THE PREPARATION

OF

SUPPLY/UTILIZATION ACCOUNTS (SUAs)

I. INTRODUCTION

The statistical framework of SUAs has been developed with the aim of providing a useful statistical tool for the preparation, conduct and appraisal of government action aimed at developing and improving the agricultural and food sectors of national economies.

It has long been recognized that it is no longer meaningful to deal separately with individual statistical series, such as those for production and trade, etc. While the separate data series by themselves are no doubt important, it is equally important to establish the links between them. Statisticians must be in a position to work with flows and matrices rather than with individual sets of data alone. This implies that the statistics of any single commodity must be traceable all the way from production and utilization to their final consumption. A set of SUAs provides the necessary linkage between primary agricultural commodities and their derived products.

This paper presents several examples of how to prepare SUAs for commodities of the crop, livestock and fishery sectors and also how ancillary and relevant information available elsewhere can be used to supplement data from official sources of production and external trade in preparing the accounts.

The first step in this rather complex undertaking is to make a thorough search for figures and to compile them along with and other information pertinent to the preparation of SUAs. In addition to data regarding production, trade and utilization of food and agricultural commodities available from official sources, a wealth of relevant information and technical expertise is frequently available from little tapped sources, such as marketing boards, commercial processing industries, extension workers, merchants, agricultural offices, transport enterprises, and the like.

To illustrate how to prepare SUAs, it is assumed the information listed in the Appendix to this paper has been compiled using the sources described above. This information will form the basis for the construction of the individual accounts that are shown below.

The account of every commodity should be constructed taking care that the balance of the equation is always maintained. The basic elements (data) of the individual commodity account do not have any relation whatsoever to elements of the other accounts except the element "processing" which corresponds to the quantity which re-appears as "input" in the account(s) of derived commodities.

II. EXAMPLES FOR THE CROP SECTOR

Wheat

Element	Unit of Measure	Quantity
Area harvested	HA	1 643 200
Yield	KG/HA	2 543
Production	MT	4 178 600
Exports	MT	359 080
Feed	MT	251 574
Seed	MT	243 060
Waste	MT	208 930
Processed	MT	3 115 456

The data compiled for area, production and exports are entered into the account. Yield has been calculated by dividing production by area. Feed has been estimated on the basis of information available in the Ministry of Agriculture and commercial feed processing industries. The quantity of wheat used for seeding purposes has been estimated by multiplying the seeding rate with the harvested area of the subsequent year. The seeding rate is known to be around 150 Kg./Ha. On the basis of information obtained from merchants in the cereal business, waste has been estimated to be around 5%. Since there is no information available as to direct food use of wheat, the SUA is then completed by allocating the balance of the account to "processing".

Flour of Wheat

Input	MT	3 115 956
Extraction rate	Percent	80
Production	MT	2 492 765
Imports	MT	44 160
Exports	MT	73 450
Waste	MT	76 108
Food	MT	2 387 367

The quantity shown as “processing” in the account for wheat is the input for the production of wheat flour. The production has been estimated by applying an extraction rate, or more precisely a milling rate, of 80%, as reported by various agencies concerned. The data reported officially for imports and exports are entered into the account. Waste again has been estimated by merchants to be around 3%. Food is left as the remainder.

Bran of Wheat

Input	MT	3 115 956
Extraction rate	Percent	17
Production	MT	529 713
Exports	MT	24 090
Feed	MT	505 623

Bran is a by-product of the milling of wheat. Therefore, the bran account has the same input as the wheat flour account. By applying the extraction rate obtained from the milling industry to the input the production can be estimated. Feed is the remainder after having allowed for exports.

Potatoes

Area harvested	HA	6 905 000
Yield	Kg/HA	16 365
Production	MT	11 300 000
Imports	MT	28 500
Exports	MT	131 000
Feed	MT	5 000 000
Seed	MT	1 564 000
Waste	MT	1 472 700
Processed	MT	655 800
Food	MT	2 505 000

The data reported officially for area, production, imports, exports and feed are entered into the account. Yield has been calculated by dividing production by area. The quantity of potatoes used for seeding/planting purposes has been obtained by multiplying the seeding rate with the area planted in the subsequent year. Based on information given by extension workers and the food processing industry, waste has been estimated to be around 13%. The quantity of potatoes processed is the aggregate of the input of potatoes manufactured into potato flour and potato starch. Food is left as the remainder in the account.

Potato Starch

Input	MT	580 000
Extraction rate	Percent	13
Production	MT	75 400
Imports	MT	5 500
Other utilization	MT	80 900

Official figures are available for production and imports. Input has been estimated on the basis of production and the extraction rate. The element other utilization representing the amount of starch used for non-food/feed purposes is the remainder.

Potato Flour

Input	MT	75 800
Extraction rate	Percent	22
Production	MT	16 680
Exports	MT	4 620
Food	MT	12 060

Official figures are available for production and exports. Input has been estimated on the basis of production and the extraction rate. The quantity for food has been obtained as the remainder.

Sugar cane

Area harvested	HA	51 850
Yield	Kg/Ha	78 000
Production	MT	4 044 300
Processing	MT	3 764 300
Food	MT	280 000

Both the “production” and “food” data for sugar cane are recorded figures. The area has been estimated based on a yield of 78 tons/HA. Processing is the remainder.

Cane sugar (raw)

Input	MT	3 464 300
Extraction rat	Percent	10.85
Production	MT	375 978
Processing	MT	375 978

The figures for input of sugar cane as well as the production of raw sugar have been supplied by the sugar industry. Hence, the extraction rate is a derived figure. Production and processing of raw sugar are identical since all raw sugar is further processed into refined sugar.

Sugar (refined)

Input	MT	375 978
Extraction rate	Percent	92
Production	MT	345 900
Imports	MT	39 121
Waste	MT	19 251
Food	MT	365 770

The input of raw sugar to refined sugar is identical to quantity recorded under raw sugar "processing" since all raw sugar is further processed into refined sugar. The production of refined sugar has been estimated by applying the known extraction rate. Waste has been estimated at 5% based on industry estimates.

Molasses

Input	MT	3 464 300
Extraction rate	Percent	4.5
Production	MT	155 900
Exports	MT	5 207
Waste	MT	16 000
Feed	MT	134 693

Molasses generally is a by-product of the manufacturing of sugar cane into raw sugar. The input figures of the two accounts "cane sugar (raw)" and "molasses" should therefore be identical. Production and waste are estimated by using the extraction rate as

well as the percentage of waste (10%) supplied by the sugar industry. Feed is the remainder.

Bagasse

Input	MT	3 464 300
Extraction rate	Percent	25
Production	MT	866 000
Other utilization	MT	866 000

Bagasse is also a by-product in the manufacture of raw sugar from sugar cane; hence, its input is the same as for raw sugar. Production is an estimate based on an extraction rate supplied by the sugar industry. The element "other utilization" is the remainder.

Non-centrifugal sugar

Input	MT	300 000
Extraction rate	Percent	10
Production	MT	30 000
Waste	MT	3 000
Food	MT	27 000

The quantity of sugar cane available for processing is 3 764 000 MT, of which 3 464 300 MT have been manufactured into raw sugar. The rest can be assumed to be processed into non-centrifugal sugar in the rural sector. Extension workers have supplied relevant information regarding locally-obtained extraction rates and on amounts lost during transport and storage.

Dry peas

Area sown	HA	78 500
Area harvested	HA	51 859
Yield	Kg/HA	530
Production	MT	27 485
Exports	MT	6 760
Feed	MT	1 450
Seed	MT	3 925

Waste	MT	2 748
Food	MT	12 602

The area sown to dry peas has been estimated by adding to the area harvested, the area under peas harvested green and an allowance for area under dry peas that had to be re-sown. Yield has been derived by dividing production by the area harvested.
Animal feed use is an estimate and the quantity of seed has been calculated by multiplying the area sown with the seeding rate. After making an allowance for waste, the remainder is that available for human consumption.

Groundnuts (in shell)

Area harvested	HA.	135 956
Yield	Kg./HA.	878
Production	MT	119 400
Seed	MT	14 103
Waste	MT	9 552
Processed	MT	95 745

The quantity of groundnuts in the shell that has been processed has been estimated as the remainder in this account. All other data have been obtained from official sources and the oil industry. The yield is calculated by dividing production by area and the amount of seed by multiplying the seed rate with the area harvested in the subsequent year.

Groundnuts (shelled)

Input	MT	95 745
Extraction rate	Percent	65
Production	MT	62 234
Exports	MT	9 131
Waste	MT	622
Processed	MT	15 000
Food	MT	37 481

Input is identical with the amount of groundnuts (in shell) available for processing. Extraction rate, production and quantity processed further into oil are figures obtained from the oil industry. Exports are from official records. Waste has been calculated as 1% of production and food is the remainder.

Oil of Groundnuts

Input	MT	15 000
Extraction rate	Percent	36
Production	MT	5 400
Food	MT	4 320
Other utilization	MT	1 080

Production has been estimated by applying the extraction rate to the reported quantity of shelled groundnuts crushed into oil. After having allowed for non-food use of oil under "other utilization", the remainder is food.

Cake of groundnuts

Input	MT	15 000
Extraction rate	Percent	60
Production	MT	9 000
Exports	MT	3 614
Feed	MT	5 386

As is the case with groundnut oil, the production of cake of groundnuts - a by-product of the manufacture of oil - has been estimated by applying the extraction rate to the quantity of shelled groundnuts crushed for oil. After having allowed for exports, the remainder is shown as being used for animal feed.

Seed cotton

Area harvested	HA.	243 162
Yield	Kg./HA.	987
Production	MT	240 114
Processed	MT	240 114

Once again, for seed cotton the yield has been calculated by dividing production by area. Seed cotton is generally processed by being ginned into cottonseed and cotton lint.

Cotton lint

Input	MT	240 114
Extraction rate	Percent	36.2
Production	MT	87 000
Exports	MT	64 733
Other utilization	MT	22 267

The extraction rate has been calculated by dividing "production" by "input" and as such is in line with general technical knowledge. "Other utilization" is the remainder and represents the quantity used by the local textile industry.

Cottonseed

Input	MT	240 114
Extraction rate	Percent	62.5
Production	MT	150 000
Feed	MT	4 000
Seed	MT	8 154
Processed	MT	136 000
Other utilization	MT	1 846

Since cotton lint and cottonseed are the outputs of the amount of seed cotton ginned, the input to both commodities must be the same, i.e., 240 114 MT. The extraction rate has been derived by dividing production by the input. On the basis of information obtained regarding the feed use of cottonseed from the commercial feed processing industry, the quantity for "feed" has been estimated at around 4 000 MT. The quantity designated as "seed" has been calculated by multiplying the seeding rate with the area of seed cotton sown in the subsequent year. The figure for "processed" is an estimate of the quantity of cottonseed required for the production of cake of cottonseed, which is exported and used for the manufacture of animal feeding stuffs. "Other utilization" is the remainder element for this account.

Oil of cottonseed

Input	MT	136 000
Extraction rate	Percent	18.0
Production	MT	24 500
Food	MT	24 500

The reason for preparing the cottonseed oil account is that cake of cottonseed is exported and used in the manufacture of animal feed, while no imports are recorded. Cake of cottonseed is a by-product of the production of oil of cottonseed which means the "input" to both oil and cake production must be the same. The production of cottonseed oil has been estimated by applying the extraction rate to the quantity of cottonseed processed (136 000 MT). All of the production can be assigned to human consumption since there is no indication of non-food uses of oil of cottonseed.

Cake of cottonseed

Input	MT	136 000
Extraction rate	Percent	45
Production	MT	61 200
Exports	MT	34 400
Feed	MT	26 800

By definition the element "input" for cake of cottonseed must be identical to the one shown in the account for oil of cottonseed. The production of cake is estimated by multiplying the extraction rate by the input figure. "Feed" is the remainder in the account and, as such, is very much in line with the information obtained from the local commercial feed industry.

Cotton linter

Input	MT	136 000
Extraction rate	Percent	4.0
Production	MT	5 440
Exports	MT	5 027
Other utilization	MT	413

Cotton linter is a by-product obtained when crushing cottonseed into oil. Thus, the input quantity is the same as for cake and oil. Production has been estimated by multiplying the input figure with the extraction rate. "Other utilization" is the remainder.

III. EXAMPLES FOR THE LIVESTOCK SECTOR

When creating a livestock account, the data for animal numbers (stocks of various species) are entered first. Other data are then added as may be seen in the examples that follow.

Cattle

Element	Unit of Measure	Quantity
Stock numbers	Head	1 944 500
Females in reproductive age	Head	841 000
Females actually reproducing	Head	759 000
Birth rate	Percent	98.2
Births	Head	749 300
Imports	Head	1 515
Exports	Head	186 876
Natural losses	Head	91 400
Slaughterings	Head	493 000
Off-take rate	Percent	34.9

The figure for the element "slaughterings" in the cattle account becomes the input for other related accounts, i.e., beef and veal, offals of cattle and fat of cattle.

Beef and Veal

Slaughterings	Head	493 000
Carcass weight	Kg./AN.	285
Production	MT	140 505
Imports	MT	16 987
Exports	MT	50 607
Waste	MT	3 150
Processed	MT	5 755
Food	MT	97 980

The carcass weight for beef and veal has been calculated by dividing the figure obtained for production by the number of slaughterings. Data for known imports and exports are inserted and the waste is assumed to be 2% of the supply (production + imports). In light of trade information confirming exports of processed meat, an allocation has been made for "processing" which serves as "input" to the SUA of beef preparations. The figure for the element "food" is obtained as the remainder.

Offals of cattle

Slaughterings	Head	493 000
Yield	Kg./AN	18.0
Production	MT	8 874
Imports	MT	2 082
Exports	MT	1 511
Waste	MT	1 096
Food	MT	7 649
Other utilization	MT	700

The production of offals of cattle has been estimated on the basis of the reported average weight of edible offals per animal. Information is also available about the amount of waste (10% of supply, i.e., production + imports), and the quantity of edible cattle offals used for industrial non-food purposes which is assigned to "other utilization". The element "food" then is the remainder, i.e., the quantity not accounted for by other uses.

Fat of cattle

Slaughterings	Head	493 000
Yield	Kg./AN	8.0
Production	MT	3 944
Other utilization	MT	3 944

With respect to fat of cattle, the production has been estimated on the basis of reported average weight of slaughter fats per animal. All cattle fats are known to be used for non-food purposes. Thus, there being no trade in this commodity, the entire quantity goes to "other utilization".

Beef preparations

Input	MT	5 755
Extraction rate	Percent	90
Production	MT	5 180
Exports	MT	5 180

The reason for preparing the SUA for beef preparations in this instance is to allow for the production of exported quantities that have been confirmed by trade data.

Cow milk

Milking animals	Head	665 890
Yield	Kg./AN	4 113
Production	MT	2 738 800
Exports	MT	57 124
Waste	MT	54 776
Processed	MT	1 410 000
Food	MT	1 200 000

In this example, it is assumed that the figures for the number of milking animals as well as those for production, exports and food, are available from official sources. The number of milking animals differs from the figures shown earlier for "females actually reproducing" or even more specifically from that shown for "births" in the "cattle" accounts because not all females which have given birth during the reference period were actually milked.

"Waste" has been estimated by assuming a waste rate of 2% of supply (in this case production). The "feed" element is the remainder after having allowed for all the "inputs" for the processed products derived from fresh milk (i.e., 296 500 MT for cream, 703 460 MT for butter, 6 640 MT for evaporated whole milk, 34 400 MT for dry whole milk and 369 000 MT for cheese).

Cream

Input	MT	296 500
Extraction rate	Percent	35
Production	MT	103 780
Waste	MT	2 076
Food	MT	101 704

Since the production of cream is a recorded figure, the input has been calculated by applying a known extraction rate of 35.0%. Waste is assumed to be 2% of supply (production).

Butter

Input	MT	703 460
Extraction rate	Percent	4.53
Production	MT	31 880
Inputs	MT	2 745
Exports	MT	7 482
Waste	MT	693
Food	MT	23 500
Other utilization	MT	2 950

In the SUA for butter the figures for input, production, trade and food are considered to be recorded data. The extraction rate, therefore, has been calculated by dividing production by input. Waste has been estimated as 2% of supply (production + imports) and "other utilization" is the remainder in the account.

Skim milk is a by-product obtained when processing fresh milk into butter and cream.

Skim milk

Input	MT	1 000 000
Extraction rate	Percent	86.4
Production	MT	864 340
Feed	MT	60 000
Waste	MT	43 217
Processed	MT	598 000
Food	MT	163 123

The input figure for skim milk has been arrived at by summing up the inputs of fresh milk for the production of cream and butter. The production figure must, therefore, be the difference between the input of fresh milk to skim milk and the sum of cream and butter production (103 780 MT and 31 880 MT). The extraction rate is a derived figure. Feed is estimated on the basis of known information regarding the livestock sector, while the amount going to processing is obtained by aggregating the inputs of skim milk for the production of dry skim milk (374 000 MT) and cheese (224 000 MT). Food is obtained as the remainder.

Dry skim milk

Input	MT	374 000

Extraction rate	Percent	9.5
Production	MT	35 550
Exports	MT	5 540
Feed	MT	25 000
Waste	MT	710
Food	MT	4 300

The input for the SUA of dry skim milk has been estimated by dividing the recorded production figure with the known extraction rate. Waste has been estimated as 2% of supply (production). The figures for exports and feed are recorded data while the quantity designated as "food" is obtained as the remainder.

Evaporated whole milk

Input	MT	6 640
Extraction rate	Percent	33
Production	MT	2 190
Imports	MT	1 652
Waste	MT	77
Food	MT	3 765

The production of evaporated whole milk is a recorded figure and the input is estimated on the basis of a known extraction rate of 33%. Imports are recorded, and waste has been estimated as 2% of supply (production + imports). Food is the remainder in this SUA.

Dry whole milk

Input	MT	34 400
Extraction rate	Percent	10.3
Production	MT	3 543
Imports	MT	300
Exports	MT	164
Waste	MT	77
Food	MT	3 602

In the SUA for dry whole milk, quantities for input, production and trade are recorded figures. The extraction rate has been derived by dividing production by input. Waste has been estimated as 2% of supply (production + imports) and food is designated as the remainder.

Cheese

Input	MT	593 000
Extraction rate	Percent	12.5
Production	MT	74 146
Imports	MT	1 660
Exports	MT	9 270
Waste	MT	1 516
Food	MT	65 020

The input figure is obtained as the sum of the inputs of whole milk for cheese production (369 000 MT) and of skim milk for cheese production (224 000 MT). Both production and trade are recorded figures. The extraction rate is the result of dividing production by input and waste and has been calculated as 2% of supply (production + imports). Food is the remainder, or the balance of the supply after all other uses have been subtracted.

The account for whey completes the series of SUAs relating to production, trade and processing of cow milk. Whey is a by-product of cheese production so the input is the same as for cheese. In the absence of any related information (except the extraction rate) all figures have been estimated; waste is assumed to be 5% of supply (production).

Whey

Input	MT	593 000
Extraction rate	Percent	84
Production	MT	498 100
Waste	MT	24 900
Feed	MT	473 200

Hen eggs

Laying population	Head	24 620 000
Yield	Kg./AN	5.5
Production	MT	135 500
Exports	MT	17 114
Hatching	MT	13 550
Waste	MT	6 775
Processed	MT	3 388
Food	MT	94 673

Turning to the account for hen eggs, the yield has been calculated by dividing production by number of reported laying birds. Hatching is estimated as 10% of production, waste as 5% of production and processing as the input for the manufacture of liquid eggs and dry whole yolks. Food is the remainder.

Liquid eggs

Input	MT	1 016
Extraction rate	Percent	83
Production	MT	843
Exports	MT	843

An account has been prepared for liquid eggs solely to cover reported exports of 843 MT since this quantity must have been manufactured, there being no imports. Thus, the production is estimated to meet exports, while the input has been derived by dividing production by the extraction rate.

Dry whole yolks

Input	MT	2 372
Extraction rate	Percent	25
Production	MT	593
Exports	MT	593

The account for dry whole yolks has been constructed in the same way as the account for liquid eggs.

IV. EXAMPLES FOR THE FISHERY SECTOR

Freshwater fish (fresh)

Production (catch)	MT	90 950
Exports	MT	441
Processing	MT	43 330
Food	MT	47 369

Beginning with the account for freshwater fish, the amount processed is the sum of the input of fresh fish for the manufacture of frozen fillets (6 600 MT) and cured

freshwater fish (36 730). The food element of freshwater fish is then the remainder of the production after allowing for exports.

Freshwater fillets (frozen)

Input	MT	6 600
Extraction rate	Percent	40
Production	MT	2 640
Exports	MT	227
Food	MT	2 413

The input for freshwater fillets has been calculated by using the known extraction rate, while food is obtained as the remainder after providing for the quantity exported.

Freshwater fish (cured)

Input	MT	36 730
Extraction rate	Percent	35
Production	MT	12 855
Exports	MT	209
Food	MT	12 646

For the SUA of freshwater fish (cured), input has been calculated based on the extraction rate and the quantity produced. Food is the remainder once exports have been subtracted.

Marine fish (fresh)

Production (catch)	MT	6 475
Processing	MT	77
Food	MT	6 398

In the case of fresh marine fish, "processing" is the quantity of fresh marine fish needed to manufacture the exports of cured marine fish.

Marine fish (cured)

Input	MT	77
Extraction rate	Percent	33.3
Production	MT	26
Exports	MT	26

The SUA for cured marine fish is created to cover an export of 26 MT which must have been manufactured in the absence of an offsetting quantity of imports. Thus, production is estimated at the level of exports, while the input quantity is calculated based on the known extraction rate.

APPENDIX

Availability and Sources of Data/Information

Wheat: Area harvested, 1 643 200 HA; (subsequent year, 1 620 400 HA); production, 4 178 600 MT; exports, 359 082 MT; feed, basic information for estimate supplied by Ministry of Agriculture and commercial feed processing industries; seeding rate, 150 Kg./HA. (Ministry of Agriculture); waste, 5%, based on information available from Marketing Board and local merchants.

Wheat flour: Extraction rate of 80% obtained from milling industry; imports, 44 160 MT; exports, 73 450; waste of 3% obtained from merchants.

Wheat bran: Extraction rate at 17% supplied by milling industry; exports 24 090 MT.

Potatoes: Area harvested, 6 905 000 HA; area planted in subsequent year 6 800 000 HA; production, 11 300 000 MT; imports, 28 500 MT; exports, 13 100 MT; feed, 5 000 000 MT (information obtained from Ministry of Agriculture and commercial feed processing industries); waste, 13% according to estimates made by extension workers and food processing industry.

Potato flour: Production, 16 680 MT; exports, 4 620 MT.

Potato starch: Production, 75 400 MT; imports, 5500 MT.

Sugar cane: Production, 4 044 300 MT; yield of 78 000 Kg./HA. obtained from Ministry of Agriculture; food, 280 000 MT.

Cane sugar (raw): Input, 3 464 300 MT reported by the sugar industry as input for the production of raw sugar. Production, 375 978 MT. All raw sugar is further processed into refined sugar.

Sugar (refined): Extraction rate of 92% and estimate of waste at 5% supplied by the sugar industry; imports, 39 121 MT.

Molasses: Extraction rate of 4.5% and estimate for percentage of waste at 10% supplied by the sugar industry; exports, 5 207 MT.

Bagasse: Extraction rate of 25% obtained from the sugar industry.

Non-centrifugal sugar: Extraction rate at 10% and estimate for percentage of waste of 10% supplied by extension workers and local merchants.

Dry peas: Area harvested, 51 859 HA; area harvested of green peas, 21 440 HA; Ministry of Agriculture indicated that around 10% of area under dry peas had to be re-sown because of natural calamities; production, 27 485 MT; exports, 6 760 MT; feed use of 1 400 to 1 500 MT and seeding rate of 50 Kg./HA. as reported by the Ministry of Agriculture; waste at 10% were estimated by local merchants.

Groundnuts (in shell): Area harvested in current year, 135 956 HA.; subsequent year, 176 290 HA.; production, 119 400 MT; seeding rate, 80 Kg./HA.; and waste of 8% obtained from agricultural officers and the oil industry.

Groundnuts (shelled): Shelling rate at 65%; waste of 1%; quantity of groundnuts in shell crushed into oil, 15 000 MT; all obtained from the oil industry;
exports, 9 131 MT.

Groundnut oil: Extraction rate of 36% and quantity used for non-food purposes of 1 080 MT, as reported by the oil industry.

Groundnut cake: Extraction rate of 60% reported by the oil industry;
exports, 3 614 MT.

Seed cotton: Area harvested, 243 162 HA; area sown in subsequent year, 271 787 HA.; production, 240 114 MT.

Cotton lint: Production, 87 000 MT; exports, 64 733 MT.

Cottonseed: Production, 150 000 MT; feed, relevant information obtained from commercial feed processing industry; seeding rate, 30 Kg./HA.

Oil of cottonseed: Extraction rate of 18% reported by the oil industry.

Cake of cottonseed: Exports, 34 400 MT; extraction rate of 45% reported by the oil industry; feed, commercial feed processing industry indicated that 25 000 to 30 000 MT are generally manufactured into animal feed.

Cotton linter: Extraction rate of 4% reported by the oil industry; exports, 5 027 MT.

Cattle: All figures in the account are official data supplied by the Ministry of Agriculture, except the birth rate and the take-off rate which are derived figures.

Beef and Veal: Production, 140 505 MT; imports, 16 987 MT; exports, 50 607 MT; waste, 2% based on experts working in the meat sector.

Cattle offals: Imports, 2 082 MT; exports, 1 511 MT; information on waste and utilization obtained from slaughterhouses.

Fat of cattle: Information supplied by slaughterhouses.

Beef preparation: Information regarding processing of beef into beef preparations supplied by the meat processing industry; extraction rate, 90%; exports, 5 180 MT.

Cow milk: Milking animals, 665 890 Head; production, 2 738 800 MT; exports, 16 900 MT; food, 1 200 000 MT; waste 2% obtained from the dairy industry.

Cream: Production: 103 780 MT; extraction rate of 35% and waste of 2% supplied by the dairy industry.

Butter: Production, 31 880 MT; imports, 2 745; exports, 7 482 MT; fresh milk manufactured into butter, 703 460 MT; quantity available for direct human consumption ("food") at 23 500 MT and information on waste supplied by the dairy industry.

Skim milk: Information regarding feed use obtained from the Ministry of Agriculture and waste of 5% from the dairy industry.

Dry skim milk: Production, 35 550 MT; exports, 5 540 MT; extraction rate of 9.5% and information on waste available from the dairy industry; quantity fed to animals supplied by the Ministry of Agriculture.

Evaporated whole milk: Production, 2 190 MT; imports, 1 652 MT; extraction rate of 33% and information on waste of 2% obtained from the dairy industry.

Dry whole milk: Production, 3 543 MT; imports, 300 MT; exports, 164 MT; quantity of fresh milk manufactured into dry whole milk of 34 400 MT and information on waste 2% available from dairy industry.

Cheese: Production, 74 146 MT; imports, 1 660 MT; exports, 9 270 MT; information regarding the quantity of fresh milk (369 000 MT) and skim milk (224 000 MT) used for the production of cheese and waste at 2% supplied by the dairy industry.

Whey: Extraction rate of 84% and waste of 5% obtained from the dairy industry.

Hen eggs: Population, 24 620 000 head; production, 135 500 MT; exports, 17 114 MT; extension workers concerned and the Ministry of Agriculture indicated that about 10% of production are generally used for reproduction (hatching) and 5% could be considered wasted.

Liquid eggs: Extraction rate of 83% reported by the food processing industry; exports, 843 MT.

Dry whole yolks: Extraction rate of 25% reported by the food processing industry; exports, 593 MT.

Fishery: All information on processing of fish have been supplied by the fishery processing industry.

Freshwater fish (fresh): Production (catch), 90 950 MT; exports, 441 MT.

Freshwater fillets (frozen): Production, 2 640 MT; exports, 227 MT; extraction rate, 40%.

Freshwater fish (cured): Production, 12 855 MT; exports, 209 MT; extraction rate, 35%.

Marine fish (fresh): Production (catch), 6 475 MT.

Marine fish (cured): Exports, 26 MT; extraction rate, 33.3%.