214	---	3229	steer+degr+tal
3215	coffee+cocoa+tea	3230	wool

These time series can only be printed without text, in the raw form, as there is no suitable text available in the commodity text files nfao.3.1 and nfao.3.22. In addition to a new classification the time series between 1961 and 1976 have also been edited and corrected by Alan Rae from New Zealand.

8.5. Corrections for Other Countries

The subdirectory "corr" referred to in the previous section contains a number of files with corrections for several countries and commodities. In general the terminology is such that the country code is used somewhere in the file.

Corrections and additions were done for a number of countries, the most important of them being:

	Country	Person
10	Australia	Brian Parmenter
11	Austria	Karl Ortner
33	Canada	John Graham
156	New Zealand	Alan Rae
		Tony Lewis
174	Portugal	Raoul Jorge
223	Turkey	???

9. Interactions with Other Institutions

The reader will be convinced by now that the FAP Data Bank is not a stand alone product, but requires continuous interaction, exchange of data and ideas, etc with a number of institutions. The places discussed in this section will by no means cover all activities, past or future, only the main ones should be listed here.

9.1. Food and Agriculture Organization of the United Nations, FAO, Rome.

For new SUA, magnetic tapes, documentation, errors, etc. the Statistics Division within the Economic and Social Policy Division should be contacted. Important names are:

Nurul Islam,	Assistant Director, ESD
C.L. Quance,	ESS
J.P. O'Hagan,	ESD
G. Parniczky,	ESS
M. De Nigris,	ESC

Jelle Bruinsma, ESD, is also familiar with some of the problems and can be addressed for that matter. The authorization to use the SUAs on magnetic tape at FAP has been issued by the Editorial Branch, FAO, Via delle Terme di Caracalla, I-00100 Rome. Any other applications for giving data to third parties should be made to that division as well. In general it is best to hand-carry the tapes from Rome, or at least have them sent by Pouch. Allow for at least 4 weeks before a request for existing data can be fulfilled. Updates are in general announced very early, but only released after 6 to 8 months.

9.2. Center for World Food Studies, Amsterdam.

This institute collaborates very closely with FAP and is interested in receiving data for the following countries:

16 Bangladesh
101 Indonesia
216 Thailand

The Center for World Food Studies has an agreement with FAO (and FAP) and is allowed to receive the original SUAs from FAP. In addition they are interested in all stages of aggregation, prices, nutritional content, and also the programs and control files that go with preparing these data files.

The main contact person there is:

Michiel Keyzer
Vrije Universiteit
P.O. Box 7161
1105 De Boelelaan
1007 MC Amsterdam

9.3. Free University of Brussels

Occasionally one might receive requests from the Free University of Brussels. These requests are in general restricted to SUAs and prices. Similarly to Amsterdam, there is an agreement between Brussels and FAO which allows FAP to give original SUAs to them.

The contact person there is

Jean Waelbroeck
Universite Libre de Bruxelles
Centre d'Economie Mathematique
et d'Econometrie
CP 135
Avenue F.-D. Roosevelt 50
B-1050 Bruxelles

REFERENCES

[1] G.Fisher and U.Sichra: *The Aggregation of the Agricultural Supply Utilisation Accounts*". WP-83-42. International Institute for Applied Systems Analysis, Laxenburg, Austria, 1983.

[2] U.Sichra: *The FAP Data Bank, Part 2: Updating and Aggregating, Methods and Practice*", WP-84-94. International Institute for Applied Systems Analysis, Laxenburg, Austria, 1984.

[3] U.Sichra: *World Prices for the Detailed and the Small FAP Commodity lists, WP-84-95. International Institute for Applied Systems Analysis, Laxenburg, Austria, 1984.*

[4] Yearbook of Labour Statistics, International Labour Office, Geneva.

Appendix 1: Country List from FAO.

code	country
000	world
002	afghanistan
003	albania
004	algeria
005	amer samoa
006	andorra
007	angola
008	antigua
009	argentina
010	australia
011	austria
012	bahamas
013	bahrain
014	barbados
015	belgium-lux
016	bangladesh
017	bermuda
018	bhutan
019	bolivia
020	botswana
021	brazil
023	belize
024	br ind oc tr
025	solomon is
026	brunei
027	bulgaria
028	burma
029	burundi
032	cameroon
033	canada
034	canton is
035	cape verde
036	cayman is
037	cent afr emp
038	sri lanka
039	chad
040	chile
041	china
042	christmas is
043	cocos is
044	colombia
045	comoros
046	congo
047	cook islands
048	costa rica
049	cuba
050	cyprus
051	czechoslovak
053	benin
054	denmark
055	dominica
056	dominican rp
058	ecuador
059	egypt
060	el salvador
061	eq guinea
062	ethiopia
064	faeroe is
065	flakland is
066	fiji
067	finland
068	france
069	fr guiana
070	fr polynesia
072	djibouti
074	gabon
075	gambia
076	gaza strip
077	german dr
078	germany fed
081	ghana
082	gibraltar
083	gilbert is
084	greece
085	greenland
086	grenada
087	guadeloupe
088	guam
089	guatemala
090	guinea
091	guyana
093	haiti
094	holy see
095	honduras
096	hong kong
097	hungary
099	iceland
100	india
101	indonesia
102	iran
103	iraq
104	ireland
105	israel
106	italy
107	ivory coast
109	jamaica
110	japan
111	johnston is

112	jordan
114	kenya
115	kampuchea dm
116	korea dpr
131	malaysia
117	korea rep
118	kuwait
120	lao
121	lebanon
122	lesotho
123	liberia
124	libya
125	liechtensten
128	macau
129	madagascar
130	malawi
132	maldives
133	mali
134	malta
135	martinique
136	mauritania
137	mauritius
138	mexico
139	midway is
140	monaco
141	mongolia
142	montserrat
143	morocco
144	mozambique
147	namibia
148	nauru
149	nepal
150	netherlands
151	neth antille
153	newcaledonia
155	new hebrides
156	new zealand
157	nicaragua
158	niger
159	nigeria
160	niue island
161	norfolk island
162	norway
164	pacific is
165	pakistan
166	panama
167	panama ca zn
168	papua n guin
169	paraguay
170	peru
171	philippines
172	pitcairn is
173	poland
174	portugal
175	guin bissau
176	east timor
177	puerto rico
179	qatar
181	rhodesia
182	reunion
183	romania
184	rwanda
187	st helena
188	st kitts etc
189	st lucia
190	st pier etc
191	st vincent
192	san marino
193	sao tome etc
194	saudi arabia
195	senegal
196	seychelles
197	sierra leone
200	singapore
201	somalia
202	south africa
203	spain
204	sp no africa
205	westn sahara
206	sudan
207	surinam
209	swaziland
210	sweden
211	switzerland
212	syria
214	taiwan
215	tanzania
216	thailand
217	togo
218	tokelau
219	tonga
220	trinidad etc
221	oman
222	tunisia
223	turkey
224	turks caicos
225	u a emirates
226	uganda
227	tuvalu
228	ussr
229	uk
231	usa
233	upper volta
234	uruguay
236	venezuela
237	viet nam
239	virgin is uk
240	virgin is us

242	wake island
243	wallis etc
244	samoa
246	yemen ar
247	yemen dem
248	yugoslavia
250	zaire
251	zambia
288	mal sabah
289	mal sarawak
290	mal peninsul
301	developed
302	n america
303	w europe
304	eec
305	w eur ex eec
306	oceania
307	oth dev.ped
308	developing
309	africa
310	n w africa
311	w africa
312	central afr
313	e africa
314	s africa dev
315	lat america
316	central amer
317	caribbean
318	south americ
319	near east
320	n east afr
321	n east asia
322	far east
323	south asia
324	e se asia
325	oth dv.ping
326	n america dev
327	oceania dev
328	centr plannd
329	asian cpe
330	msa far east
331	asian cpe -c
332	e eur+ussr
334	e europe
335	europe
336	n c america
337	asia
338	africa
339	oceania
340	world -c
341	world
342	oecd
343	ecla
344	escap dvping
345	escap all
346	oecd europe
347	msa neareast
348	escap devped
349	ecwa
350	arab world
351	rafe devping
352	rafe all
353	rnea countr
354	dev.ped all
355	dev.ping all
356	msa all
357	china
358	africa ex sa
359	e s afr dev
360	msa africa r
361	nord ctrs-fo
362	other eec-fc
363	oth w eur-fo
364	neast+naf-fo
365	s. sahara-fo
366	far east -fo
367	cent plan-fo
368	all devpd-fo
369	w europe -fo
370	all devpg-fo
374	n.e.asia oth
375	eec.other
376	oth we,other
377	nw afr,other
378	w.afr.others
379	c.afr.,other
380	e.afr.,other
381	fpa northafr
382	fpa westaf n
383	fpa westaf s
384	fpa centrafr
385	fpa eastsoua
386	s.asia,other
387	e+se asia ot
388	c.amer.other
389	caribb.other
390	s.amer.other
391	ec la sela
392	ec lafta
393	ec cacm
394	ec caricom
395	ec andean
396	ec river pl
397	ec af aec
398	ec eac
399	ec udeac
400	ec gepgl
401	ec ecowas

402	ec ceao
403	ec senegal
404	ec ocam
405	ec entente
406	ec mano riv
407	ec maghreb
408	ec ne caeu
409	ec acm
410	ec gulf c m
411	ec fe bangk
412	ec asean
413	ec rod
414	malaysia
415	ldc total
416	ldc africa
417	ldc neareast
418	ldc asia
776	cmea ex ussr (FAP)
333	producer countries
444	latin countries
555	african countries
666	asian countries
777	cmea (FAP)
888	eec (FAP)
999	lat+afr+asia
890	FAP 33 ctr.
891	FAP resid
892	FAP 20 ctr.
893	FAP-0 resid
895	Rest World

Appendix 1a: FAP countries (* = FAP4)

	EEC and Japan
15	Belgium - Luxembourg (*)
54	Denmark (*)
68	France (*)
78	Federal Rep. of Germany (*)
104	Ireland(*)
106	Italy(*)
110	Japan(*)
150	Netherlands(*)
229	UK(*)
888	Total EEC

	CMEA
27	Bulgaria(*)
51	Czecoslovakia(*)
77	German Democratic Republic(*)
97	Hungary(*)
173	Poland(*)
183	Romania(*)
228	USSR(*)
777	Total CMEA

	Rest of Europe
11	Austria(*)
67	Finland(*)
84	Greece(*)
162	Norway
174	Portugal(*)
203	Spain(*)
210	Sweden(*)
211	Switzerland
223	Turkey(*)
248	Yugoslavia

	Developing Africa
4	Algeria
59	Egypt(*)
62	Ethiopia
114	Kenya(*)
143	Morroco
159	Nigeria(*)
206	Sudan
212	Syria
215	Tanzania
222	Tunisia

	Developing Asia
16	Bangladesh
100	India(*)
101	Indonesia(*)
102	Iran
103	Iraq
116	Korean Democr. Rep
165	Pakistan(*)
171	Philippines
216	Thailand

	Latin America
9	Argentina(*)
21	Brazil(*)
138	Mexico(*)
170	Peru
236	Venezuela

	Other Countries
10	Australia(*)
33	Canada(*)
41	China(*)
156	New Zealand(*)
202	South Africa
231	USA(*)

Appendix 2: Commodities from FAO and FAP

SUPPLY UTILIZATION ACCOUNTS and PRODUCTION YEARBOOK

commodity code	group code	text
0001	01	population
0002	14	macroecon.1
0003	14	macroecon.2
0010	03	total trade
0012	17	land use
0013	17	irrigation
0014	16	land use
0015	02	wheat
0016	03	flour wheat
0017	03	bran wheat
0018	03	macaroni
0020	03	bread
0022	03	pastry
0023	03	wheat, starch
0024	03	wheat, gluten
0027	02	rice, paddy
0028	03	rice, husked
0031	03	rice, milled
0032	03	rice, broken
0034	03	rice, starch
0035	03	bran rice
0036	03	oil rice brn
0037	03	cake ricebrn
0041	03	breakf cerls
0044	02	barley
0046	03	barley, pearl
0049	03	malt barley
0050	03	malt extract
0051	03	beer barley
0056	02	maize
0058	03	flour maize
0059	03	bran maize
0060	03	oil maize
0061	03	cake maize
0063	03	maize gluten
0064	03	starch maize
0066	03	beer maize
0067	03	white maize
0068	02	pop corn
0071	02	rye
0072	03	flour rye
0073	03	bran rye
0075	02	oats
0076	03	oats, rolled
0079	02	millet
0080	03	flour millet
0081	03	bran millet
0082	03	beer millet
0083	02	sorghum
0084	03	flour sorghm
0085	03	bran sorghum
0086	03	beer sorghum
0089	02	buckwheat
0090	03	flour buckwh
0091	03	bran buckwht
0092	02	quinoa
0101	02	canary seed
0103	02	mixed grain
0104	03	flour mix gr
0105	03	bran of mix gr
0108	02	cereals nes
0109	03	infant food
0110	03	wafers
0111	03	flour cereal
0112	03	bran cereal
0113	03	cer prep nes
0116	02	potatoes
0117	03	flour potat
0119	03	potato stch
0121	03	potato tap
0122	02	sweet potato
0125	02	cassava
0126	03	flour cass
0127	03	cassava tap
0128	03	cassava drd
0129	03	cassava stch
0136	02	taro
0137	02	yams
0149	02	roots tub ns
0150	03	flour rt tub
0151	03	roots tub dr
0156	02	sugar cane
0157	02	sugar beets
0158	03	cane sugar
0159	03	beet sugar
0161	02	sugar crops
0162	03	sugar,c. raw
0163	03	sugar,n-cent
0164	03	sugar refind
0165	03	molasses

0167	03	sugar nes
0168	03	sugar conf
0169	03	beet pulp
0170	03	bagasse
0171	03	sugars flav
0176	02	beans, dry
0181	02	brd beans,dr
0187	02	peas, dry
0191	02	chick-peas
0195	02	cow peas,dry
0197	02	pigeon peas
0201	02	lentils
0205	02	vetches
0210	02	lupins
0211	02	pulses nes
0212	03	flour pulses
0216	02	brazil nuts
0217	02	cashew nuts
0220	02	chestnuts
0221	02	almonds
0222	02	walnuts
0223	02	pistachios
0224	02	kolanuts
0225	02	hazelnuts
0226	02	arecanuts
0230	03	cashew she
0231	03	almonds she
0232	03	walenuts she
0233	03	hazelnuts she
0234	02	nuts nes
0235	03	preprd nuts
0236	02	soybeans
0237	03	oil soyabean
0238	03	cake soybean
0239	03	soya sauce
0240	03	soya paste
0241	03	soya curd
0242	02	groundnuts
0243	03	groundnut she
0244	03	oil groundnt
0245	03	cake groundt
0249	02	coconuts
0250	03	coconuts,des
0251	03	copra
0252	03	oil coconuts
0253	03	cake coconut
0256	03	palm kernels
0257	03	palm oil
0258	03	oil,palm ker
0259	03	cake,palm ker
0260	02	olives
0261	03	olive oil
0262	03	olive,pres
0263	02	karite nuts
0264	03	karit nt but
0265	02	castor beans
0266	03	oil cast bns
0267	02	sunflwr seed
0268	03	oil sunf sd
0269	03	cake sunf sd
0270	02	rapeseed
0271	03	oil rapeseed
0272	03	cake rapeseed
0273	03	olive resid
0274	03	oil oliveres
0275	02	tung nuts
0276	03	tung oil
0280	02	safflower
0281	03	oil safflwer
0282	03	cake safflwr
0289	02	sesame seed
0290	03	oil ses sd
0291	03	cake ses sd
0292	02	mustard seed
0293	03	oil must sd
0296	02	poppy seed
0297	03	oil pop sd
0298	03	cake pop sd
0299	02	melonseed
0305	02	tallow seeds
0306	03	veg tallow
0307	03	stilling oil
0310	02	kapok fruit
0311	03	kapokseed sh
0312	03	kapoksee shed
0313	03	oil of kapok
0314	03	cake kapok
0328	02	seed cotton
0329	03	cottonseed
0331	03	oil cotton s
0332	03	cake cotton
0333	02	linseed
0334	03	oil linseed
0335	03	cake linseed
0336	02	hempseed
0337	03	oil hempsd
0338	03	cake hempsd
0339	02	oilseeds nes
0340	03	oil vg or ns
0341	03	cak oilsd ns
0343	03	oil meals
0358	02	cabbages
0366	02	artichokes
0367	02	asparagus
0372	02	lettuce
0373	02	spinach
0388	02	tomatoes
0390	03	juice tomato

0391	03	tomato paste
0392	03	peeld tomato
0393	02	cauliflower
0394	02	pumpk+sq+grd
0397	02	cucmbr+gherk
0399	02	eggplants
0401	02	chil+pep,grn
0402	02	onions,green
0403	02	onions, dry
0406	02	garlic
0414	02	beans, green
0417	02	peas, green
0420	02	brd bean, grn
0423	02	string beans
0426	02	carrots
0446	02	green corn
0449	02	mushrooms
0459	02	chicory root
0460	03	veg pr fr dr
0461	02	carobs
0463	02	vegetables
0464	03	veget dr nes
0465	03	vegt can nes
0466	03	juice veg ns
0469	03	vegs dehydr
0471	03	vegs vinegar
0472	03	vegs pr nes
0473	03	vegs frozen
0474	03	vegs temp pr
0486	02	bananas
0489	02	plantains
0490	02	oranges
0491	03	juice orange
0495	02	tangerines
0497	02	lemon limes
0507	02	grapefruit
0509	03	grapef juice
0512	02	citr frt nes
0513	03	citrus juice
0515	02	apples
0517	03	cider
0521	02	pears
0523	02	quinces
0526	02	apricots
0530	02	sour cherry
0531	02	cherries
0534	02	peaches
0536	02	plums
0537	03	plums, dried
0541	02	stone fruit
0542	02	pome fruit
0544	02	strawberries
0547	02	raspberries
0549	02	gooseberries
0550	02	currants
0552	02	blueberries
0554	02	cranberries
0558	02	berries nes
0560	02	grapes
0561	03	raisins
0563	03	must grapes
0564	03	wine
0565	03	vermth simil
0567	02	watermelons
0568	02	mel inc cant
0569	02	figs
0570	03	figs, dried
0571	02	mangoes
0572	02	avocados
0574	02	pineapples
0575	03	pineapple can
0576	03	pineap juice
0577	02	dates
0600	02	papayas
0603	02	frt trop nes
0604	03	fr trp dr ns
0619	02	fruit nes
0620	03	fruit dr nes
0622	03	fruit juice
0623	03	fruit pr nes
0624	03	flour fruit
0632	03	???????
0633	03	bev non-alc
0634	03	bev dis alc
0635	03	straw, husks
0636	02	maize fd+sil
0637	02	sorghum fs
0638	02	rye grass fs
0639	02	grasses fs
0640	02	clover fs
0641	02	alfalfa fs
0643	02	legumes fs
0644	02	cabbage fod
0645	02	pumpkins fod
0646	02	turnips fod
0647	02	beets fodder
0648	02	carrots fod
0649	02	swedes fod
0650	03	leaves+tops
0651	02	forage prod
0652	03	veg prod
0653	03	food wastes
0654	03	dregs,br+dis
0655	02	veg root fod
0656	02	coffee,green
0657	03	coffee roast
0658	03	coffee subst
0659	03	coffee extr

0661	02	cocoa beans
0662	03	cocoa powder
0663	03	cocoa paste
0664	03	cocoa butter
0665	03	choc prod ns
0666	03	???????
0667	02	tea
0671	02	mate
0674	02	tea nes
0677	02	hops
0687	02	pepper w/l/b
0689	02	pimento
0692	02	vanilla
0693	02	cinnamon
0698	02	cloves
0702	02	nutmeg
0711	02	anise
0723	02	spices nes
0737	03	oil citronll
0748	02	peppermint
0753	03	ess oils nes
0754	02	pyrethrum
0755	03	pyret extr.
0756	03	pyret marc
0766	02	seed cotton
0767	03	cotton lint
0768	03	cotton cardd
0769	03	cotton waste
0770	03	cotton lintr
0771	02	flax raw
0773	02	flax fibre
0774	03	flax tow
0777	02	hemp fibre
0780	02	jute
0782	02	jute-like
0788	02	ramie
0789	02	sisal
0800	02	agave nes
0809	02	abaca
0821	02	fibre nes
0826	02	tobacco
0828	03	cigarettes
0829	03	cigars
0831	03	tobacco prod
0836	02	nat rubber
0837	03	rubber dry
0839	03	natural gums
0840	03	com feed cat
0841	03	com feed pou
0842	03	com feed pig
0845	03	com feed oth
0846	03	glut feed&me
0850	03	feed sup
0851	03	nonprot nitr
0852	03	concentr nes
0853	03	vitamins
0854	03	feed additiv
0855	03	feed mineral
0857	02	hay non-leg
0858	02	hay legumin
0859	02	hay unspecif
0860	02	range past
0861	02	improv past
0862	03	fl/meal misc
0864	04	calves
0865	05	veal
0866	04	cattle
0867	05	beef veal
0868	06	offals cattl
0869	06	fat cattle
0870	03	beef boneless
0872	03	beef dss
0873	03	meat extract
0874	03	sausage beef
0875	03	beef prep
0876	03	beef canned
0882	08	cow milk
0885	03	cream, fresh
0886	03	butter, cows
0887	03	ghee, cows
0888	03	sk milk cows
0889	03	wh milk,cond
0890	03	whey,condens
0894	03	wh milk,evap
0895	03	skmilk evap
0896	03	sk milk cond
0897	03	cowmilk dry
0898	03	milk sk dr c
0899	03	dry buttermilk
0900	03	dry whey
0901	03	cheese w cow
0903	03	whey, fresh
0904	03	cheese s cow
0917	03	casein
0919	07	cattle hides
0920	03	hide w cattl
0921	03	hide d cattl
0922	03	hide n cattl
0927	07	skin f calve
0928	03	skin w calve
0929	03	skin d calve
0930	03	skin n cattl
0944	15	ind cattmeat
0945	16	bio cattmeat
0946	04	buffaloes
0947	05	buffalo meat
0948	06	offal buffal
0949	06	fat buffalo

0951	08	buffalo milk
0952	03	butter buffl
0953	03	ghee buffalo
0954	03	milk sk buff
0955	03	chees buffl
0957	07	buffalo hide
0958	03	hide w buffl
0959	03	hide d buffl
0972	15	ind buffmeat
0973	16	bio buffmeat
0974	04	lambs
0975	05	lamb meat
0976	04	sheep
0977	05	mutton lamb
0978	06	offals sheep
0979	06	fat of sheep
0982	08	sheep milk
0983	03	butter sheep
0984	03	sheep cheese
0985	03	sk milk shee
0987	10	wool, greasy
0988	03	wool, scoured
0994	03	grease wool
0995	07	sheepskins
0996	03	skin w sheep
0997	03	skin d sheep
0998	03	skin nes sh
0999	07	skinwool sh
1007	03	wool shoddy
1008	03	hair carded
1009	03	wool waste
1012	15	ind sheepmeat
1013	16	bio sheepmeat
1014	04	kids
1015	05	kids meat
1016	04	goats
1017	05	goat meat
1018	06	offals goats
1019	06	fat of goats
1020	08	goat milk
1021	03	goat cheese
1025	07	goatskins
1026	03	skin w goat
1027	03	skin d goat
1028	03	skin nes goa
1032	15	ind goatmeat
1033	16	bio goatmeat
1034	04	pigs
1035	05	pigmeat
1036	06	offals pigs
1037	06	fat pigs
1039	03	bacon pigs
1041	03	sausages pig
1042	03	meat pr pig
1043	03	lard
1044	07	pigskins
1045	03	skin w pigs
1046	03	skin d pigs
1047	03	skin nes pig
1055	15	ind pigmeat
1056	16	bio pigmeat
1057	04	chickens
1058	05	chicken meat
1059	06	offal chickn
1060	03	meat pr chck
1061	03	meat od chck
1062	09	hen eggs
1063	03	eggs l hen
1064	03	eggs dry hen
1065	03	fat poultry
1066	03	fat r poultr
1067	03	hen eggs no
1068	04	ducks
1070	15	ind duckmeat
1071	16	bio duckmeat
1072	04	geese
1077	15	ind geesmeat
1078	16	bio geesmeat
1079	04	turkeys
1087	15	ind turkmeat
1088	16	bio turkmeat
1089	05	poultry meat
1091	09	eggs ex hen
1092	03	oth egg (no)
1094	15	ind chckmeat
1095	16	bio chckmeat
1096	04	horses
1097	05	horsemeat
1098	05	???????
1100	10	hair horses
1102	07	horse hides
1103	03	hide w horse
1104	03	hide d horse
1105	03	hide y horse
1107	04	asses
1110	04	mules
1120	15	ind horsemeat
1121	16	bio horsmeat
1122	15	ind ass meat
1123	16	bio ass meat
1124	15	ind mulemeat
1125	16	bio mulemeat
1126	04	camels
1127	05	meat camel
1128	06	offals camel
1129	06	fat camel
1130	08	camel milk
1133	07	hides camel

1134	03	hides w camel
1135	03	hides d camel
1136	03	hide u camel
1137	15	ind camlmeat
1138	16	bio camelmeat
1140	05	???????
1141	05	?????
1163	05	game meat
1164	03	meat dry nes
1166	05	meat nes
1167	03	offals nes
1168	03	oils animal
1171	04	animals nes
1172	03	meat pr nes
1173	03	meat meal
1174	02	fish meal
1181	04	beehives
1182	10	honey
1183	10	beeswax
1185	10	cocoon reel
1186	03	silk, raw
1187	10	cocoon unr
1195	10	fur skins
1213	03	hides nes fr
1214	03	hide ws
1215	03	hide ds
1216	03	hide nes
1217	03	leather used
1218	03	hair fine
1219	03	hair coarse
1221	03	stearine
1222	03	degras
1223	03	oils fish
1225	03	tallow
1232	03	food prep
1242	03	margarine
1243	03	fats prep ns
1259	03	food wastes
1274	03	oils boiled
1275	03	oils hydrogn
1276	03	fatty acids
1277	03	res fatty s
1293	03	org mat 29
1294	03	seeds
1295	03	spermaceti
1296	03	waxes veg
1297	03	protein

PRODUCTION YEARBOOK

commodity code	group code	text
1299	11	soil mach
1300	11	agr mach nes
1301	11	tractors all
1302	11	tractors tot
1303	11	tractors crw
1304	11	tractors whl
1305	11	garden tract
1306	11	harv thresh
1307	11	milking mash
1308	11	lindane
1309	11	d d t
1310	11	b h c
1311	11	other chlorin
1312	11	aldrin etc
1313	11	carbamates i
1314	11	other herbicid
1315	11	toxaphene
1316	11	fenitrothion
1317	11	parathion
1318	11	malathion
1319	11	org phos oth
1320	11	chlorobenzil
1321	11	bot insc pyr
1324	11	bot insc oth
1325	11	miner oils
1326	11	arsenicals
1327	11	bromides
1328	11	oth fumigant
1330	11	other insect
1331	11	dinitro comp
1332	11	dithiocarbam
1333	11	seed dress m
1334	11	seed dress o
1335	11	sulphur
1336	11	lime sulphur
1337	11	urea derivat
1338	11	aromatic cp
1339	11	carbamates h
1340	11	copper comp
1341	11	oth fungicid
1342	11	2,4,-d
1343	11	mcpa
1344	11	2,4,5-t
1345	11	triazines
1346	11	anticoagul
1347	11	oth rodent
1348	11	pesticid nes
1350	11	plant gr reg
1352	11	methoxychlor
1353	11	aliphatic cp
1354	11	nematocides
1355	11	al phosphide
1356	11	car tetrachl
1357	11	pesticides
1360	11	nitrogfertlz
1361	11	ammon sulph
1362	11	ammon nitrat
1363	11	amm sul nitr
1364	11	sodium nitr
1365	11	calcium nitr
1366	11	calcium cyan
1367	11	urea
1368	11	amm phosph n
1369	11	other nitr fer
1370	11	oth compl n
1371	11	ammonia d ap
1372	11	calc am nitr
1374	11	nit fert nes
1375	11	phosphfertlz
1376	11	sing superph
1377	11	conc superph
1378	11	basic slag
1379	11	amm phosph p
1380	11	other phos fer
1381	11	oth compl p
1385	11	phos fer nes
1386	11	potashfertiliz
1387	11	potas sulph
1388	11	muriate 45
1389	11	muria 20-45
1390	11	crude salts
1391	11	oth pot fert
1392	11	compl fer k
1396	11	pot fert nes
1397	11	fert m nes
1398	11	nat sod nitr
1399	11	phosphat nat
1400	11	pot salt nat
1401	11	fertil organ
1402	11	ammonia
1403	11	phosph acid
1404	11	sulphur acid
1405	11	agric lime
1406	11	gypsum
1410	11	int comb eng
1411	11	electr motor
1412	11	trucks farms

SUPPLY UTILIZATION ACCOUNTS

commodity code	group code	text
1501	12	frwtr diad f
1502	13	frwtr fz whl
1503	13	frwtr fillet
1504	13	frwtr fz flt
1505	13	frwtr cured
1506	13	frwtr canned
1507	13	frwtr pr nes
1508	13	frwtr meals
1509	13	frwt bdy oil
1510	13	frwt liver oil
1511	13	frwt meal of
1514	12	dmrsl fresh
1515	13	dmrsl fz whl
1516	13	dmrsl fillet
1517	13	dmrsl fz flt
1518	13	dmrsl cured
1519	13	dmrsl canned
1520	13	dmrsl pr nes
1521	13	dmrsl meals
1522	13	dmrs bdy oil
1523	13	dmrs lvr oil
1524	13	dmrs meal of
1527	12	pelagic frsh
1528	13	pelgc fz whl
1529	13	pelgc fillet
1530	13	pelgc fz flt
1531	13	pelgc cured
1532	13	pelgc canned
1533	13	pelgc pr nes
1534	13	pelgc meals
1535	13	pelg bdy oil
1536	13	pelg lvr oil
1537	13	pelg meal of
1540	12	marine nes f
1541	13	marine fz whl
1542	13	marin fillet
1543	13	marin fz flt
1544	13	marin cured
1545	13	marin canned
1546	13	marin pr nes
1547	13	marin meals
1548	13	marn bdy oil
1549	13	marn lvr oil
1550	13	marn meal of
1553	12	crstaceans f
1554	13	crstc frozen
1555	13	crstc cured
1556	13	crstc canned
1557	13	crstc pr nes
1558	13	crstc meals
1559	13	crst meal of
1562	12	mlluscs frsh
1563	13	molsc frozen
1564	13	molsc cured
1565	13	molsc canned
1566	13	molsc meals
1567	13	mols meal of
1570	12	cephlp fresh
1571	13	cphlp frozen
1572	13	cphlp cured
1573	13	cphlp canned
1574	13	cphlp pr nes
1575	13	cphlp meals
1576	13	cphl meal of
1579	12	aquto mammal
1580	13	aq m meat
1581	13	aq m meals
1582	13	aq m oils
1583	13	aq m prep ns
1584	13	aq m meal of
1587	12	aqutc anim f
1588	13	aq a cured
1589	13	aq a meals
1590	13	aq a prep ns
1591	13	aq a meal of
1594	12	aqutc plants
1595	13	aq p dried
1596	13	aq p prep ns
1599	13	fish tot val

FORESTRY

commodity code	group code	text
1601	02	sawl vener c
1602	02	sawlogs c
1603	02	veneerlogs c
1604	02	sawl ven nc
1606	02	veneerlogs b
1608	02	pulpwood c
1609	02	pitprops c
1611	02	pulpwood nc
1612	02	pitprops nc
1614	02	pulpwood
1615	02	pitprops
1617	02	sc w plp(nc)
1618	02	unb site(nc)
1619	02	chips
1620	02	residues
1621	02	bl s-phite
1622	02	nwood cell f
1623	02	other ind c
1624	02	unb sate(nc)
1625	02	other ind
1626	02	other ind no
1627	02	fuelwood c
1628	02	fuelwood nc
1629	02	fuelwood
1630	02	charcoal
1631	02	sleepers
1632	02	sawnwood c
1633	02	sawnwood nc
1634	02	veneer
1637	02	bl sate(nc)
1638	02	ot plp straw
1639	02	ot plp bagas
1640	02	plywood
1641	02	plywood c
1642	02	plywood b
1643	02	ot plp bambo
1644	02	ot plp reeds
1645	02	blockboard
1646	02	particle brd
1647	02	nwd partbd
1648	02	disving(nc)
1649	02	fibrebd comp
1650	02	fibred,ncomp
1652	02	p ctd w cont
1653	02	p ctd w free
1654	02	mech wd pulp
1655	02	s-ch wd pulp
1656	02	chem wd pulp
1658	02	p unc w cont
1659	02	p unc w free
1660	02	unbl sulphit
1661	02	bl sulphite
1662	02	unbl sulphat
1663	02	bl sulphate
1664	02	pap linerbd
1665	02	linrbrd kraft
1666	02	kft lnr unbl
1667	02	dissolving
1668	02	other fi pul
1670	03	waste paper
1671	02	newsprint
1672	02	oth linrbrd
1673	02	fting medium
1674	02	print+writin
1675	02	other paper
1676	02	housh+san pa
1677	02	flt md s-che
1678	02	oth flt med
1679	02	kft wr pack
1680	02	sack kraft
1681	02	wraping pap
1683	02	paper+bd nes
1684	02	prt+wr unc
1685	02	prt+wr coat
1686	02	sol bl brd
1687	02	ot fold bxbd
1688	02	ot wrpkgpabd
1689	02	ot paper
1690	02	ot paperbd
1691	02	ot paper nes
1692	02	ot papbd nes
1693	02	blchd sulpha
1694	02	ot kft wr pk
1695	02	folding bxbd
1696	02	kft lnr blch
1698	02	wood pulp c
1699	02	paper+papbd

PRODUCTION YEARBOOK

commodity code	group code	text
1701	03	grand total
1702	03	a fi fo prim
1703	03	a fi fo proc
1704	03	food
1705	03	food prim
1706	03	food proc
1707	03	no food
1708	03	no food prim
1709	03	no food proc
1710	03	agriculture
1711	03	agriclt prim
1712	03	agriclt proc
1713	03	crops
1714	02	crops prim
1715	03	crops proc
1716	03	cereals
1717	02	cereals prim
1718	03	cereals proc
1719	03	roots+tubers
1720	02	root+tub pr
1721	07	catt&buf hide
1722	03	sugar crops
1723	02	sugar prim
1724	03	sugar proc
1725	03	pulses
1726	02	pulses prim
1727	03	olive oil t
1728	11	pho fert tot
1729	02	treenut prim
1730	11	pot fert tot
1731	03	oilcrops
1732	02	oilcrop prim
1733	03	oilcrop proc
1734	03	vegetables
1735	02	vegetbl prim
1736	03	vegetbl proc
1737	03	fruit
1738	02	fruit prim
1739	03	fruit proc
1740	03	stimulants
1741	02	stimul prim
1742	03	whmilk,ev+co
1743	03	spices
1744	02	spices prim
1745	03	cheese(all)
1746	04	cattle&buff
1747	15	beef buf ind
1748	15	mut goat ind
1749	04	sheep&goats
1750	02	fodder prim
1751	02	jute ans sim
1752	03	fibre crops
1753	02	fibre prim
1754	03	fibre prod
1755	03	livestock
1756	04	live animals
1757	03	livestock pr
1758	03	live pr prim
1759	03	live pr proc
1760	03	animal pr pr
1761	03	meat offals
1762	05	meat of prim
1763	03	meat of proc
1764	03	meat
1765	05	meat prim
1766	03	meat proc
1767	03	beef mu pork
1768	05	b mu po prim
1769	03	b mu po proc
1770	03	offals edibl
1771	06	offals prim
1772	02	offals proc
1773	03	slaughtr fat
1774	06	sl. fat prim
1775	03	sl. fat proc
1776	03	hides skins
1777	07	hides prim
1778	03	hides proc
1779	03	milk
1780	08	milk primary
1781	03	milk procssd
1782	03	eggs
1783	09	eggs primary
1784	03	eggs procssd
1785	03	veg products
1786	03	an products
1787	03	oil and fat
1788	03	veg oil fat
1789	03	ani oil fat
1790	03	sugar s hony
1791	03	trnut ex oil
1792	03	cer st sugar
1793	03	tot exc alc
1794	03	alcohol bev
1795	11	crude fertlz
1796	03	off etc prim
1797	03	raw material
1798	03	raw mat prim

1799	03	raw mat proc
1800	02	veget+melons
1801	03	fr ex m prim
1802	03	cereal bran
1803	03	oil cakes
1804	03	citrus prim
1805	11	agr requisit
1806	03	beef buff m.
1807	03	mutton g. m.
1808	03	poultry meat
1809	03	milk dr sk
1810	03	cow b cheese
1811	03	butter ghee
1812	03	skmilk,ev+co
1813	03	fibres silk
1814	02	coarse grain
1815	03	milk p ex bu
1816	03	ev cond milk

FAO AGGREGATES

commodity code	group code	text
1817	11	nit fert tot
1818	11	tot fertiliz
1819	03	dry milk
1820	11	agr machnry
1821	12	tot mar fish
1822	12	finfish frfz
1823	12	finfish proc
1824	13	f s frozen
1825	13	flt chll fz
1826	13	shlf f fz cr
1827	13	f s cured
1828	13	f s canned
1829	13	f s prep nes
1830	13	fish meal
1831	13	fish oil
1832	13	shlf cann pr
1833	13	fish prod
1834	13	fish food
1835	13	fish nonfood
1836	13	fish fz w fl
1837	13	fish cured
1838	13	fish cann pr
1839	13	fish total
1840	12	total fish
1841	03	oilcpr-p.oil
1842	02	pul nut olcr
1843	02	millet+sorg.
1844	02	misc cereals
1845	02	misc roots
1846	03	sugar+honey
1847	02	orang+tang
1848	02	other citrus
1849	02	misc fruits
1850	05	misc meat
1851	12	crust+moll
1852	12	oth aq an+pl
1853	06	ani+fish oil
1854	02	tea and sim
1855	02	hops+chicory
1856	03	beer
1857	03	oth alc bev
1858	03	skimmed milk
1859	02	wood pulp nm
1860	02	paper+-board
1861	02	roundwood
1862	02	roundwood c
1863	02	roundwood nc
1864	02	fuelwd+charc
1865	02	ind roundwd
1866	02	ind round c
1867	02	ind round nc
1868	02	sawlog+ven
1869	02	pitprops
1870	02	pulpwd+part
1871	02	other ind
1872	02	sawnwood
1873	02	panels
1874	02	fibreboard
1875	02	wood pulp
1876	02	paper+bd
1877	02	forest prod
1878	02	pulp for pap
1879	02	wood+lumber
1880	02	pitp&oth ind

TRADE YEARBOOK

commodity code	group code	text
2702	02	agric.pr.tot.
2732	11	crude fertil.
2733	11	manuf.fertil.
2741	04	bovine cattle
2742	04	sheep + goats
2743	03	meat fr+ch+fr
2744	03	meat bov fr
2745	03	meat sheep fr
2746	03	meat poult fr
2747	06	offals edb fr
2748	06	meat off fr n
2749	03	meat dr salt.
2750	03	meat,dr,nes
2751	03	canned meat n
2752	03	sausages
2753	03	meat pre pres
2754	03	milk cd+dr+fr
2755	03	milk cond
2756	03	milk dry
2757	03	milk fresh
2758	03	butter
2759	03	cheese+curd
2760	02	onions
2762	09	eggs in she
2763	03	eggs liqu,dr
2764	02	cereals
2765	03	wheat+fl,equ
2766	02	rice
2768	02	cereals nes
2769	02	orang+tang+c
2770	02	oth citr fru
2771	02	bananas
2774	02	pulses
2775	02	sug,tot,r eq
2776	03	coffe gr+roa
2779	03	bran+mill pr
2780	03	oils cake me
2782	03	oils cake ne
2784	03	lard+fat,p+p
2785	03	margarine et
2786	03	wine+verm+si
2787	03	beer
2788	03	groundn tot sh
2789	02	rape+must seed
2790	02	natural rubber
2791	03	silk
2793	03	flax fib+tow+w
2794	02	sisal+oth agav
2796	03	anim oil+fat+g
2797	03	rape+must oils
2800	03	jute+sim fib
2819	03	olive oil total

PASTURES

commodity code	group code	text
2901	02	cereal hayes
2902	02	past+green hay
2903	02	green fod tot
2904	02	alfalfa
2905	02	guinea grass
2906	02	forag fod
2951	11	phosph to past
2952	11	fert to past

FAP COMMODITIES
Detailed List

commodity code	group code	text
3001	02	wheat+wh.pr.
3002	02	rice
3003	02	coarse grain
3004	02	veget. oil
3005	02	protein feed
3006	02	sugar
3007	24	bov.+ov.meat
3008	24	pork
3009	24	poultry+eggs
3010	24	dairy prod.
3011	02	veget.,roots
3012	02	fruits+nuts
3013	02	fishery pr.
3014	02	coffee
3015	02	cocoa,tea
3016	02	bev.dist.alc.
3017	02	fibres
3018	02	indust.crops
3019	02	non-agr
3020	02	bov.+ov.fats
3021	02	pig fat
3022	02	poultry fat
3023	02	fish oil
3024	02	meat meal
3025	02	fish meal
3026	02	wool,hides
3027	02	pig hides

MACRO DATA

commodity code	group code	text
3101	18	GDP(cur.pr)
3102	18	GDP(cst.pr.)
3103	19	res+exp(cur)
3104	19	res+exp(cst)
3105	20	investment
3106	21	govnt.fin.
3107	22	gvt.cur.exp.
3108	23	gvt.cap.exp.
3109	23	deflat+index
3110	25	fertil.+pest
3111	26	capital(cur)
3112	26	capital(cst)
3113	29	mac.ec.cmea(cur)
3114	29	mac.ec.cmea(cst)
3201	29	net mat.prod(cur)
3202	29	net mat.prod(cst)
3203	29	net res+exp (cur)
3204	29	net res+exp (cst)
3209	29	defl + index

SPECIAL AGGREGATION for Australia and NZ
Simplified List

commodity code	group code	text
3301	02	wheat S1 (**)
3302	02	rice S2 (**)
3303	02	oth.cerls.S3 (**)
3304	24	bov.meat S4 (**)
3305	24	dairy pr. S5 (**)
3306	24	oth.meat S6 (**)
3307	02	prt.feed S7C (**)
3308	02	oth.food S8C (**)
3309	02	non-food S9C (**)
3310	02	non-agr S10 (**)
3311	12	bov.fat S8L4 (**)
3312	12	oth.fat S8L6 (**)
3313	12	m.meal S7L4 (**)
3314	12	f.meal S7L6 (**)
3315	12	h+h+w S9L4 (**)
3316	12	pig hid.S9L6 (**)
3317	24	ovine meat (**)
3318	12	h+w ov. (**)
3319	12	ov. fat (**)

FAP COMMODITIES

Detailed List

commodity code	group code	text
3401	02	wheat+wh.pr.(++)
3402	02	rice (++)
3403	02	coarse grain (++)
3404	02	veget. oil (++)
3405	02	protein feed (++)
3406	02	sugar (++)
3407	24	bovine meat (++)
3408	24	pork (++)
3409	24	poultry+eggs (++)
3410	24	dairy prod. (++)
3411	02	veget.,roots (++)
3412	02	fruits+nuts (++)
3413	02	fishery pr. (++)
3414	02	coffee (++)
3415	02	cocoa,tea (++)
3416	02	bev.dist.alc.(++)
3417	02	fibres (++)
3418	02	indust.crops (++)
3419	24	non-agriculture (++)
3420	02	bovine fats (++)
3421	02	pig fat (++)
3422	02	poultry fat (++)
3423	02	fish oil (++)
3424	02	meat meal (++)
3425	02	fish meal (++)
3426	02	hides bov.(++)
3427	02	pig hides (++)
3428	02	ovine meat (++)
3429	02	h+w ovine (++)
3430	02	ovine fat (++)

FAP COMMODITIES

Simplified List

commodity code	group code	text
3501	02	wheat S1
3502	02	rice S2
3503	02	oth.cerls.S3
3504	24	bov.meat S4
3505	24	dairy pr. S5
3506	24	oth.meat S6
3507	02	prt.feed S7C
3508	02	oth.food S8C
3509	02	non-food S9C
3510	02	non-agr S10
3511	12	bov.fat S8L4
3512	12	oth.fat S8L6
3513	12	m.meal S7L4
3514	12	f.meal S7L6
3515	12	h+h+w S9L4
3516	12	pig hid.S9L6
3601	02	Agriculture
3602	02	Non-Agric.

SPECIAL AGGREGATION for Feed Programs

Detailed List

commodity code	group code	text
3701	02	wheat+wh.pr.(++)
3702	02	rice (++)
3703	02	coarse grain (++)
3704	02	veget. oil (++)
3705	02	protein feed (++)
3706	02	sugar (++)
3707	24	bovine+ov meat (++)
3708	24	pork (++)
3709	24	poultry+eggs (++)
3710	24	dairy prod. (++)
3711	02	veget.,roots (++)
3412	02	fruits+nuts (++)
3713	02	fishery pr. (++)
3714	02	coffee (++)
3715	02	cocoa,tea (++)
3716	02	bev.dist.alc.(++)
3717	02	fibres (++)
3718	02	indust.crops (++)
3719	24	non-agriculture (++)
3720	02	bovine+ov fats (++)
3721	02	pig fat (++)
3722	02	poultry fat (++)
3723	02	fish oil (++)
3724	02	meat meal (++)
3725	02	fish meal (++)
3726	02	hides bov+ov(++)
3727	02	pig hides (++)
3728	02	potatoes (++)
3729	02	cassava (++)
3730	02	eggs (++)

Simplified List

commodity code	group code	text
3801	02	wheat S1 (**)
3802	02	rice S2 (**)
3803	02	oth.cerls.S3 (**)
3804	24	bov+ov.meat S4 (**)
3805	24	dairy pr. S5 (**)
3806	24	oth.meat S6 (**)
3807	02	prt.feed S7C (**)
3808	02	oth.food S8C (**)
3809	02	non-food S9C (**)
3810	02	non-agr S10 (**)
3811	12	bov+ov.fat S8L4 (**)
3812	12	oth.fat S8L6 (**)
3813	12	m.meal S7L4 (**)
3814	12	f.meal S7L6 (**)
3815	12	h+h+w S9L4 (**)
3816	12	pig hid.S9L6 (**)
3817	24	potatoes (**)
3818	12	cassava (**)
3819	12	eggs (**)

ILO DATA

commodity code	group code	text
4001	27	ilo-popul.
4002	27	ilo-lab. force
4003	27	ilo-act.rates
4004	28	ilo-sect.rates
4005	28	ilo-sect.lab.for

FAO AGGREGATES

commodity code	group code	text
5001	02	wheat
5002	02	rice,paddy
5003	02	maize
5004	02	barley
5005	02	oth. cereals
5006	02	root+tub pr
5007	02	sugar,raw
5008	02	pulses prim.
5009	02	vegetables
5010	02	bananas
5011	02	citrus prim.
5012	02	fruits
5013	02	veg oil+seeds
5014	02	cocoa beans
5015	02	coffee, green
5016	02	tea and sim.
5017	02	tobacco
5018	02	seed cotton
5019	02	jute+sim.
5020	02	nat rubber
5021	05	beef buff m.
5022	05	mutton g. m.
5023	05	pigmeat
5024	05	poultry meat
5025	08	milk primary
5026	09	eggs primary
5501	02	wheat
5502	02	rice
5503	02	coarse grain
5504	02	oilseeds
5506	02	sugar, raw
5507	05	bov.+ov.meat
5508	05	pork
5509	02	fowl+egg(pr)
5510	08	dairy prod.
5511	02	veget.,roots
5512	02	fruits
5513	02	tea
5514	02	seed cotton
5515	02	oth. non-food

Appendix 2a: Commodities, Elements and Dimensions of the Macro Data.

commodity	element	dimension	text
1			population
	1	1	total population
	14	1	total labour force
	16	1	agricultural labour force
	17	1	non agricultural labour force
3101			GDP at current prices
	1	1	total
	2	1	non agriculture
	3	1	agriculture
3102			GDP at constant 1970 prices
	1	1	total
	2	1	non agriculture
	3	1	agriculture
3103			Resources and Expenditures at current prices
	4	1	private consumption
	5	1	government consumption
	6	1	total resources
	7	1	gross capital formation
	8	1	gross fixed investments
	9	1	stock formation
	12	1	net exports
3104			Resources and Expenditures at constant 1970 prices
	4	1	private consumption
	5	1	government consumption
	6	1	total resources
	7	1	gross capital formation
	8	1	gross fixed investments
	9	1	stock formation
	12	1	net exports
3109			Deflator and Index
	13	1	exchange rate
3110			Fertilizer and pesticides
	1	2	fertilizer consumption
	2	1	nitrogen consumption
	2	3	price of nitrogen
	6	2	intermediate consumption of non.ag
3111			Capital at current prices
	4	1	depreciation
	5	1	agriculatural investment

3112			Capital at constant 1970 prices
	1	1	total capital stock
	2	1	non agriculture capital stock
	3	1	agriculture capital stock
	5	1	agricultural investment
3113			Macro Economic CMEA at current prices
	1	1	total
	3	1	agriculture
	4	1	total consumption
	7	1	net capital formation
	8	1	net fix investment
	9	1	stock formation
	10	1	exports
	11	1	imports
	12	1	net exports
	13	1	exchange rate (NC/Rb)
3114			Macro Econonic CMEA at constant prices
	1		total
	3		agriculture
	4		total consumption

Appendix 2b: Commodities from FAP

FAP Commodities
Detailed List

commodity code	group code	text
3001	02	wheat+wh.pr.
3002	02	rice
3003	02	coarse grain
3004	02	veget. oil
3005	02	protein feed
3006	02	sugar
3007	24	bov.+ov.meat
3008	24	pork
3009	24	poultry+eggs
3010	24	dairy prod.
3011	02	veget.,roots
3012	02	fruits+nuts
3013	02	fishery pr.
3014	02	coffee
3015	02	cocoa,tea
3016	02	bev.dist.alc.
3017	02	fibres
3018	02	indust.crops
3019	02	non-agr
3020	02	bov.+ov.fats
3021	02	pig fat
3022	02	poultry fat
3023	02	fish oil
3024	02	meat meal
3025	02	fish meal
3026	02	wool,hides
3027	02	pig hides

MACRO DATA

commodity code	group code	text
3101	18	GDP(cur.pr)
3102	18	GDP(cst.pr.)
3103	19	res+exp(cur)
3104	19	res+exp(cst)
3105	20	investment
3106	21	govnt.fin.
3107	22	gvt.cur.exp.
3108	23	gvt.cap.exp.
3109	23	deflat+index
3110	25	fertil.+pest
3111	26	capital(cur)
3112	26	capital(cst)
3113	29	mac.ec.cmea(cur)
3114	29	mac.ec.cmea(cst)
3201	29	net mat.prod(cur)
3202	29	net mat.prod(cst)
3203	29	net res+exp (cur)
3204	29	net res+exp (cst)
3209	29	defl + index

SPECIAL AGGREGATION for Australia and NZ

Simplified List

commodity code	group code	text
3301	02	wheat S1 (**)
3302	02	rice S2 (**)
3303	02	oth.cerls.S3 (**)
3304	24	bov.meat S4 (**)
3305	24	dairy pr. S5 (**)
3306	24	oth.meat S6 (**)
3307	02	prt.feed S7C (**)
3308	02	oth.food S8C (**)
3309	02	non-food S9C (**)
3310	02	non-agr S10 (**)
3311	12	bov.fat S8L4 (**)
3312	12	oth.fat S8L6 (**)
3313	12	m.meal S7L4 (**)
3314	12	f.meal S7L6 (**)
3315	12	h+h+w S9L4 (**)
3316	12	pig hid.S9L6 (**)
3317	24	ovine meat (**)
3318	12	h+w ov. (**)
3319	12	ov. fat (**)

Detailed List

commodity code	group code	text
3401	02	wheat+wh.pr.(++)
3402	02	rice (++)
3403	02	coarse grain (++)
3404	02	veget. oil (++)
3405	02	protein feed (++)
3406	02	sugar (++)
3407	24	bovine meat (++)
3408	24	pork (++)
3409	24	poultry+eggs (++)
3410	24	dairy prod. (++)
3411	02	veget.,roots (++)
3412	02	fruits+nuts (++)
3413	02	fishery pr. (++)
3414	02	coffee (++)
3415	02	cocoa,tea (++)
3416	02	bev.dist.alc.(++)
3417	02	fibres (++)
3418	02	indust.crops (++)
3419	24	non-agriculture (++)
3420	02	bovine fats (++)
3421	02	pig fat (++)
3422	02	poultry fat (++)
3423	02	fish oil (++)
3424	02	meat meal (++)
3425	02	fish meal (++)
3426	02	hides bov.(++)
3427	02	pig hides (++)
3428	02	ovine meat (++)
3429	02	h+w ovine (++)
3430	02	ovine fat (++)

FAP Commodities
Simplified List

commodity code	group code	text
3501	02	wheat S1
3502	02	rice S2
3503	02	oth.cerls.S3
3504	24	bov.meat S4
3505	24	dairy pr. S5
3506	24	oth.meat S6
3507	02	prt.feed S7C
3508	02	oth.food S8C
3509	02	non-food S9C
3510	02	non-agr S10
3511	12	bov.fat S8L4
3512	12	oth.fat S8L6
3513	12	m.meal S7L4
3514	12	f.meal S7L6
3515	12	h+h+w S9L4
3516	12	pig hid.S9L6
3601	02	Agriculture
3602	02	Non-Agric.

SPECIAL AGGREGATION for Feed Programs
Detailed List

commodity code	group code	text
3701	02	wheat+wh.pr.(++)
3702	02	rice (++)
3703	02	coarse grain (++)
3704	02	veget. oil (++)
3705	02	protein feed (++)
3706	02	sugar (++)
3707	24	bovine+ov meat (++)
3708	24	pork (++)
3709	24	poultry+eggs (++)
3710	24	dairy prod. (++)
3711	02	veget.,roots (++)
3412	02	fruits+nuts (++)
3713	02	fishery pr. (++)
3714	02	coffee (++)
3715	02	cocoa,tea (++)
3716	02	bev.dist.alc.(++)
3717	02	fibres (++)
3718	02	indust.crops (++)
3719	24	non-agriculture (++)
3720	02	bovine+ov fats (++)
3721	02	pig fat (++)
3722	02	poultry fat (++)
3723	02	fish oil (++)
3724	02	meat meal (++)
3725	02	fish meal (++)
3726	02	hides bov+ov(++)
3727	02	pig hides (++)
3728	02	potatoes (++)
3729	02	cassava (++)
3730	02	eggs (++)

Simplified List

commodity code	group code	text
3801	02	wheat S1 (**)
3802	02	rice S2 (**)
3803	02	oth.cerls.S3 (**)
3804	24	bov+ov.meat S4 (**)
3805	24	dairy pr. S5 (**)
3806	24	oth.meat S6 (**)
3807	02	prt.feed S7C (**)
3808	02	oth.food S8C (**)
3809	02	non-food S9C (**)
3810	02	non-agr S10 (**)
3811	12	bov+ov.fat S8L4 (**)
3812	12	oth.fat S8L6 (**)
3813	12	m.meal S7L4 (**)
3814	12	f.meal S7L6 (**)
3815	12	h+h+w S9L4 (**)
3816	12	pig hid.S9L6 (**)
3817	24	potatoes (**)
3818	12	cassava (**)
3819	12	eggs (**)

ILO DATA

commodity code	group code	text
4001	27	ilo-popul.
4002	27	ilo-lab. force
4003	27	ilo-act.rates
4004	28	ilo-sect.rates
4005	28	ilo-sect.lab.for

Appendix 3: Elements and Dimensions for FAO Commodities

commodity group	element code	text	dimension code 1	2	3
1	1	total	1000		
1	2	**********	****		
1	3	**********	****		
1	4	**********	****		
1	5	rural	1000		
1	6	urban	1000		
1	7	agriculture	1000		
1	8	non agric	1000		
1	9	labor force	1000		
1	10	agriclabforc	1000		
1	11	nonagrlabfor	1000		
1	12	**********	****		
1	13	**********	****		
1	14	agpop/tpop	000001		
1	15	rural/tpop	000001		
1	16	totlab/tpop	000001		
1	17	aglab/totlab	000001		
2	1	op stocks	mt	1000 $	
2	2	area sown	ha		
2	3	area harv	ha		
2	4	yield	*kg/ha		
2	5	production	mt	1000 $	
2	6	imports	mt	1000 $	$/mt
2	7	from stocks	mt	1000 $	
2	8	to stocks	mt	1000 $	
2	9	exports	mt	1000 $	$/mt
2	10	feed	mt	1000 $	
2	11	seed	mt	1000 $	
2	12	waste	mt	1000 $	
2	13	processed	mt	1000 $	
2	14	food	mt	1000 $	
2	15	other util	mt	1000 $	
2	16	cl stocks	mt	1000 $	
2	17	seed rate	kg/ha		
3	1	op stocks	mt		
3	2	** not used			
3	3	input	mt		
3	4	extr rate	kg/mt		
3	5	production	mt	thous.	
3	6	imports	mt	1000 $	$/mt
3	7	from stocks	mt		
3	8	to stocks	mt		
3	9	exports	mt	1000 $	$/mt
3	10	feed	mt		
3	11	seed	mt		
3	12	waste	mt		
3	13	processed	mt		
3	14	food	mt		
3	15	other util	mt		

3	16	cl stocks	mt		
3	17	seed rate	kg/ha		
4	1	stocks	head	number	
4	2	fem repr age	head		
4	3	fem act repr	head		
4	4	birth rate	.0001		
4	5	born	head	1000 $	
4	6	imports	head	1000 $	$/mt
4	7	from stocks	head	1000 $	
4	8	to stocks	head	1000 $	
4	9	exports	head	1000 $	$/mt
4	10	feed	head	1000 $	
4	11	** not used			
4	12	nat death	head	1000 $	
4	13	slaughtered	head	1000 $	
4	14	food	head	1000 $	
4	15	other util	head	1000 $	
4	16	cl stocks	head	1000 $	
4	17	take off rat	.001		
5	1	op stocks	mt		
5	2	** not used			
5	3	slaughtered	head		
5	4	carcass wt	*kg/an		
5	5	production	mt		
5	6	imports	mt	1000 $	$/mt
5	7	from stocks	mt		
5	8	to stocks	mt		
5	9	exports	mt	1000 $	$/mt
5	10	feed	mt		
5	11	** not used			
5	12	waste	mt		
5	13	processed	mt		
5	14	food	mt		
5	15	other util	mt		
5	16	cl stocks	mt		
5	17	** not used			
6	1	op stocks	mt		
6	2	** not used			
6	3	slaughtered	head		
6	4	f/c yield	kg		
6	5	production	mt		
6	6	imports	mt	1000 $	$/mt
6	7	from stocks	mt		
6	8	to stocks	mt		
6	9	exports	mt	1000 $	$/mt
6	10	feed	mt		
6	11	** not used			
6	12	waste	mt		
6	13	processed	mt		
6	14	food	mt		
6	15	other util	mt		
6	16	cl stocks	mt		
6	17	of carc wt			
7	1	op stocks	mt		

7	2	** not used			
7	3	slaughtered	head		
7	4	yield	*kg/an		
7	5	production	mt	thous.	
7	6	imports	mt	1000 $	$/mt
7	7	from stocks	mt		
7	8	to stocks	mt		
7	9	exports	mt	1000 $	$/mt
7	10	feed	mt	1000 $	
7	11	** not used			
7	12	waste	mt	1000 $	
7	13	processed	mt	1000 $	
7	14	food	mt	thous.	
7	15	other util	mt	1000 $	
7	16	cl stocks	mt	1000 $	
7	17	wt per piece	kg	1000 $	
8	1	op stocks	mt		
8	2	cows	head		
8	3	milk animals	head		
8	4	yield	*kg/an		
8	5	production	mt		
8	6	import	mt	1000 $	$/mt
8	7	from stocks	mt		
8	8	to stocks	mt		
8	9	exports	mt	1000 $	$/mt
8	10	feed	mt		
8	11	** not used			
8	12	waste	mt		
8	13	processed	mt		
8	14	food	mt		
8	15	other util	mt		
8	16	cl stocks	mt		
8	17	** not used			
9	1	op stocks	mt		
9	2	population	head		
9	3	laying	head		
9	4	yield	kg		
9	5	production	mt		
9	6	imports	mt	1000 $	$/mt
9	7	from stocks	mt		
9	8	to stocks	mt		
9	9	exports	mt	1000 $	$/mt
9	10	feed	mt		
9	11	for hatching	mt		
9	12	waste	mt		
9	13	processed	mt		
9	14	food	mt		
9	15	other util	mt		
9	16	cl stocks	mt		
9	17	wt per egg	gram		
10	1	op stocks	mt	mt	
10	2	population	head	number	
10	3	prod populin	head	number	
10	4	yield	kg	kg	

10	5	production	mt	thous.	
10	6	imports	mt	1000 $	$/mt
10	7	from stocks	mt	1000 $	
10	8	to stocks	mt	1000 $	
10	9	exports	mt	1000 $	$/mt
10	10	feed	mt	1000 $	
10	11	** not used			
10	12	waste	mt	1000 $	
10	13	processed	mt	1000 $	
10	14	food	mt	1000 $	
10	15	other util	mt	1000 $	
10	16	cl stocks	mt	1000 $	
10	17	** not used			
11	1	in use	mt	number	
11	2	** not used			
11	3	capacity prd	mt		
11	4	use	kg/ha		
11	5	production	mt	number	
11	6	imports	mt	number	
11	7	from stocks	mt	number	
11	8	to stocks	mt	number	
11	9	exports	mt	number	
11	10	feed	mt	number	
11	11	** not used			
11	12	loss	mt	number	
11	13	** not used			
11	14	food	mt	number	
11	15	consumption	mt	number	100 kg
11	16	cl stocks	mt	number	
11	17	** not used			
12	1	** not used			
12	2	** not used			
12	3	** not used			
12	4	** not used			
12	5	production	mt		
12	6	imports	mt	1000 $	$/mt
12	7	from stocks	mt		
12	8	to stocks	mt		
12	9	exports	mt	1000 $	$/mt
12	10	feed	mt		
12	11	breed/bait	mt		
12	12	waste	mt		
12	13	processing	mt		
12	14	food	mt		
12	15	other util	mt		
12	16	** not used			
12	17	** not used			
13	1	op stocks	mt		
13	2	** not used			
13	3	input	mt		
13	4	extr rate	hg/mt		
13	5	output	mt		
13	6	imports	mt	1000 $	$/mt
13	7	from stocks	mt		

13	8	to stocks	mt		
13	9	exports	mt	1000 $	$/mt
13	10	feed	mt		
13	11	baiting	mt		
13	12	waste	mt		
13	13	processing	mt		
13	14	food	mt		
13	15	other util	mt		
13	16	cl stocks	mt		
13	17	** not used			
14	1	pv cons expn			
14	2	gv cons expn			
14	3	grs cap form			
14	4	exports g+s			
14	5	imports g+s			
14	6	stat discr +			
14	7	stat discr -			
14	8	ind tax-subs			
14	9	gdp fc agr			
14	10	gdp fc min			
14	11	gdp fc man			
14	12	gdp fc oth			
14	13	gdp fc uns			
14	14	n f income +			
14	15	n f income -			
14	16	depreciation			
14	17	curr change			
15	1	** not used			
15	2	** not used			
15	3	production	head		
15	4	carcass wt	*kg/an		
15	5	production	mt		
15	6	** not used			
15	7	** not used			
15	8	** not used			
15	9	** not used			
15	10	** not used			
15	11	** not used			
15	12	** not used			
15	13	** not used			
15	14	** not used			
15	15	** not used			
15	16	** not used			
15	17	** not used			
16	1	** not used			
16	2	** not used			
16	3	production	head		
16	4	live weight	*kg/an		
16	5	production	mt		
16	6	** not used			
16	7	** not used			
16	8	** not used			
16	9	** not used			
16	10	oth ar land	1000ha		

16	11	pastur culiv	1000ha
16	12	pastur unclt	1000ha
16	13	forest grazd	1000ha
16	14	unused land	1000ha
16	15	built area	1000ha
16	16	** not used	
16	17	** not used	
17	1	total area	1000ha
17	2	inland water	1000ha
17	3	land area	1000ha
17	4	agr/land	
17	5	agric area	1000ha
17	6	arab&perm cr	1000ha
17	7	arable land	1000ha
17	8	temp crops	1000ha
17	9	tem meadow	1000ha
17	10	gardens	1000ha
17	11	tem fallow	1000ha
17	12	perm crops	1000ha
17	13	perm pasture	1000ha
17	14	forest&woodl	1000ha
17	15	other land	1000ha
17	16	pot for agr	1000ha
17	17	pot for for	1000ha
18	1	GDP(mkt.pr.)	mill.
18	2	GNP(mkt.pr.)	mill.
18	3	agriculture	mill.
18	4	mining	mill.
18	5	construct.	mill.
18	6	manufact.	mill.
18	7	el.,wat.,gas	mill.
18	8	transp.,comm	mill.
18	9	trade	mill.
18	10	bank.,assur.	mill.
18	11	housing	mill.
18	12	services	mill.
18	13	publ.admin.	mill.
18	14	oth.branches	mill.
18	15	stat.discrep	mill.
18	16	GDP(fct.cst)	mill.
18	17	net ind.tax.	mill.
19	1	GDP(mkt.pr.)	mill.
19	2	n.fct.inc.ab	mill.
19	3	GNP(mkt.pr.)	mill.
19	4	priv.consum.	mill.
19	5	gvnt.consum.	mill.
19	6	tot.resourc.	mill.
19	7	gr.cap.form.	mill.
19	8	gr.fix.invst	mill.
19	9	stock form.	mill.
19	10	exports	mill.
19	11	imports	mill.
19	12	net exports	mill.
19	13	stat.discrep	mill.

19	14	gr.nat.sav.	mill.
19	15	gr.dom.sav.	mill.
19	16	gr.pub.sav.	mill.
19	17	gr.priv.sav.	mill.
20	1	private	mill.
20	2	public	mill.
20	3	for constr.	mill.
20	4	for building	mill.
20	5	for machin.	mill.
20	6	by agricult.	mill.
20	7	by mining	mill.
20	8	by manufact.	mill.
20	9	by constr.	mill.
20	10	by el.,w.,g.	mill.
20	11	by trsp.,com	mill.
20	12	by trade	mill.
20	13	by bank.,ass	mill.
20	14	by housing	mill.
20	15	by services	mill.
20	16	by publ.adm.	mill.
20	17	by oth.brch.	mill.
21	1	tot.revenue	mill.
21	2	curr.expend.	mill.
21	3	cap.expend.	mill.
21	4	curr.surplus	mill.
21	5	overall supl	mill.
21	6	** not used	mill.
21	7	** not used	mill.
21	8	** not used	mill.
21	9	** not used	mill.
21	10	** not used	mill.
21	11	** not used	mill.
21	12	** not used	mill.
21	13	** not used	mill.
21	14	** not used	mill.
21	15	** not used	mill.
21	16	** not used	mill.
21	17	** not used	mill.
22	1	total	mill.
22	2	agriculture	mill.
22	3	education	mill.
22	4	health	mill.
22	5	transport	mill.
22	6	communicat.	mill.
22	7	trsf.loc.gvt	mill.
22	8	subs.+transf	mill.
22	9	int.on debt	mill.
22	10	defense	mill.
22	11	other expend	mill.
22	12	** not used	mill.
22	13	** not used	mill.
22	14	** not used	mill.
22	15	** not used	mill.
22	16	** not used	mill.

22	17	** not used	mill.	
23	1	total	mill.	
23	2	agriculture	mill.	
23	3	education	mill.	
23	4	health	mill.	
23	5	transport	mill.	
23	6	communicat.	mill.	
23	7	industry	mill.	
23	8	housing	mill.	
23	9	lending	mill.	
23	10	others	mill.	
23	11	** not used	mill.	
23	12	** not used	mill.	
23	13	exch.rate	nc/$	EUR/nc
23	14	GDP deflator		
23	15	whs pr.index		
23	16	ret.pr.index		
23	17	** not used	mill.	

Appendix 3a: Elements and Dimensions for FAP Commodities

commodity group	element code	text	dimension codes 1	2	3
1	1	total	1000		
1	2	female	1000		
1	3	females ma	1000		
1	4	birth rate	.0001		
1	5	born	1000		
1	6	immigration	1000		
1	7	** not used			
1	8	** not used			
1	9	emigration	1000		
1	10	rural total	1000		
1	11	urban total	1000		
1	12	agriculture			
1	13	agriculture	1000		
1	14	labforce tot	1000		
1	15	labforce rat	.0001		
1	16	labf. agr.	1000		
1	17	labf. non ag	1000		
2	1	op stocks	1000 $	mt	
2	2	area sown	ha		
2	3	area harv	ha		
2	4	yield	* $/ha	*kg/ha	
2	5	production	1000 $	mt	unit.p
2	6	imports	1000 $	mt	
2	7	from stocks	1000 $	mt	
2	8	to stocks	1000 $	mt	
2	9	exports	1000 $	mt	unit.p
2	10	feed	1000 $	mt	unit.p
2	11	seed	1000 $	mt	
2	12	waste	1000 $	mt	
2	13	unit price			
2	14	food	1000 $	mt	
2	15	other util	1000 $	mt	
2	16	** not used			
2	17	process.634	mt		
3	1	op stocks	1000 $	mt	
3	2	** not used			
3	3	input	1000 $	mt	
3	4	extr rate	kg/mt		
3	5	production	1000 $	mt	unit.p
3	6	imports	1000 $	mt	
3	7	from stocks	1000 $	mt	
3	8	to stocks	1000 $	mt	
3	9	exports	1000 $	mt	unit.p
3	10	feed	1000 $	mt	unit.p
3	11	seed	1000 $	mt	
3	12	waste	1000 $	mt	
3	13	processed	1000 $	mt	
3	14	food	1000 $	mt	

3	15	other util	1000 $	mt	mt
3	16	cl stocks	1000 $	mt	
3	17	process.634	mt		
4	1	stocks	head	number	
4	2	fem repr age	head		
4	3	fem act repr	head		
4	4	birth rate	.0001		
4	5	born	head	1000 $	
4	6	imports	head	1000 $	
4	7	from stocks	head	1000 $	
4	8	to stocks	head	1000 $	
4	9	exports	head	1000 $	
4	10	feed	head	1000 $	
4	11	** not used			
4	12	nat death	head	1000 $	
4	13	slaughtered	head	1000 $	
4	14	food	head	1000 $	
4	15	other util	head	1000 $	
4	16	cl stocks	head	1000 $	
4	17	take off rat	.001		
5	1	op stocks	1000 $	mt	
5	2	** not used			
5	3	slaughtered	head		
5	4	yield	* $/an	*kg/an	
5	5	production	1000 $	mt	unit.p
5	6	imports	1000 $	mt	
5	7	from stocks	1000 $	mt	
5	8	to stocks	1000 $	mt	
5	9	exports	1000 $	mt	unit.p
5	10	feed	1000 $	mt	
5	11	** not used			
5	12	waste	1000 $	mt	
5	13	processed	1000 $	mt	
5	14	food	1000 $	mt	
5	15	other util	1000 $	mt	
5	16	cl stocks	1000 $	mt	
5	17	** not used			
6	1	op stocks	1000 $	mt	
6	2	** not used			
6	3	slaughtered	head		
6	4	f/c yield	hc	hg	
6	5	production	1000 $	mt	unit.p
6	6	imports	1000 $	mt	
6	7	from stocks	1000 $	mt	
6	8	to stocks	1000 $	mt	
6	9	exports	1000 $	mt	unit.p
6	10	feed	1000 $	mt	
6	11	** not used			
6	12	waste	1000 $	mt	
6	13	processed	1000 $	mt	
6	14	food	1000 $	mt	
6	15	other util	1000 $	mt	
6	16	cl stocks	1000 $	mt	
6	17	of carc wt			

7	1	op stocks	1000 $	mt	
7	2	** not used			
7	3	slaughtered	head		
7	4	yield	* $/an	*kg/an	
7	5	production	1000 $	mt	unit.p
7	6	imports	1000 $	mt	
7	7	from stocks	1000 $	mt	
7	8	to stocks	1000 $	mt	
7	9	exports	1000 $	mt	unit.p
7	10	feed	1000 $	mt	
7	11	** not used			
7	12	waste	1000 $	mt	
7	13	processed	1000 $	mt	
7	14	food	1000 $	mt	
7	15	other util	1000 $	mt	
7	16	cl stocks	1000 $	mt	
7	17	wt per piece	hg	1000 $	
8	1	op stocks	1000 $	mt	
8	2	cows	head		
8	3	milk animals	head		
8	4	yield	* $/an	*kg/an	
8	5	production	1000 $	mt	unit.p
8	6	import	1000 $	mt	
8	7	from stocks	1000 $	mt	
8	8	to stocks	1000 $	mt	
8	9	exports	1000 $	mt	unit.p
8	10	feed	1000 $	mt	
8	11	** not used			
8	12	waste	1000 $	mt	
8	13	processed	1000 $	mt	
8	14	food	1000 $	mt	
8	15	other util	1000 $	mt	
8	16	cl stocks	1000 $	mt	
8	17	** not used			
9	1	op stocks	1000 $	mt	
9	2	population	head		
9	3	laying	head		
9	4	yield	hc	hg	
9	5	production	1000 $	mt	unit.p
9	6	imports	1000 $	mt	
9	7	from stocks	1000 $	mt	
9	8	to stocks	1000 $	mt	
9	9	exports	1000 $	mt	unit.p
9	10	feed	1000 $	mt	
9	11	for hatching	1000 $	mt	
9	12	waste	1000 $	mt	
9	13	processed	1000 $	mt	
9	14	food	1000 $	mt	
9	15	other util	1000 $	mt	
9	16	cl stocks	1000 $	mt	
9	17	wt per egg	gram		
10	1	op stocks	1000 $	mt	
10	2	population	head	number	
10	3	prod populin	head	number	

10	4	yield	hc		
10	5	production	1000 $	mt	unit.p
10	6	imports	1000 $	mt	
10	7	from stocks	1000 $	mt	
10	8	to stocks	1000 $	mt	
10	9	exports	1000 $	mt	unit.p
10	10	feed	1000 $	mt	
10	11	** not used			
10	12	waste	1000 $	mt	
10	13	processed	1000 $	mt	
10	14	food	1000 $	mt	
10	15	other util	1000 $	mt	
10	16	cl stocks	1000 $	mt	
10	17	** not used			
11	1	in use	number		
11	2	** not used			
11	3	capacity prd	1000 $	mt	
11	4	use	kg/ha		
11	5	production	number		
11	6	imports	number		
11	7	from stocks	number		
11	8	to stocks	number		
11	9	exports	number		
11	10	feed	number		
11	11	** not used			
11	12	loss	number		
11	13	** not used			
11	14	food	1000 $	mt	
11	15	consumption	1000 $	mt	
11	16	cl stocks	1000 $	mt	
11	17	** not used			
12	1	** not used			
12	2	** not used			
12	3	prim.prod.	1000 $	mt	
12	4	yield	* $/mt		
12	5	production	1000 $	mt	unit.p
12	6	imports	1000 $	mt	
12	7	from stocks	1000 $	mt	
12	8	to stocks	1000 $	mt	
12	9	exports	1000 $	mt	unit.p
12	10	feed	1000 $	mt	unit.p
12	11	breed/bait	1000 $	mt	
12	12	waste	1000 $	mt	
12	13	processing			
12	14	food	1000 $	mt	
12	15	other util	1000 $	mt	
12	16	** not used			
12	17	** not used			
13	1	op stocks	1000 $	mt	
13	2	** not used			
13	3	input	1000 $	mt	
13	4	extr rate	10**-4	10**-4	
13	5	output	1000 $	mt	
13	6	imports	1000 $	mt	

13	7	from stocks	1000 $	mt	
13	8	to stocks	1000 $	mt	
13	9	exports	1000 $	mt	unit.p
13	10	feed	1000 $	mt	
13	11	baiting	1000 $	mt	
13	12	waste	1000 $	mt	
13	13	processing	1000 $	mt	
13	14	food	1000 $	mt	
13	15	other util	1000 $	mt	
13	16	cl stocks	1000 $	mt	
13	17	** not used			
14	1	pv cons expn			
14	2	gv cons expn			
14	3	grs cap form			
14	4	exports g+s			
14	5	imports g+s			
14	6	stat discr +			
14	7	stat discr -			
14	8	ind tax-subs			
14	9	gdp fc agr			
14	10	gdp fc min			
14	11	gdp fc man			
14	12	gdp fc oth			
14	13	gdp fc uns			
14	14	n f income +			
14	15	n f income -			
14	16	depreciation			
14	17	curr change			
15	1	** not used			
15	2	** not used			
15	3	production	head		
15	4	carcass wt	* $/an	*kg/an	
15	5	production	1000 $	mt	
15	6	** not used			
15	7	** not used			
15	8	** not used			
15	9	** not used			
15	10	** not used			
15	11	** not used			
15	12	** not used			
15	13	** not used			
15	14	** not used			
15	15	** not used			
15	16	** not used			
15	17	** not used			
16	1	** not used			
16	2	** not used			
16	3	production	head		
16	4	live weight	* $/an	*kg/an	
16	5	production	1000 $	mt	
16	6	** not used			
16	7	** not used			
16	8	** not used			
16	9	** not used			

16	10	oth ar land	1000ha
16	11	pastur culiv	1000ha
16	12	pastur unclt	1000ha
16	13	forest grazd	1000ha
16	14	unused land	1000ha
16	15	built area	1000ha
16	16	** not used	
16	17	** not used	
17	1	total area	1000ha
17	2	inland water	1000ha
17	3	land area	1000ha
17	4	agr/land	
17	5	agric area	1000ha
17	6	arab&perm cr	1000ha
17	7	arable land	1000ha
17	8	temp crops	1000ha
17	9	tem meadow	1000ha
17	10	gardens	1000ha
17	11	tem fallow	1000ha
17	12	perm crops	1000ha
17	13	perm pasture	1000ha
17	14	forest&woodl	1000ha
17	15	other land	1000ha
17	16	pot for agr	1000ha
17	17	pot for for	1000ha
18	1	GDP(mkt.pr.)	mill.
18	2	GNP(mkt.pr.)	mill.
18	3	agriculture	mill.
18	4	mining	mill.
18	5	construct.	mill.
18	6	manufact.	mill.
18	7	el.,wat.,gas	mill.
18	8	transp.,comm	mill.
18	9	trade	mill.
18	10	bank.,assur.	mill.
18	11	housing	mill.
18	12	services	mill.
18	13	publ.admin.	mill.
18	14	oth.branches	mill.
18	15	cons.fix.cap	mill.
18	16	GDP(fct.cst)	mill.
18	17	net ind.tax.	mill.
19	1	GDP(mkt.pr.)	mill.
19	2	n.fct.inc.ab	mill.
19	3	GNP(mkt.pr.)	mill.
19	4	priv.consum.	mill.
19	5	gvnt.consum.	mill.
19	6	tot.resourc.	mill.
19	7	gr.cap.form.	mill.
19	8	gr.fix.invst	mill.
19	9	stock form.	mill.
19	10	exports	mill.
19	11	imports	mill.
19	12	net exports	mill.

19	13	stat.discrep	mill.
19	14	gr.nat.sav.	mill.
19	15	gr.dom.sav.	mill.
19	16	gr.pub.sav.	mill.
19	17	gr.priv.sav.	mill.
20	1	private	mill.
20	2	public	mill.
20	3	for constr.	mill.
20	4	for building	mill.
20	5	for machin.	mill.
20	6	by agricult.	mill.
20	7	by mining	mill.
20	8	by manufact.	mill.
20	9	by constr.	mill.
20	10	by el.,w.,g.	mill.
20	11	by trsp.,com	mill.
20	12	by trade	mill.
20	13	by bank.,ass	mill.
20	14	by housing	mill.
20	15	by services	mill.
20	16	by publ.adm.	mill.
20	17	by oth.brch.	mill.
21	1	tot.revenue	mill.
21	2	curr.expend.	mill.
21	3	cap.expend.	mill.
21	4	curr.surplus	mill.
21	5	overall supl	mill.
21	6	** not used	mill.
21	7	** not used	mill.
21	8	** not used	mill.
21	9	** not used	mill.
21	10	** not used	mill.
21	11	** not used	mill.
21	12	** not used	mill.
21	13	** not used	mill.
21	14	** not used	mill.
21	15	** not used	mill.
21	16	** not used	mill.
21	17	** not used	mill.
22	1	total	mill.
22	2	agriculture	mill.
22	3	education	mill.
22	4	health	mill.
22	5	transport	mill.
22	6	communicat.	mill.
22	7	trsf.loc.gvt	mill.
22	8	subs.+transf	mill.
22	9	int.on debt	mill.
22	10	defense	mill.
22	11	other expend	mill.
22	12	** not used	mill.
22	13	** not used	mill.
22	14	** not used	mill.
22	15	** not used	mill.

22	16	** not used	mill.		
22	17	** not used	mill.		
23	1	total	mill.		
23	2	agriculture	mill.		
23	3	education	mill.		
23	4	health	mill.		
23	5	transport	mill.		
23	6	communicat.	mill.		
23	7	industry	mill.		
23	8	housing	mill.		
23	9	lending	mill.		
23	10	others	mill.		
23	11	** not used	mill.		
23	12	** not used	mill.		
23	13	exch.rate	nc/$	EUR/nc	
23	14	GDP deflator			
23	15	whs pr.index			
23	16	ret.pr.index			
23	17	** not used	mill.		
24	1	stocks	number		
24	2	** not used			
24	3	milking anim	head		
24	4	yield	* $/an	*kg/an	
24	5	production	1000 $	mt	unit.p
24	6	imports	1000 $	mt	
24	7	from stocks	1000 $	mt	
24	8	to stocks	1000 $	mt	
24	9	exports	1000 $	mt	unit.p
24	10	feed	1000 $	mt	unit.p
24	11	breed/bait	1000 $	mt	
24	12	waste	1000 $	mt	
24	13	unit price			
24	14	food	1000 $	mt	
24	15	other util.	1000 $	mt	
24	16	** not used			
24	17	** not used			
25	1	fertilizer	mt	1000nc	unit.p
25	2	nitrogen	mt	1000nc	unit.p
25	3	phosphate	mt	1000nc	unit.p
25	4	potash	mt	1000nc	unit.p
25	5	N+K20+P205.	mt	1000nc	unit.p
25	6	intm.cons.na	mt	1000nc	unit.p
25	7	** not used			
25	8	** not used			
25	9	** not used			
25	10	** not used			
25	11	** not used			
25	12	** not used			
25	13	** not used			
25	14	** not used			
25	15	** not used			
25	16	** not used			
25	17	** not used			
26	1	cap.stock	mill.		

26	2	agr.capital	mill.		
26	3	nag.capital	mill.		
26	4	depreciation	mill.		
26	5	agr.investm.	mill.		
26	6	nag.investm.	mill.		
26	7	agr.deprec.	mill.	.0001	
26	8	nag.deprec.	mill.	.0001	
26	9	total.deprec	mill.	.0001	
26	10	** not used	mill.		
26	11	** not used	mill.		
26	12	** not used	mill.		
26	13	** not used	mill.		
26	14	** not used	mill.		
26	15	** not used			
26	16	** not used			
26	17	** not used			
27	1	0- 9 years	male	female	total
27	2	10-14 years	male	female	total
27	3	15-19 years	male	female	total
27	4	20-24 years	male	female	total
27	5	25-44 years	male	female	total
27	6	35-54 years	male	female	total
27	7	55-64 years	male	female	total
27	8	65+years	male	female	total
27	9	all	male	female	total
27	10	** not used			
27	11	** not used			
27	12	** not used			
27	13	** not used			
27	14	** not used			
27	15	** not used			
27	16	** not used			
27	17	** not used			
28	1	agriculture	male	female	total
28	2	industry	male	female	total
28	3	services	male	female	total
28	4	** not used			
28	5	** not used			
28	6	** not used			
28	7	** not used			
28	8	** not used			
28	9	** not used			
28	10	** not used			
28	11	** not used			
28	12	** not used			
28	13	** not used			
28	14	** not used			
28	15	** not used			
28	16	** not used			
28	17	** not used			
29	1	total	mill.		
29	2	** not used			
29	3	agriculture	mill.		
29	4	total cons.	mill.		

29	5	** not used	mill.
29	6	** not used	
29	7	net cap.for	mill.
29	8	net fix inv	mill.
29	9	stock form.	mill.
29	10	exports	mill.
29	11	imports	mill.
29	12	net exports	mill.
29	13	exch.rate	nc/rb
29	14	** not used	
29	15	** not used	
29	16	** not used	
29	17	** not used	

Appendix 4: Abbreviations of Full Listing (SUPUTA)

Each block of data enclosed in '...**********...' refers to one commodity of one country.

First line: nn1 nn2 nn3 text1 text2

- nn1: not relevant code
- nn2: country code
- nn3: commodity code
- text1: country text
- text2: commodity text

Time series:

line 1: years 1961 to 1968 (or 65 to 72, or 66 to 73)
line 2: years 1969 to 1976 (or 73 to 80, or 74 to 81)

Indicators to the right of the data: (applicable to original FAO data, in the aggregated versions all is computed data)

- blank official figure
- c computed number
- f FAO estimate
- * inofficial figure

Item column: n1n2

- n1: item (element) code (1,2,... or 17)
- n2: unit (dimension) code (1,2 or 3)
- text: item (element) text

Unit column:

1000$	1000 US dollars
1000nc	1000 national currency
unit.p	unit price (mostly in national currency)
mt	metric tons
number	number, units
cum	current unit of measurement, always 1000$
nc	national currency
nc/$	national currency per us dollar times 10**4
nc/rb	national currency per rubel
EUR/nc	euros per national currency
ha	hectarea
hg/mt	100 gramm per mt
hg/ha	100 gramm per hectar
*kg/ha	100 gramm per hectar
*kg/an	100 gramm per animal
* $/mt	10 us cents per mt
* $/ha	10 us cents per hectar
* $/an	10 cents per animal
mill.	million national currency

yy column:

- ny1: year of first datum
- ny2: year of 9th datum

Appendix 5: Data Files and Time Coverage

Mnemonics:

FAP2, fap2 countries appendix 1a (also called FAP countries)
FAP4, fap4 countries appendix 1a
61+65 update from 66 onwards

Type of Data	Files	Explanation	Coverage
Macroeconomics	all.fap2	FAP2	65-74
	all.fap4	FAP4	61-67
	gdp.66	FAP2	66-81
Exchange Rates	all.fap2	see macro	65-74
	all.fap4	see macro	61-76
	exch.all	FAP2	61-76
	exch.all.66	FAP4	66-81
Population	all.fap2	see macro	65-74
	all.fap4	see macro	61-76
	pop.bin	FAP2	61-76
	pop.bin.66	FAO countries	66-81
Fertilizer	all.fap2	see macro	65-76
	all.fap4	see macro	61-76
	fert.fap2		
	fert.fap4		
Area	area.bin	FAP4	61-76
Nutritive Factors	mix.nut	intern.factors	11 nutrients
	nutc.bin.w	intern.factors, corrected	3 nutrients
	nut.bin.n	national factors	3 nutrients
Nutrient Intake	fovapc.fap4	intake/cap/day	61-76, 3 nut
	fovapc.fap4.66	intake/cap/day	66-81,11 nut
Nutrient Content	fova27.fap4	unit content for ag27	61-76,11 nut
	fova9.fap4	unit content for ag9	61-76,11 nut
	fova27.fap4.66	unit content for ag27	66-81,11 nut
	fova9.fap4.66	unit content for ag9	66-81,11 nut
FAO Producer Prices	on dd-tape	orig. nat.prod.prices	61-76
		orig. nat.prod.prices	66-81
FAP Producer Prices	prices.fap4.new	nat.prod.prices, completed	61-76
	prices.fap4.66	nat.prod.prices completed	66-81
FAP Prices	vavo27.fap4	prices for ag27	61-76
	vavo27.fap4.re	prices for ag27,demand	61-76

	vavo9.fap4	prices for ag9	61-76
	vavo9.fap4.re	prices for ag9, demand	61-76
	vavo27.fap4.66	prices for ag27	66-81
	vavo27.fap4.66.re	...	66-81
	vavo9.fap4.66	...	66-81
	vavo9.fap4.66.re	...	66-81
World Export (Import) Prices	price.a	(average exp price/comm)	61-76
	price61+65.a		61-76
	price66.a		66-81
World Market Prices	worldp27	world exp price for 27	61-76
	worldp27.re	world exp price for 19, demand	61-76
	worldp9	world exp price for 16	61-76
	worldp9.re	world exp price for 10, demand	61-76
	worldp27.66	...	66-81
	worldp27.66.re	...	66-81
	worldp9.66	...	66-81
	worldp9.66.re	...	66-81
10th price	bin.3019	world non-ag price	61-76
Original SUA	on dd-tape	FAP2	61-76
		FAP4 (upd.66)	61-76
		all FAO countries	65-80
		all FAO countries	66-81
		FAP4 countries	66-81
Aggregated SUA	ag, dd-tape	FAP2	61-76
		FAP4 (upd.66)	61-76
		FAP4 countries	65-80
		FAP4 countries	66-81
Converted SUA	agcv, dd-tape	FAP2	61-76
		FAP4 (upd.66)	61-76
		FAP4 countries	65-80
		FAP4 countries	66-81
ag27 SUA, with prices	ag27, dd-tape	FAP2	61-76
		FAP4 (upd.66)	61-76
		FAP4 countries	66-81
ag27 SUA, no prices	ag27, dd-tape	FAP4 countries	65-80
ag9 SUA, with prices	ag9, dd-tape	FAP2	61-76
		FAP4 (upd.66)	61-76
		FAP4 countries	66-81
ag9 SUA, no prices	ag9, dd-tape	FAP4 countries	65-80
EEC SUAs	or.888	original SUA (upd.66)	61-76

	ag.888	aggregated SUA (upd.66)	61-76
	ag.888.66	aggregated SUA	66-81
	ag27.888	ag27 and prices ...	61-76
	ag27.888.66	ag27 and prices ...	66-81
	ag9.888	ag9 and prices ...	61-76
	ag9.888.66	ag9 and prices ...	66-81
CMEA SUAs	or.777	original SUA	61-76
	ag.777	aggregated SUA	61-76
	ag.777.66	aggregated SUA	66-81
	ag27.777	ag27	61-76
	ag27.777.66	ag27	66-81
	ag9.777	ag9	61-76
	ag9.777.66	ag9	66-81
ONE SUAs FAP2	or.one	original SUA	61-76
	ag.one	aggregated SUA	61-76
	ag27.one	ag27	61-76
	ag9.one	ag9	61-76
ONE SUAs FAP4	or.one.61+65	original SUA (upd.66)	61-76
	or.one.66	original SUA	66-81
	ag.one.61+65	aggregated SUA ...	61-76
	ag.one.66	aggregated SUA	66-81
	ag27.one.61+65	ag27 ...	61-76
	ag27.one.66	ag27 ...	66-81
	ag9.one.61+65	ag9 ...	61-76
	ag9.one.66	ag9	66-81

Appendix 6: Methods and Sources for Fertilizer Calculations

Country	Item	Reference and/or Method	Missing
9 Argentina	1,2 Fert cons 1000nc	a	71-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	3(61-74),4 and corr (75-76)	
	6,2 Int. nonag to ag	a	71-76
10 Australia	1,2 Fert cons 1000nc	a	61-67,76
	2,1 Fert cons mt	b(superphosphate), expert from the Impact Project, Melbourne	
	2,3 Fert price nc/mt	3(61), 1(62-76)	
	6,2 Int. nonag to ag	a	76
11 Austria	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	Expert from the Agricultural Institute, Vienna	
	2,3 Fert price nc/mt	(Karl Ortner)	
	6,2 Int. nonag to ag	a	
15 Belgium	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	76
16 Bangladesh	1,2 Fert cons 1000nc	a	61-71
	2,1 Fert cons mt	b(64-76), Experts from Amsterdam (M.Keyzer)	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	a	61-71
21 Brazil	1,2 Fert cons 1000nc	not available	61-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	4 and corrected(61-65),	
	3(66-76)		
	6,2 Int. nonag to ag	not available	61-76
27 Bulgaria	1,2 Fert cons 1000nc	not available	61-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	not available	61-76
33 Canada	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	76
41 China	1,2 Fert cons 1000nc	not available	61-76
	2,1 Fert cons mt	b	61-63
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	not available	61-76
54 Denmark	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	76
59 Egypt	1,2 Fert cons 1000nc	a(61-68) 5(69-76)	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	2(61-68),3(69-76)	
	6,2 Int. nonag to ag	a	69-76
68 France	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	3	
	6,2 Int. nonag to ag	a	76

77 GDR	1,2 Fert cons 1000nc	a	61-65,76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	a	61-65,76
78 FRG	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	76
84 Greece	1,2 Fert cons 1000nc	a(61-75), 5(76)	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	2(61-75),1(76)	
	6,2 Int. nonag to ag	a, corrected(61-64)76	
97 Hungary	1,2 Fert cons 1000nc	a(new)	61-65,76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	
	6,2 Int. nonag to ag	a (new)	61-65,76
100 India	1,2 Fert cons 1000nc	a	61-64,76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	a	61-64,76
101 Indonesia	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	2 (very different from 3)	
	6,2 Int. nonag to ag	a	76
104 Ireland	1,2 Fert cons 1000nc	a	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	
106 Italy	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	3(61-65),1(66-77)	
	6,2 Int. nonag to ag	a	76
110 Japan	1,2 Fert cons 1000nc	Expert from the Agric. University of Tokyo	
	2,1 Fert cons mt		
	2,3 Fert price nc/mt		
	6,2 Int. nonag to ag	a	75-76
114 Kenya	1,2 Fert cons 1000nc	a	61-63,75-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	3	61-76
	6,2 Int. nonag to ag	a	61-63
138 Mexico	1,2 Fert cons 1000nc	a	(61-67),5(68-76)
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	2(61-74),1(75-76) checked with method 3	
	6,2 Int. nonag to ag	a	68-76
150 Netherlands	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	76
158 New Zealand	1,2 Fert cons 1000nc	a	61-71
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	Expert from the Dep.of Agric. Econom.,Massey U.,New Zealand	
	6,2 Int. nonag to ag	a	61-71
159 Nigeria	1,2 Fert cons 1000nc	a	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	4	
	6,2 Int. nonag to ag	a	61-65,76

165 Pakistan	1,2 Fert cons 1000nc	a	61-68,75-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1(69-74),3 and corr (rest)	
	6,2 Int. nonag to ag	a	61-68,75-76
173 Poland	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	a	76
174 Portugal	1,2 Fert cons 1000nc	a (large difference between old and new edition)	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	3	
	6,2 Int. nonag to ag	a (large difference between old and new edition)	76
183 Romania	1,2 Fert cons 1000nc	a	61-65,76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	a	61-65,76
203 Spain	1,2 Fert cons 1000nc	a(61-75),5(76)	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	2(61-75),1(76)	
	6,2 Int. nonag to ag	a	76
210 Sweden	1,2 Fert cons 1000nc	a	75-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	Experts of the Agricultural University of Uppsala	
	6,2 Int. nonag to ag	a	76
216 Thailand	1,2 Fert cons 1000nc	a(65-75)	61-64,76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	4	
	6,2 Int. nonag to ag	a	61-64,76
223 Turkey	1,2 Fert cons 1000nc	a	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	Experts from the University of Ankara	
	6,2 Int. nonag to ag	a	
228 USSR	1,2 Fert cons 1000nc	not available	61-76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	not available	61-76
	6,2 Int. nonag to ag	not available	61-76
229 UK	1,2 Fert cons 1000nc	a	
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	1	
	6,2 Int. nonag to ag	a	
231 USA	1,2 Fert cons 1000nc	a	76
	2,1 Fert cons mt	b	
	2,3 Fert price nc/mt	2(61-75),1(76), checked	
	6,2 Int. nonag to ag	a	76
888 EEC	1,2 Fert cons 1000nc		76
	2,1 Fert cons mt	aggregated, taking euros as currency unit	
	2,3 Fert price nc/mt		
	6,2 Int. nonag to ag		76

References:

a. Economic Accounts for Agriculture, FAO issue 1 1961-1971, issue 2 1965-1977

b. Fertilizer Yearbooks, FAO, 1978,1979,1980 Annual Fertilizer Review, FAO, 1960,1961,...,1977

c. Trade Yearbook, FAO, 1963,1964,...,1979

d. Production Yearbook, FAO, 1963,1964,...,1979

e. World Tables, World Bank

Methods for calculating the price:

1 Take price for 1 year, multiply by fertilizer price index for all the other years

2 Divide total fertilizer use in NC by nitrogen fertilizer use in mt.

3 Take individual prices for types of fertilizer, multiply by consumption and add up, divide by nitrogen consumption.

4 Take total imports of fertilizer (crude and manufactured) in US$, divide by total imports of fertilizer in mt, multiply by total consumption of fertilizer in mt, divide by consumption of nitrogen in mt, convert to national currency.

5 Inverse of 2: total use in 1000 nc ="price"of n * consumption of n

23	9 3501	2	1	61 9999	4952000.	4874300.	6276000.	6496700.	5425500.	6291200.	6613000.	6679500.
					6238700.	4468200.	4986000.	5627000.	4251800.	5183000.	5753000.	7175000.
23	9 3501	3	1	61 9999	4420900.	3744700.	5676000.	6135400.	4601200.	5213600.	5811600.	5837200.
					5191300.	3701000.	4314640.	4965100.	3957900.	4233000.	5270600.	6386000.
23	9 3501	4	2	61 9999	12950.	15222.	15751.	18353.	13212.	11982.	12595.	9833.
					13523.	13294.	13164.	15911.	16574.	14103.	16260.	17225.
23	9 3501	5	2	61 9999	5725000.	5700000.	8940000.	11260000.	6079000.	6247000.	7320000.	5740000.
					7020000.	4920000.	5680000.	7900000.	6560000.	5970000.	8570000.	11000000.
23	9 3501	5	3	61 1182	40.	47.	56.	66.	80.	77.	112.	135.
					152.	141.	168.	240.	515.	677.	966.	5628.
23	9 3501	6	2	61 9999	84.	50.	1.	0.	16.	0.	169045.	20.
					392075.	61.	27.	25.	422066.	284.	0.	84.
23	9 3501	7	2	61 9999	0.	630000.	0.	0.	4449000.	2534000.	0.	864000.
					0.	1270000.	0.	0.	0.	0.	0.	0.
23	9 3501	8	2	61 9999	1277000.	0.	3449000.	3688000.	0.	0.	1615000.	0.
					498000.	0.	883000.	744000.	140000.	350843.	2549827.	2480660.
23	9 3501	9	2	61 9999	1509104.	3309872.	2294477.	4269146.	7105404.	5540769.	2574826.	2978705.
					3003867.	2935628.	1528272.	2320323.	3617804.	2328915.	2372588.	4020871.
23	9 3501	10	2	61 9999	123347.	128268.	135191.	91522.	233384.	188858.	182873.	403013.
					846446.	139920.	136289.	1478207.	133040.	173337.	434574.	1021862.
23	9 3501	10	3	61 1182	36.	43.	51.	60.	72.	69.	101.	122.
					137.	127.	151.	216.	464.	609.	869.	5065.
23	9 3501	11	2	61 9999	470000.	460000.	596000.	617000.	515000.	598000.	629000.	665000.
					640000.	440000.	498600.	562700.	425180.	512180.	560000.	600000.
23	9 3501	12	2	61 9999	130248.	161500.	160943.	227611.	274660.	169340.	172631.	194497.
					163050.	174426.	164379.	239463.	202531.	149129.	235951.	257522.
23	9 3501	14	2	61 9999	2215386.	2270410.	2304390.	2366721.	2399568.	2284034.	2314715.	2362805.
					2260712.	2500087.	2469487.	2555333.	2463512.	2455880.	2417061.	2619169.
23	9 3501	14	3	61 1182	40.	47.	56.	66.	80.	77.	112.	135.
					152.	141.	168.	240.	515.	677.	966.	5628.
23	9 3502	2	1	61 9999	53000.	59000.	57300.	57700.	78700.	56300.	68300.	79700.
					95800.	109300.	81200.	93200.	86400.	88700.	96500.	91100.
23	9 3502	3	1	61 9999	46000.	53060.	52300.	54020.	67880.	46795.	61830.	70800.
					87500.	101900.	77200.	83100.	76550.	82700.	92500.	87270.
23	9 3502	4	2	61 9999	21701.	23020.	22829.	23564.	26412.	23667.	23515.	26771.
					26417.	26760.	24997.	23705.	22755.	25600.	25423.	23724.
23	9 3502	5	2	61 9999	99825.	122143.	119394.	127292.	179286.	110752.	145395.	189541.
					231146.	272684.	192974.	196988.	174192.	211710.	235159.	207040.
23	9 3502	5	3	61 1182	103.	126.	157.	192.	243.	239.	358.	360.
					343.	334.	552.	2164.	1696.	2551.	3624.	21113.
23	9 3502	6	2	61 9999	0.	3.	2.	0.	0.	88.	0.	0.
					6.	18.	0.	0.	0.	0.	0.	0.
23	9 3502	7	2	61 9999	6700.	7370.	3350.	0.	0.	25460.	0.	0.
					0.	0.	50250.	0.	0.	0.	0.	0.
23	9 3502	8	2	61 9999	0.	0.	0.	10720.	18090.	0.	1340.	1340.
					50250.	11390.	0.	0.	0.	0.	0.	0.
23	9 3502	9	2	61 9999	13928.	40389.	19715.	12637.	44468.	61863.	49804.	57832.
					74525.	100340.	92428.	27278.	36381.	35491.	64411.	78366.
23	9 3502	10	2	61 9999	11629.	12611.	9920.	9583.	14257.	6706.	10887.	17132.
					15554.	19795.	19898.	18253.	16060.	25362.	29449.	25700.
23	9 3502	10	3	61 1182	93.	114.	141.	173.	219.	215.	322.	324.
					309.	301.	497.	1948.	1526.	2296.	3261.	19002.
23	9 3502	11	2	61 9999	5360.	4690.	5360.	6700.	5360.	5360.	6700.	8040.
					9380.	7370.	6378.	6479.	6010.	6030.	6365.	6030.
23	9 3502	12	2	61 9999	3670.	4740.	4644.	4496.	6004.	4219.	5001.	7054.
					7538.	9726.	8084.	7258.	6230.	7526.	7927.	7446.
23	9 3502	14	2	61 9999	71939.	67086.	83107.	83156.	91107.	58153.	71664.	98144.
					73906.	124082.	116436.	137720.	109512.	137302.	127007.	89499.
23	9 3502	14	3	61 1182	103.	126.	157.	192.	243.	239.	358.	360.
					343.	334.	552.	2164.	1696.	2551.	3624.	21113.

23	9 3503	2	1	61 9999	13277300.	13123700.	13260300.	13528700.	13363100.	14105200.	14780800.	16480900.
					17168400.	17522500.	19635700.	18924600.	19576200.	19511600.	18190900.	17621200.
23	9 3503	3	1	61 9999	6808700.	5921460.	6713150.	7243270.	6131500.	7148160.	7533380.	7976660.
					8259100.	9661190.	10470500.	8351550.	10123750.	9863500.	8621650.	8328800.
23	9 3503	4	2	61 9999	12593.	13534.	12135.	12842.	12116.	15159.	15880.	12784.
					13332.	15003.	15402.	12635.	16749.	17442.	16267.	15476.
23	9 3503	5	2	61 9999	8573921.	8013814.	8146343.	9301994.	7428912.	10836141.	11963183.	10197006.
					11010833.	14494292.	16126279.	10551913.	16956016.	17203516.	14024801.	12889600.
23	9 3503	5	3	61 1182	28.	35.	45.	57.	75.	74.	112.	99.
					124.	121.	152.	244.	415.	606.	837.	4803.
23	9 3503	6	2	61 9999	2854.	4526.	5951.	4617.	4851.	4549.	517.	3374.
					693.	1098.	1402.	687.	180.	182.	42.	103.
23	9 3503	7	2	61 9999	0.	620351.	0.	232406.	954843.	115191.	36205.	202369.
					920501.	403456.	123255.	660000.	28667.	729333.	170000.	950000.
23	9 3503	8	2	61 9999	584456.	4293.	1176559.	113385.	0.	28000.	1231137.	283000.
					94456.	337409.	169000.	714667.	2190000.	300000.	41000.	140333.
23	9 3503	9	2	61 9999	2571002.	4163959.	3241308.	5369989.	3906751.	5148970.	5357839.	4148264.
					5896739.	7760951.	8810641.	4007005.	6797433.	9280765.	6290665.	6968779.
23	9 3503	10	2	61 9999	4550034.	3654955.	2962886.	3252516.	3681020.	4903178.	4471158.	5008940.
					4988139.	5788308.	6220720.	5539785.	6891687.	7233561.	6802919.	5659180.
23	9 3503	10	3	61 1182	28.	34.	45.	55.	71.	73.	110.	97.
					125.	117.	148.	243.	398.	590.	821.	4880.
23	9 3503	11	2	61 9999	552692.	509006.	508487.	484537.	484809.	511044.	550151.	590645.
					561746.	540542.	554138.	564398.	575368.	542310.	538019.	607200.
23	9 3503	12	2	61 9999	180874.	177923.	151016.	192984.	169240.	222437.	241936.	213830.
					226554.	299612.	333830.	226330.	361506.	361979.	308902.	266253.
23	9 3503	14	2	61 9999	137717.	128556.	112038.	125607.	146786.	142252.	147683.	158070.
					164395.	172024.	162606.	160415.	168869.	214418.	213338.	197959.
23	9 3503	14	3	61 1182	28.	36.	46.	58.	74.	80.	108.	100.
					121.	111.	166.	240.	419.	574.	839.	4964.
23	9 3504	1	1	61 9999	44187068.	43773472.	41279320.	43229800.	46916744.	48548400.	50548000.	50309600.
					47540556.	47484912.	48336000.	50178000.	52108800.	51945648.	54395400.	54176200.
23	9 3504	4	2	61 9999	616.	689.	800.	599.	554.	617.	646.	660.
					772.	710.	544.	560.	521.	519.	559.	645.
23	9 3504	5	2	61 9999	2721333.	3018175.	3301072.	2588202.	2597076.	2994963.	3264347.	3321343.
					3670848.	3369661.	2627649.	2811766.	2714999.	2695637.	3040683.	3492205.
23	9 3504	5	3	61 1182	285.	354.	448.	561.	727.	840.	1007.	1062.
					1133.	1629.	2937.	4845.	7246.	6754.	12659.	73721.
23	9 3504	6	2	61 9999	12.	6.	26.	2.	0.	4.	4.	6.
					12.	6.	6.	0.	338.	188.	145.	0.
23	9											

23	9	Argentina	3501	wheat	S1	5	3	61	40.19	47.23	56.24	66.27	80.06	77.00	112.00	135.00
									152.00	141.00	168.00	240.00	515.00	677.00	966.00	5627.97
23	9	Argentina	3501	wheat	S1	10	3	61	36.17	42.51	50.62	59.64	72.06	69.30	100.80	121.50
									136.80	126.90	151.20	216.00	463.50	609.30	869.40	5065.18
23	9	Argentina	3501	wheat	S1	14	3	61	40.19	47.23	56.24	66.27	80.06	77.00	112.00	135.00
									152.00	141.00	168.00	240.00	515.00	677.00	966.00	5627.97
23	9	Argentina	3502	rice	S2	5	3	61	103.25	126.16	156.67	192.03	242.79	238.81	358.21	359.70
									343.28	334.33	552.24	2164.18	1695.52	2550.75	3623.88	21112.95
23	9	Argentina	3502	rice	S2	10	3	61	92.93	113.54	141.00	172.82	218.51	214.93	322.39	323.73
									308.96	300.90	497.01	1947.76	1525.97	2295.67	3261.49	19001.65
23	9	Argentina	3502	rice	S2	14	3	61	103.25	126.16	156.67	192.03	242.79	238.81	358.21	359.70
									343.28	334.33	552.24	2164.18	1695.52	2550.75	3623.88	21112.95
23	9	Argentina	3503	oth.cerls.	S3	5	3	61	28.31	35.20	45.25	56.60	74.93	73.70	111.82	99.16
									124.40	121.37	152.42	244.35	414.58	606.07	836.96	4802.98
23	9	Argentina	3503	oth.cerls.	S3	10	3	61	27.85	33.85	44.92	55.25	70.95	72.61	110.31	96.93
									124.91	117.07	148.47	242.96	397.94	589.5€	820.95	4880.45
23	9	Argentina	3503	oth.cerls.	S3	14	3	61	28.14	35.64	46.24	57.53	74.32	80.29	108.20	99.88
									121.39	111.16	165.75	239.98	418.69	573.86	838.80	4964.12
23	9	Argentina	3504	bov.meat	S4	5	3	61	284.58	353.63	447.86	561.25	727.40	840.24	1006.66	1062.34
									1132.51	1628.57	2936.81	4845.24	7246.18	6754.35	12659.10	73720.97
23	9	Argentina	3504	bov.meat	S4	14	3	61	284.52	353.04	449.98	566.57	739.50	844.09	1010.46	1065.23
									1138.68	1645.22	2981.71	4871.85	7336.96	6796.33	12741.28	74010.34
23	9	Argentina	3504	bov.meat	S4	15	3	61	154.77	157.01	167.47	199.44	246.77	280.95	318.22	332.75
									407.76	533.63	947.94	1709.96	2951.37	2894.92	5211.49	28863.82
23	9	Argentina	3505	dairy pr.	S5	5	3	61	27.34	34.71	44.94	57.27	75.75	89.00	105.00	129.00
									156.00	219.00	277.00	380.00	643.00	600.00	1130.00	6583.45
23	9	Argentina	3505	dairy pr.	S5	10	3	61	6.83	8.68	11.23	14.32	18.94	22.25	26.25	32.25
									39.00	54.75	69.25	95.00	160.75	150.00	282.50	1645.86
23	9	Argentina	3505	dairy pr.	S5	14	3	61	27.34	34.71	44.94	57.27	75.75	89.00	105.00	129.00
									156.00	219.00	277.00	380.00	643.00	600.00	1130.00	6583.45
23	9	Argentina	3506	oth.meat	S6	5	3	61	3407.96	4333.70	5365.38	6450.84	8172.40	8093.19	12763.72	15237.17
									16003.42	17702.20	24556.07	35200.87	58753.75	73442.32	160641.56	1005151.50
23	9	Argentina	3506	oth.meat	S6	14	3	61	3327.66	4198.68	5131.62	6193.95	8113.41	7968.27	12460.86	14865.17
									15611.24	16784.18	23305.38	31606.21	52344.49	72251.72	145818.08	876261.06
23	9	Argentina	3506	oth.meat	S6	15	3	61	340.17	571.51	645.29	684.61	952.91	1109.23	2665.04	1653.37
									652.78	5166.60	0.	0.	66080.06	63371.43	188097.52	1909081.63
23	9	Argentina	3507	prt.feed	S7C	5	3	61	264.23	363.23	412.43	500.52	695.84	810.09	1005.33	1153.69
									1188.57	1329.01	2352.13	3726.59	4926.08	4586.61	6909.65	37329.01
23	9	Argentina	3507	prt.feed	S7C	10	3	61	492.85	840.51	739.12	491.98	1031.29	888.39	1154.39	1056.73
									1297.03	1730.31	2727.44	4671.74	4084.75	4795.63	5658.00	33557.62
23	9	Argentina	3507	prt.feed	S7C	14	3	61	758.44	189.58	234.94	306.37	357.76	438.56	487.17	954.80
									1078.06	1017.71	1587.72	1920.80	2597.37	1933.96	3795.31	22122.67
23	9	Argentina	3507	prt.feed	S7C	15	3	61	0.	0.	0.	0.	0.	501.07	630.87	792.98
									850.88	739.45	1012.44	2024.52	2965.30	3881.23	5533.23	32318.67
23	9	Argentina	3508	oth.food	S8C	5	3	61	283.05	350.24	454.77	573.78	750.31	870.19	1039.69	1266.79
									1461.65	1555.09	1902.22	3956.31	6379.28	7784.60	11559.57	68164.86
23	9	Argentina	3508	oth.food	S8C	10	3	61	21.97	34.74	57.03	90.85	155.40	557.62	411.43	437.14
									558.84	519.27	596.25	1038.86	1491.43	1959.43	2797.71	16299.65
23	9	Argentina	3508	oth.food	S8C	14	3	61	290.49	344.01	437.84	574.02	745.64	870.99	1112.75	1317.82
									1505.87	1656.70	2007.07	4169.84	6226.67	7698.95	12799.86	72336.91
23	9	Argentina	3508	oth.food	S8C	15	3	61	316.79	350.37	429.90	501.89	600.07	606.38	826.65	1251.86
									1449.52	1559.34	2121.01	4166.55	6074.04	10038.62	16480.60	85578.79
23	9	Argentina	3509	non-food	S9C	5	3	61	405.90	468.61	591.21	680.03	911.03	1041.49	936.22	1288.71
									1590.72	1829.87	3163.21	4699.36	8886.35	11137.04	18239.56	103179.84
23	9	Argentina	3509	non-food	S9C	15	3	61	399.56	444.80	603.92	755.97	1006.54	1113.00	983.07	1469.34
									1785.82	1791.59	3530.19	5360.17	9601.00	11733.32	18761.44	103705.43
23	9	Argentina	3510	non-agr	S10	5	3	61	678.77	853.57	1093.15	1379.41	1778.41	2237.65	2871.35	3162.70
									3415.34	3775.00	4927.96	7705.16	12243.10	16027.00	44091.50	256557.00
23	9	Argentina	3511	bov.fat	S8L4	5	3	61	326.56	407.65	519.89	653.32	847.51	974.97	1170.94	1263.33
									1313.87	1899.60	3457.26	5633.45	8379.47	7801.91	14564.28	84916.26

23	9	Argentina	3511	bov.fat	S8L4	14	3	61	0.	0.	0.	0.	0.	0.	0.	0.
23	9	Argentina	3511	bov.fat	S8L4	15	3	61	0.	0.	0.	0.	0.	0.	0.	0.
23	9	Argentina	3512	oth.fat	S8L6	5	3	61	49.03	53.69	51.60	73.49	97.46	130.03	150.45	108.80
23	9	Argentina	3512	oth.fat	S8L6	14	3	61	208.60	225.27	293.31	534.90	969.04	650.92	925.38	6841.32
23	9	Argentina	3512	oth.fat	S8L6	15	3	61	421.88	497.49	599.68	713.25	864.05	838.03	1250.02	1817.94
23	9	Argentina	3513	m.meal	S7L4	5	3	61	1997.40	1870.57	2427.05	4185.94	6057.51	8716.66	14849.73	84352.32
23	9	Argentina	3513	m.meal	S7L4	10	3	61	419.59	495.84	593.94	703.71	855.66	810.45	1221.05	1822.97
23	9	Argentina	3514	f.meal	S7L6	5	3	61	2000.33	1839.10	2401.25	4173.71	6006.35	8641.92	14478.45	84352.33
23	9	Argentina	3514	f.meal	S7L6	10	3	61	448.63	595.46	900.51	750.67	897.16	1018.52	1364.41	1953.12
23	9	Argentina	3515	h+h+w	S9L4	5	3	61	2602.05	2815.66	2971.85	5916.79	9287.70	13927.36	14516.65	85181.55
23	9	Argentina	3515	h+h+w	S9L4	15	3	61	112.65	158.15	177.43	196.39	274.08	336.84	444.05	440.47
23	10	Australia	3501	wheat	S1	5	3	61	478.22	615.08	872.13	1454.79	2794.73	3400.82	7406.89	44054.83
23	10	Australia	3501	wheat	S1	10	3	61	0.	0.	0.	0.	0.	336.84	444.05	440.47
23	10	Australia	3501	wheat	S1	14	3	61	478.22	615.08	872.13	1454.79	2794.73	3400.82	7406.89	44054.83
23	10	Australia	3502	rice	S2	5	3	61	125.12	206.93	263.82	270.83	368.37	535.02	696.00	680.29
23	10	Australia	3502	rice	S2	10	3	61	812.34	1110.46	1391.57	2388.80	6812.38	6095.35	11845.61	85032.95
23	10	Australia	3502	rice	S2	14	3	61	125.12	206.93	263.82	270.83	368.37	535.02	696.00	680.29
23	10	Australia	3503	oth.cerls.	S3	5	3	61	812.34	1110.46	1391.57	2388.80	6812.38	6095.35	11845.61	85032.95
23	10	Australia	3503	oth.cerls.	S3	10	3	61	561.21	634.30	804.40	1005.18	1210.45	1365.54	1468.32	1618.04
23	10	Australia	3503	oth.cerls.	S3	14	3	61	1861.54	1856.04	3081.73	6755.42	13212.90	11715.78	20154.13	115683.56
									750.91	880.70	1050.70	1196.34	1431.14	1625.04	1661.08	1927.90
									2346.75	1754.55	3096.49	6385.34	12010.70	11286.58	18069.29	104071.98
									54.16	53.39	52.60	53.40	54.20	54.33	57.69	49.40
									50.36	51.15	53.75	55.42	110.22	110.63	104.00	89.00
									48.75	48.05	47.34	48.06	48.78	48.90	51.92	44.46
									45.32	46.03	48.38	49.88	99.20	99.57	93.60	80.10
									54.16	53.39	52.60	53.40	54.20	54.33	57.69	49.40
									50.36	51.15	53.75	55.42	110.22	110.63	104.00	89.00
									87.02	88.44	89.93	88.41	86.95	83.96	86.67	86.67
									83.82	87.91	68.48	73.61	120.91	184.19	137.96	147.76
									78.32	79.59	80.93	79.57	78.26	75.56	78.00	78.00
									75.44	79.12	61.63	66.25	108.82	165.77	124.16	132.99
									87.02	88.44	89.93	88.41	86.95	83.96	86.67	86.67
									83.82	87.91	68.48	73.61	120.91	184.19	137.96	147.76
									46.71	45.81	44.95	45.62	46.40	48.28	47.55	39.54
									36.73	42.69	39.46	47.25	70.07	89.53	90.45	93.64
									46.07	45.38	44.26	44.52	45.36	46.91	45.69	38.34
									36.05	41.01	38.11	46.17	67.38	82.79	83.96	86.89
									48.76	48.53	47.80	48.62	49.50	53.59	50.43	42.68
									38.83	46.55						

23 9 3501 Argentina wheat S1

item	unit	yy	1961 1969	1962 1970	1963 1971	1964 1972	1965 1973	1966 1974	1967 1975	1968 1976
21 area sown	ha	61	4952000.	4874300.	6276000.	6496700.	5425500.	6291200.	6613000.	6679500.
		69	6238700.	4468200.	4986000.	5627000.	4251800.	5183000.	5753000.	7175000.
31 area harv	ha	61	4420900.	3744700.	5676000.	6135400.	4601200.	5213600.	5811600.	5837200.
		69	5191300.	3701000.	4314640.	4965100.	3957900.	4233000.	5270600.	6386000.
42 yield	•kg/ha	61	12950.	15222.	15751.	18353.	13212.	11982.	12595.	9833.
		69	13523.	13294.	13164.	15911.	16574.	14103.	16260.	17225.
52 production	mt	61	5725000.	5700000.	8940000.	11260000.	6079000.	6247000.	7320000.	5740000.
		69	7020000.	4920000.	5680000.	7900000.	6560000.	5970000.	8570000.	11000000.
53 production	unit.p	61	40.	47.	56.	66.	80.	77.	112.	135.
		69	152.	141.	168.	240.	515.	677.	966.	5628.
62 imports	mt	61	84.	50.	1.		16.		169045.	20.
		69	392075.	61.	27.	25.	422066.	284.		84.
72 from stocks	mt	61		630000.			4449000.	2534000.		864000.
		69		1270000.						
82 to stocks	mt	61	1277000.		3449000.	3688000.			1615000.	
		69	498000.		883000.	744000.	140000.	350843.	2549827.	2480660.
92 exports	mt	61	1509104.	3309872.	2294477.	4269146.	7105404.	5540769.	2574826.	2978705.
		69	3003867.	2935628.	1528272.	2320323.	3617804.	2328915.	2372588.	4020871.
102 feed	mt	61	123347.	128268.	135191.	91522.	233384.	188858.	182873.	403013.
		69	846446.	139920.	136289.	1478207.	133040.	173337.	434574.	1021862.
103 feed	unit.p	61	36.	43.	51.	60.	72.	69.	101.	122.
		69	137.	127.	151.	216.	464.	609.	869.	5065.
112 seed	mt	61	470000.	460000.	596000.	617000.	515000.	598000.	629000.	665000.
		69	640000.	440000.	498600.	562700.	425180.	512180.	560000.	600000.
122 waste	mt	61	130248.	161500.	160943.	227611.	274660.	169340.	172631.	194497.
		69	163050.	174426.	164379.	239463.	202531.	149129.	235951.	257522.
142 food	mt	61	2215386.	2270410.	2304390.	2366721.	2399568.	2284034.	2314715.	2362805.
		69	2260712.	2500087.	2469487.	2555333.	2463512.	2455880.	2417061.	2619169.
143 food		61	40.	47.	56.	66.	80.	77.	112.	135.
		69	152.	141.	168.	240.	515.	677.	966.	5628.

23 9 3502 Argentina rice S2

item	unit	yy	1961 1969	1962 1970	1963 1971	1964 1972	1965 1973	1966 1974	1967 1975	1968 1976
21		61	53000.	59000.	57300.	57700.	78700.	56300.	68300.	79700.
area sown	ha	69	95800.	109300.	81200.	93200.	86400.	88700.	96500.	91100.
31		61	46000.	53060.	52300.	54020.	67880.	46795.	61830.	70800.
area harv	ha	69	87500.	101900.	77200.	83100.	76550.	82700.	92500.	87270.
42		61	21701.	23020.	22829.	23564.	26412.	23667.	23515.	26771.
yield	*kg/ha	69	26417.	26760.	24997.	23705.	22755.	25600.	25423.	23724.
52		61	99825.	122143.	119394.	127292.	179286.	110752.	145395.	189541.
production	mt	69	231146.	272684.	192974.	196988.	174192.	211710.	235159.	207040.
53		61	103.	126.	157.	192.	243.	239.	358.	360.
production	unit.p	69	343.	334.	552.	2164.	1696.	2551.	3624.	21113.
62		61		3.	2.			88.		
imports	mt	69	6.	18.						
72		61	6700.	7370.	3350.			25460.		
from stocks	mt	69			50250.					
82		61				10720.	18090.		1340.	1340.
to stocks	mt	69	50250.	11390.						
92		61	13928.	40389.	19715.	12637.	44468.	61863.	49804.	57832.
exports	mt	69	74525.	100340.	92428.	27278.	36381.	35491.	64411.	78366.
102		61	11629.	12611.	9920.	9583.	14257.	6706.	10887.	17132.
feed	mt	69	15554.	19795.	19898.	18253.	16060.	25362.	29449.	25700.
103		61	93.	114.	141.	173.	219.	215.	322.	324.
feed	unit.p	69	309.	301.	497.	1948.	1526.	2296.	3261.	19002.
112		61	5360.	4690.	5360.	6700.	5360.	5360.	6700.	8040.
seed	mt	69	9380.	7370.	6378.	6479.	6010.	6030.	6365.	6030.
122		61	3670.	4740.	4644.	4496.	6004.	4219.	5001.	7054.
waste	mt	69	7538.	9726.	8084.	7258.	6230.	7526.	7927.	7446.
142		61	71939.	67086.	83107.	83156.	91107.	58153.	71664.	98144.
food	mt	69	73906.	124082.	116436.	137720.	109512.	137302.	127007.	89499.
143		61	103.	126.	157.	192.	243.	239.	358.	360.
food		69	343.	334.	552.	2164.	1696.	2551.	3624.	21113.

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23 9 3503 Argentina oth.cerls.S3

item	unit	yy	1961 1969	1962 1970	1963 1971	1964 1972	1965 1973	1966 1974	1967 1975	1968 1976
21		61	13277300.	13123700.	13260300.	13528700.	13363100.	14105200.	14780800.	16480900.
area sown	ha	69	17168400.	17522500.	19635700.	18924600.	19576200.	19511600.	18190900.	17621200.

31		61	6808700.	5921460.	6713150.	7243270.	6131500.	7148160.	7533380.	7976660.
area harv	ha	69	8259100.	9661190.	10470500.	8351550.	10123750.	9863500.	8621650.	8328800.
42		61	12593.	13534.	12135.	12842.	12116.	15159.	15880.	12784.
yield	*kg/ha	69	13332.	15003.	15402.	12635.	16749.	17442.	16267.	15476.
52		61	8573921.	8013814.	8146343.	9301994.	7428912.	10836141.	11963183.	10197006.
production	mt	69	11010833.	14494292.	16126279.	10551913.	16956016.	17203516.	14024801.	12889600.
53		61	28.	35.	45.	57.	75.	74.	112.	99.
production	unit.p	69	124.	121.	152.	244.	415.	606.	837.	4803.
62		61	2854.	4526.	5951.	4617.	4851.	4549.	517.	3374.
imports										

Appendix 10

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23    9 3501    2    1   61 9999
4952000.00   4874300.00   6276000.00   6496700.00   5425500.00   6291200.00
6613000.00   6679500.00   6238700.00   4468200.00   4986000.00   5627000.00
4251800.00   5183000.00   5753000.00   7175000.00
23    9 3501    3    1   61 9999
4420900.00   3744700.00   5676000.00   6135400.00   4601200.00   5213600.00
5811600.00   5837200.00   5191300.00   3701000.00   4314640.00   4965100.00
3957900.00   4233000.00   5270600.00   6386000.00
23    9 3501    4    2   61 9999
  12949.85     15221.51     15750.53     18352.51     13211.77     11982.12
  12595.50      9833.48     13522.62     13293.71     13164.48     15911.06
  16574.45     14103.47     16260.01     17225.18
23    9 3501    5    2   61 9999
5725000.00   5700000.00   8940000.00  11260000.00   6079000.00   6247000.00
7320000.00   5740000.00   7020000.00   4920000.00   5680000.00   7900000.00
6560000.00   5970000.00   8570000.00  11000000.00
23    9 3501    5    3   61 1182
     40.19        47.23        56.24        66.27        80.06        77.00
    112.00       135.00       152.00       141.00       168.00       240.00
    515.00       677.00       966.00      5627.97
23    9 3501    6    2   61 9999
     84.19        49.81         1.08         0.          15.63         0.
 169044.95        19.78    392074.59        60.55        27.00        25.00
 422066.00       284.00         0.         84.44
23    9 3501    7    2   61 9999
      0.       630000.00         0.           0.      4449000.00   2534000.00
      0.       864000.00         0.     1270000.00         0.           0.
      0.            0.           0.           0.
23    9 3501    8    2   61 9999
1277000.00         0.     3449000.00   3688000.00         0.           0.
1615000.00         0.      498000.00         0.      883000.00    744000.00
 140000.00    350843.00    2549827.25   2480660.25
23    9 3501    9    2   61 9999
1509103.88   3309872.25   2294476.50   4269146.00   7105403.50   5540768.50
2574826.25   2978704.50   3003866.75   2935627.75   1528272.25   2320322.50
3617803.75   2328915.00   2372587.75   4020870.75
23    9 3501   10    2   61 9999
 123347.05    128267.60    135191.06     91522.47    233384.31    188858.19
 182872.56    403013.19    846445.69    139919.53    136288.50   1478206.88
 133039.64    173336.58    434573.72   1021861.75
23    9 3501   10    3   61 1182
     36.17        42.51        50.62        59.64        72.06        69.30
    100.80       121.50       136.80       126.90       151.20       216.00
    463.50       609.30       869.40      5065.18
23    9 3501   11    2   61 9999
 470000.00    460000.00    596000.00    617000.00    515000.00    598000.00
 629000.00    665000.00    640000.00    440000.00    498600.00    562700.00
 425180.00    512180.00    560000.00    600000.00
23    9 3501   12    2   61 9999
 130247.67    161499.91    160943.45    227610.64    274659.56    169339.52
 172630.64    194496.94    163049.80    174426.14    164379.08    239462.80
 202531.23    149129.25    235950.92    257522.31
23    9 3501   14    2   61 9999
2215385.50   2270410.00   2304390.25   2366720.75   2399568.25   2284034.00
2314715.25   2362805.00   2260712.25   2500087.25   2469487.25   2555333.00
2463511.50   2455880.25   2417060.50   2619169.00
23    9 3501   14    3   61 1182
     40.19        47.23        56.24        66.27        80.06        77.00
    112.00       135.00       152.00       141.00       168.00       240.00
    515.00       677.00       966.00      5627.97
```

```
23    9 3502    2    1   61 9999
  53000.00     59000.00     57300.00     57700.00     78700.00     56300.00
  68300.00     79700.00     95800.00    109300.00     81200.00     93200.00
  86400.00     88700.00     96500.00     91100.00
23    9 3502    3    1   61 9999
  46000.00     53060.00     52300.00     54020.00     67880.00     46795.00
  61830.00     70800.00     87500.00    101900.00     77200.00     83100.00
  76550.00     82700.00     92500.00     87270.00
23    9 3502    4    2   61 9999
  21701.10     23019.72     22828.65     23563.92     26412.20     23667.43
  23515.35     26771.36     26416.72     26759.98     24996.65     23704.89
  22755.34     25599.81     25422.62     23724.11
23    9 3502    5    2   61 9999
  99825.06    122142.63    119393.86    127292.30    179286.02    110751.74
 145395.39    189541.25    231146.33    272684.22    192974.11    196987.67
 174192.16    211710.42    235159.19    207040.28
23    9 3502    5    3   61 1182
    103.25       126.16       156.67       192.03       242.79       238.81
    358.21       359.70       343.28       334.33       552.24      2164.18
   1695.52      2550.75      3623.88     21112.95
23    9 3502    6    2   61 9999
      0.           2.61         1.76         0.           0.          88.28
      0.           0.           6.16        18.10         0.           0.
      0.           0.           0.           0.
23    9 3502    7    2   61 9999
   6700.00      7370.00      3350.00         0.           0.       25460.00
      0.           0.           0.           0.       50250.00         0.
      0.           0.           0.           0.
23    9 3502    8    2   61 9999
      0.           0.           0.       10720.00     18090.00         0.
   1340.00      1340.00     50250.00     11390.00         0.           0.
      0.           0.           0.           0.
23    9 3502    9    2   61 9999
  13927.56     40389.12     19715.40     12636.74     44468.08     61862.50
  49803.76     57831.55     74524.77    100339.98     92427.91     27277.88
  36381.01     35490.80     64410.87     78365.97
23    9 3502   10    2   61 9999
  11629.29     12610.89      9919.83      9583.11     14257.22      6705.64
  10886.80     17131.71     15554.29     19794.94     19897.96     18252.70
  16059.85     25361.61     29449.27     25700.02
23    9 3502   10    3   61 1182
     92.93       113.54       141.00       172.82       218.51       214.93
    322.39       323.73       308.96       300.90       497.01      1947.76
   1525.97      2295.67      3261.49     19001.65
23    9 3502   11    2   61 9999
   5360.00      4690.00      5360.00      6700.00      5360.00      5360.00
   6700.00      8040.00      9380.00      7370.00      6378.40      6478.90
   6009.90      6030.00      6365.00      6030.00
23    9 3502   12    2   61 9999
   3669.67      4739.60      4643.67      4496.42      6004.22      4218.75
   5001.24      7053.70      7537.67      9725.55      8084.35      7258.18
   6229.66      7525.82      7926.95      7445.81
23    9 3502   14    2   61 9999
  71938.54     67085.63     83106.71     83156.03     91106.50     58153.14
  71663.59     98144.29     73905.76    124081.84    116435.50    137720.00
 109511.73    137302.19    127007.10     89498.50
23    9 3502   14    3   61 1182
    103.25       126.16       156.67       192.03       242.79       238.81
    358.21       359.70       343.28       334.33       552.24      2164.18
   1695.52      2550.75      3623.88     21112.95
```

```
 23    9 3503    2    1   61 9999
13277300.00  13123700.00  13260300.00  13528700.00  13363100.00  14105200.00
14780800.00  16480900.00  17168400.00  17522500.00  19635700.00  18924600.00
19576200.00  19511600.00  18190900.00  17621200.00
 23    9 3503    3    1   61 9999
 6808700.00   5921460.00   6713150.00   7243270.00   6131500.00   7148160.00
 7533380.00   7976660.00   8259100.00   9661190.00  10470500.00   8351550.00
10123750.00   9863500.00   8621650.00   8328800.00
 23    9 3503    4    2   61 9999
   12592.60     13533.51     12134.90     12842.26     12115.98     15159.34
   15880.23     12783.55     13331.76     15002.60     15401.63     12634.68
   16748.75     17441.59     16266.96     15475.94
 23    9 3503    5    2   61 9999
 8573921.00   8013814.00   8146342.50   9301994.00   7428912.00  10836141.00
11963183.00  10197006.00  11010833.00  14494292.00  16126279.00  10551913.00
16956016.00  17203516.00  14024801.00  12889600.00
 23    9 3503    5    3   61 1182
      28.31        35.20        45.25        56.60        74.93        73.70
```

Appendix 11.

```
note    ***** plots for world prices nom,10 and 16 commodities
obs     20
vars    52
orde    col
form    (10x,20g12.4)
type    line
basi    ,1961,1
scal    no
xmin    1960
xmax    1980
xsc     5
xfm     (f5.0,t5,' ')
yfm     (f7.0,t7,' ')
tlgd    ,0.16
lgd     yes,0.16
symb    1,2,3,4,5,6,7,8,9,0,*,+
wind    0.0,0.0,8.45,10.56
read    ,n01,n02,n03,n04,n05,n06,n07,n08,n09,n10,n11,n12,n13,n14,n15,n16
skip    11
read    ,r01,r02,r03,r04,r05,r06,r07,r08,r09,r10,r11,r12,r13,r14,r15,r16
skip    11
read    ,s01,s02,s03,s04,s05,s06,s07,s08,s09,s10
skip    9
read    ,t01,t02,t03,t04,t05,t06,t07,t08,t09,t10
gt      wheat rice grains dairy (world price in $/unit)
ymin    0.
ymax    400.
ysc     10
upda    n01,lab,wheat
upda    n02,lab,rice
upda    n03,lab,grains
upda    n05,lab,dairy
load    wheat,rice,grains,dairy
print
plot    1961,20
gt      bov.meat oth.meat prt.feed (world price in $/unit)
upda    n04,lab,bov.meat
upda    n06,lab,oth.meat
upda    n07,lab,prot.feed
upda    s07,lab,prt.feed
load    bov.meat,oth.meat,prt.feed
ymin    0.
ymax    10000.
plot    1961,20
gt      other meat (world price in $/unit)
load    oth.meat
plot    1961,20
gt      protein feed (world price in $/unit)
load    prt.feed
ymax    1000.
plot    1961,20
gt      oth.food non-food non-ag (world price in $/unit)
```

```
upda    n08,lab,oth.food
upda    n09,lab,non-food
upda    n10,lab,non-ag
load    oth.food,non-food,non-ag
ymin    250.
ymax    2750.
plo     t1961,20
gt      bov.fat oth.fat (world price in $/unit)
upda    n11,lab,bov.fat
upda    n12,lab,oth.fat
load    bov.fat,oth.fat
ymin    250.
ymax    2750.
plot    1961,20
gt      m.meal f.meal (world price in $/unit)
upda    n13,lab,m.meal
upda    n14,lab,f.meal
load    m.meal,f.meal
ymin    0.
ymax    800.
plot    1961,20
gt      h-h-w pig-hid. (world price in $/unit)
upda    n15,lab,h-h-w
upda    n16,lab,pig-hid.
load    h-h-w,pig-hid.
ymin    0.
ymax    2500.
plot    1961,20
gt      oth.food non-food non-ag (world price in $/unit)
upda    s08,lab,o.f-10
upda    s09,lab,n-f-10
upda    s10,lab,n-ag-10
load    o.f-10,n-f-10,n-ag-10
ymin    250.
ymax    2750.
plot    1961,20
gt      other food  (world price in $/unit)
load    o.f-10
ymin    0.
ymax    2000.
plot    1961,20
gt      non-food (world price in $/unit)
load    n-f-10
ymin    250.
ymax    2750.
plot    1961,20
lgd     no
gt      10 commodities  (world price in $/unit)
load    wheat,rice,grains,dairy,bov.meat,oth.meat,prt.feed,
ymin    0.
ymax    3000.
lgd     no
tran    ,,,,,*0.1
plot    1961,20
stop
```