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USE OF THE KASS MODEL IN PRELIMINARY PLANNING
for the
FOURTH FIVE YEAR PLAN

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Korean Agricultural Sector Study

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Background Information for the Revision of
TFYP and Formulation of FFYP

Basic Guidelines for Korean Economic Prospects (1973-1981), published January 18, 1973 provides the guidelines for revising the Third Five Year Plan (1972-1976) and to formulate the Fourth Five Year Plan (1977-1981).

As part of the October Revitalization Movement, the Korean economy is to move forward at accelerated speed; and this document presents the goals to be obtained between 1973 and 1981. Primary goals of Korean economy to be achieved by 1981 include a per capita GNP of 1,000 dollars and total export amount of 10 billion dollars.

Use of the KASS Model in Preliminary Planning
in Agricultural Sector

The model used in the agricultural sector of the First, Second, and Third Five Year Economic Development Plan was mainly a simple linear extrapolation model without regarding mutual consistency among sectors and feasibility on present or potential resources available in agricultural sector.

Due to the weakness and limitation of the linear extrapolation model, it cannot be applied very effectively as a

long-run development planning purpose. The past trends of Korean agriculture show a strong upward phenomena in both production and demand. If we fully understand that some of the staple foods (e.g. rice) have almost reached their saturation point, the use of a linear extrapolation method for projection purpose is too risky.

Since September, 1971, the MSU/AERI Sector Study Team has been a generalized system simulation model of the agricultural sector as an analytical aid to policy makers in planning, policy formulation, and program development.* The components of that model which are presently operating require much additional work and other components must be developed. Analyzing different policy assumptions will also entail data collection and analysis "off-line", in addition to use of the existing model.

Appendix A contains a position paper submitted to the Office of Planning and Coordinating, MAF, before using the KASS Model in the plan formulation.

* See George E. Rossmiller et al., Korean Agricultural Sector Analysis and Recommended Development Strategies, 1971-1985, AERI-MAF, Seoul, Korea; and Department of Agricultural Economics, Michigan State University, East Lansing, 1972.

Guideline Used and Model Change Necessary

The following is a discussion of the data, parameter, and programming changes required in the components of the model in order to set the model up to conform with the EPB guidelines and current data.

Population Component

The EPB guidelines appeared to include simple linear projections of total population. The annual increase rate in the population appears to be somewhat lower than used in the KASS model under the intensive population control program assumption and substantially lower than the rates used under the moderate population control program assumption. In addition, the straight-line EPB projections do not account for the fact that an increasing number of females will be moving into the child bearing age cohorts in the late 1970's, thus creating a predictable "baby boom". This question was raised by KASS with EPB along with the explanation that our population component in the model uses a much finer breakdown of data than is necessary for straight-line projection and is recursive in the sense that birth rates and death rates are applied to age cohorts and the actual number of

births and deaths depend upon the number of persons in specific age cohorts at any given point in time. EPB agreed to our using the KASS model and methodology as long as the 1981 figure for total population is equal to their straight-line estimates. This will mean a substantial reduction in the rate of population growth assumed in the KASS models since the EPB 1981 estimate of total population is 36.709 million persons while the estimates from KASS are 37.672 million persons under the intensive population control program assumption, and 38.234 million persons under the moderate population control program assumption. The population estimate affects per capita incomes and consumer expenditures as well as total demand for agricultural commodities. It does not, however, affect employment during the projection period since all of the persons who will be in the working force in 1981 are now already born.

Demand Component

In order to drive the demand component population is provided from the population component and yearly urban consumer expenditure is required from another source. In the KASS model this is normally provided by a simple input-

output component which links the agricultural sector to the nonagricultural sector. Present model programming accepts a base year urban consumer expenditure figure and applies a yearly rate of increase during the simulation period. For the simulation runs reported in the sector report this figure is nine percent.

EPB guidelines indicate a yearly figure (1971-1981) for total consumer expenditure. Since the demand component in the model is an urban demand component, it is necessary to split total consumer expenditure into agricultural and non-agricultural portions. For Alternative MAF/KASS V, urban consumer expenditure will be calculated as follows:

$$\text{Urban Consumer Expenditure (t)} = \text{Total consumer expenditure (t)} - (\text{Agricultural value added (t)} + \text{Agricultural sector income from nonfarm sources (t)}) \times \text{Agricultural Average propensity to consume (t)}.$$

Where:

- a. Total Consumer Expenditure is exogenous (EPB Guidelines)
- b. Agricultural Value Added is calculated in KASS model subroutine REGAC. Summation across regions must be accomplished here to be used in subroutine DEMAND. This is presently not done until subroutine CRTNAT and will require slight reprogramming.

- c. Agricultural Sector Income From Non-Farm Sources (NAI) is a yearly percent of Agricultural Value Added (AVA), i.e., $NAI_t = AVA_t \times K_t$ where K is an exogenously furnished percentage figure (calculated from EPB and Blue House source guidelines).
- d. Agricultural Average Propensity to Consume is exogenous and was calculated from MAF historic data series to be .86, a constant.

International Commodity Price Projections ^{1/}

In the present KASS model the Alternative III producer prices are considered to be the international prices for the commodities listed. During the last several months, international grain prices have increased drastically creating the need for substantial revision in international grain price projections to 1981. Following is the rationale for those revisions as presented in Table 1.

Rice: Present abnormally high rice prices which began increasing during 1972 are due to major crop failures, particularly throughout Southeast Asia. With heavy U.S. and Japanese commitment toward disaster relief and toward filling in with exports to countries incurring crop failures,

^{1/} At present, it is almost impossible to predict U.S. agricultural policy change effects due to President Nixon's "agriculture liberalization policy". If those effects are fairly accurately predictable at the same time in near future, the price projection should be revised.

Table 1
Producer Prices for Grain

Types of Grain	Year									
	1970	1973	1974	1975	1976	1977	1978	1979	1980	1981
Rice	75.0	98.7	104.2	109.6	115.0	118.0	121.0	124.0	127.0	130.0
Barley	48.0	58.0	60.3	62.7	65.0	66.0	69.0	68.0	69.0	70.0
Wheat	24.1	35.0	35.0	32.0	30.0	30.0	30.0	30.0	30.0	30.0
Pulses	97.0	106.0	109.0	112.0	115.0	118.0	121.0	124.0	127.0	130.0
Potatoes	53.0	47.0	45.0	43.0	43.2	43.4	43.6	43.8	44.0	44.7
Misc. Grain	40.0	49.0	52.0	55.0	56.4	57.8	59.2	60.6	62.0	62.6

Assumptions introduced into price determinations.

(1) Rice: Price raising for production inducement and economization of consumption - 81/70:176%

1973-76: Real price will be increased by annual average rate of 5%.

1977-81: Annual average 2.4%

(2) Barley: 1) Dual prices are continuing until 1976 in order to increase production and consumption.

2) Dual prices are and will be kept at 50% level of rice price.

(3) Wheat: Imported price.

(4) Other Grain: Self-supported price except corn and soybean.

pipeline stocks are relatively low. In the case of rice, the production season is shorter than for other grains with many localities in the world producing two or three crops per year. Thus, normalization of prices should be possible by late 1973 or mid-1974. Political considerations in the U.S. would indicate that the price may not return quite to pre-1972 price crisis levels so a long term price in excess of former normalized levels is indicated.

Wheat: The 1972-1973 wheat prices are abnormally high because of short world crops, and particularly the short crop in Russia requiring massive imports by that country. Outlook for the Russian crop for 1973 is below normal; so unless the rest of the world has above normal production, the normalization of the wheat price will not be possible before 1975. Mainland China wheat production is an unknown but it is likely that production trends in China will follow the pattern indicated for Russia. Thus, increased imports by China are likely. With slightly increasing demands and the competition of feedgrains in production and the political considerations in both the major exporting and major importing countries, it is likely that a floor price for wheat somewhat above pre-1972 price levels is quite realistic.

Feedgrains: Present international feedgrain prices are probably abnormally high due to the recent short crops (particularly in the U.S. in 1971) and the excessively heavy demand for feedgrains in the U.S. as attempts are made to rapidly increase meat production in response to upward shifts in demand and rapidly rising meat prices. The long term trend the world over with rising incomes is an increase in the demand for meat, dairy, and poultry products and massive shifts toward the use of technology in livestock production which uses feedgrains as a feed base. Thus, beyond the present disturbance in the international market the longterm demand trend for feedgrains will be up. Production capacity for feedgrains can be extended somewhat above present levels, but the short term phenomena of excess demand, short crop supplies, and relatively empty pipelines indicate that the normalizing of prices will probably not be completed until about 1975. Even at that point the normalized price will likely be higher than the pre-1972 price crises level and will probably increase slightly over time. We, however, took a more conservative approach and leveled out the feedgrain import price after 1975.

Assumptions for Other Model Parameters

Table 2 presents the marketing margins assumed for the basic grain commodities. Table 3 presents rural and urban demand elasticities. Table 4 presents the cross elasticities. Table 5 presents urban per capita consumption targets which are used by the model to adjust the urban income elasticities.

Other model parameters are the same as were assumed for KASS Alternative II.

Conclusions

Policy assumptions which can be analyzed include such items as follows;

1. Population growth rates
2. Migration rates
3. Changes in tastes and preferences for agricultural commodities.
4. Producer and consumer price policies
5. Rate of general economic growth and urban consumer expenditure.
6. Level of grain imports.
7. Level of government investment in such categories as agricultural research, agricultural guidance, land and water development, and other kinds of quantifiable investments.

Table 2
Marketing Margin for Grains

Grain Commodity	Marketing Margin
Rice	0.12
Barley & Naked Barley	0
1970	0
1975	0
1981	0.12
Wheat	0.12
Pulses	0.15
Potatoes	0.50

Table 3
Rural and Urban Demand Elasticities

Commodity	Rural		Urban	
	Income	Price	Income	1/Price
Rice	0.04	0	-0.2	-0.4
Barley & Naked Barley	-0.08	0	-1.0	-1.0
Wheat	0.5	-1.0	1.5	-0.6
Misc. Grain	0	0	0	-0.4
Pulses	0.8	0	0.8	-0.4

1/ Changes with rising incomes over time.

Table 4
Cross Elasticities of Urban Demand

Quantity of:	Price of:	Cross Elasticities
Rice	Barley & Naked Barley	0.2
Barley & Naked Barley	Rice	1.3
Wheat	Rice	0.3137
Barley	Barley & Naked Barley	0.041
Barley & Naked Barley	Wheat	0.751
Rice	Wheat	0.1424

Table 5
Urban Per Capita Consumption Targets

Grain Commodity	Quantity kg/cap-yr
Rice	90
Barley	10
Wheat	90
Pulses	14
Potatoes	55

8. Production programs for specific crops and live-stock commodities.
9. Sensitivity tests to determine effect of changing coefficients on the system.

However, given a short time span, we have not fully considered some of the above items.

After a completion of preliminary formulation for agricultural development plan under Fourth Five Year Economic Development Plan, MAF had a review session with inter-governmental committee on the Economic Development Plan, whose members mainly consisted of the vice-ministers of the various economic ministries.

At the meeting, Lee, Duck-Yong, Vice-Minister of MAF emphasised that the basic model for the plan had been intensively developed by the MSU/AERI Team under the USAID contract since September 1971. Most of those at the meeting recognized and fully accepted the fact that the planning process was improved over that used with previous five year plan. In addition, the KASS Team provided for MAF the basis of formulating food demand/supply projections with general equilibrium basis. It was one of the more important contributions made by KASS to MAF in practical application of the KASS model.

Appendix B contains a listing of the update deck which modified the Korean Agricultural Simulation Model (Version 1.14, Alternative II, as documented in Appendix A of The User's Manual, KASS Special Report 9) to run KASS/MAF Alternative V.

Appendix C presents the projected consequences for Alternatives I - V for 1970, 1971, 1972, 1976, and 1981. Alternatives I - IV are included to provide a basis for comparison with Alternative V.

Appendix D presents the supply-disappearance tables for Alternatives I - V for 1970, 1971, 1972, 1976, and 1981.

APPENDIX A

Preliminary Thoughts on the Formulation of the Agricultural Development Plan (1973-1981) under EPB Guidelines*

I. Major areas covering economic development plan formula- tion are as follows:

- A. Demand estimates
- B. Supply estimates (under the various level of resource allocation).
- C. Policy, program and project formulation to achieve desired goals. (To solve present/future problems related to agricultural sector and to overall Korean economy.)

II. Under the present constraints such time, manpower, etc., facing to the task force on agricultural development plan formulation, below listed approach methods are available in hand.

- A. Traditional Approach methods:
 - a. Simple linear extrapolation
 - b. Independent sectorial development model
 - c. Aggregating of various sub-sector without re-
viewing and considering internal consistency and
coordination.
- B. KASS Model (general, simulated, computerized and re-
presenting system model).

As far as the KASS Team are concerned, KASS Model is fairly well developed applying in agricultural development purpose. However, some of off-line projections (yields, land allocation, commodity prices, food demand elasticities, and population) and its input data are requiring updating and tuning to get better results.

* Submitted for consideration by the Office of Planning and Coordination, MAF, in February, 1973.

III. If MAF fully agrees on using KASS Model as a basic frame for Agricultural Development Plan requested by EPB, task force will follow the below listed steps.

A. Review KASS sub-sector model, their significant variables and coefficients.

a. KASS Model components

1. Production components
 - (1) Annual crop production
 - (2) Perennial crop production
 - (3) Crop accounting
 - (4) Regional/national accounting
 - (5) Livestock production
2. Urban demand components
3. National criterion components
4. Demographic components

b. Input data; approximately 250 items

B. Having intensive review sessions with various bureaus whether KASS input data are appropriate or not.

In case of KASS original input data are not appropriate or needed any additional data, task force will revise or request MAF personnel to collect those data under the full conformation with concerned bureau director.

C. After completion of internal use draft of development plan, task force will have at least 2-3 times of special review session with MAF Bureau directors and one final review session with vice-minister.

IV. With parallel to the above works, task-force will develop agricultural sector goals attainable under a given resource assumptions. Particularly, in this stage, task force should have proper and intensive discussion with MAF decision makers to get a clear-cut definition of working objectives and assumptions fully acceptable to those concerned on this area including EPB.

- V. Anticipated problem area by using KASS Model.
 - A. Since most of MAF projections or plans are special equilibrium concept or independent sectorial plan, some of those plan results are not fully agreeable with KASS model, e.g. livestock development plan.
 - B. Former works on demand and supply estimates of food grains had a little or no allowances on farm loss, marketing loss and storage loss, etc. If MAF wants this plan to be more realistic, executable, and workable plan, those items should be given a full consideration.
 - C. Setting problems of long-run per capita consumption targets of major food items.

- VI. Set up proper communication channel to make better understanding of the plan and to increase working efficiency.
 - A. Task force meeting three times a week.
 - B. Meeting between task force members and MAF policy decision makers once a week.

APPENDIX B

**Modifications to
Korean Agricultural Simulation Model
(Version 1.14)
For Running MAF/KASS Alternative V**

ELT.ILD ALTS.UPDATE...x
ELT006-RLIB67-1n 7/21-14:47:21
CYCLE (00)

```
000001 000 PASG:T TAPE1,12,.,KASS2
000002 000 PASG KASH,F
000003 000 COPIN TAPE1,.,KASH.
000004 000 FREE TAPE1.
000005 000 PDP:LF KASH,PDPBLK,.,PDPBLK
000006 000 -39
000007 000 3 ,VALHM2(3,4)
000008 000 -127
000009 000 6 ,VALPRG(3,16,3)
000010 000 FOR:SW KASH,CONTRL,.,CONTRL,.,CONTRL
000011 000 -129
000012 000 KYEAR = YEAR + .01
000013 000 IF (KYEAR.NE.1971 .AND. KYEAR.NE.1972 .AND. KYEAR.NE.1976
000014 000 1 .AND. KYEAR.NE.1981) IPROTH = 0
000015 000 FOR:S KASH,CRT:AT,.,CRTNAT,.,CRTNAT
000016 000 -11
000017 000 DIMENSION VLPRG(16)
000018 000 -16
000019 000 D1 = 1.
000020 000 -17
000021 000 K1 = 12
000022 000 -20,20
000023 000 TRCST(J) = 1.00 * 400.
000024 000 IF(J.EQ.2) TRCST(2) = 15.0 * 400.
000025 000 -28
000026 000 IF (J.GE.4) GO TO 28
000027 000 DO 24 L=1,16
000028 000 24 VLPRG(L) = VALPRG(3,L,J)
000029 000 PWLD(J) = TABLIE(VLPRG,SHALL,D1,K1,YEAR)
000030 000 GO TO 30
000031 000 28 CONTINUE
000032 000 -32
000033 000 30 CONTINUE
000034 000 FOR:S KASH,DEMAND,.,DEMAND,.,DEMAND
000035 000 -4
000036 000 INCLUDE REGACC,LIST
000037 000 -11
000038 000 C
000039 000 VALTCE = TOTAL CONSUMER EXPENDITURE (BILL. MON)
000040 000 DIMENSION VALTCE(12)
000041 000 1 DATA VALTCE/2166.1E9, 2415.5E9, 2589.1E9, 2797.8E9, 2980.1E9,
000042 000 2 3198.8E9, 3437.9E9, 3738.8E9, 4095.8E9, 4480.3E9,
000043 000 4898.7E9, 5393.7E9/, DTCE/1.0/, KTCE/11/
000044 000 -19,30
000045 000 -39,34
000046 000 -41
000047 000 C
000048 000 PRCONR = .86
000049 000 TCONEX = TABFXE(VALTCE,SHALL,DTCE,KTCE,YEAR)
000050 000 CONEXU = TCONEX - (TSVA,PRCONR)
000051 000 INCOM = CONEXU
000052 000 -44,44
000053 000 -69
000054 000 DO 1 I=1,4
```

- 20 -

```

000055 000      1 AZB(I) = VALMH2(IALT,I)
000056 000      IF (J=EQ.2) MH(2) = TABLIE(AZB,SHALL,DIFF,K,YEAR)
000057 000      -73,75
000058 000      -98,100
000059 000      FOR,S KASH,INPDEM,,INPDEM,,INPDEM
000060 000      -616
000061 000      ELAS(1) = -.2
000062 000      -25,25
000063 000      ELAS(20) = 1.7
000064 000      -28,28
000065 000      PCCONU(3) = .060
000066 000      -33,33
000067 000      PCCONU(8) = .014
000068 000      -100,100
000069 000      PCCONT(1) = .09
000070 000      -102,102
000071 000      PCCONT(3) = .09
000072 000      -106,107
000073 000      PCCONT(7) = .130
000074 000      PCCONT(8) = .045
000075 000      -137,137
000076 000      PDFLTR(1) = .10
000077 000      PDFLTR(2) = .20
000078 000      PDFLTR(3) = .05
000079 000      -142,142
000080 000      MH(1) = .12
000081 000      -149,158
000082 000      DO 95 IY=1,4
000083 000      95 VALMH2(1,IY) = -.22
000084 000      VALMH2(2,1) = 0.
000085 000      VALMH2(2,2) = 0.
000086 000      VALMH2(2,3) = .12
000087 000      VALMH2(2,4) = .12
000088 000      DO 97 IY=1,4
000089 000      97 VALMH2(3,IY) = .14
000090 000      -159,160
000091 000      MH(3) = .12
000092 000      MH(4) = .12
000093 000      -183,184
000094 000      PMLOSS(3) = .02
000095 000      PMLOSS(4) = .03
000096 000      FOR,S KASH,INPPRD,,INPPRD,,INPPRD
000097 000      -55,58
000098 000      PFLOSS(1) = .07
000099 000      PFLOSS(2) = .07
000100 000      PFLOSS(3) = .07
000101 000      PFLOSS(4) = .07
000102 000      -42
000103 000      PFLOSS(8) = .20
000104 000      FOR,S KASH,INPTS,,INPTS,,INPTS
000105 000      -13
000106 000      KASS = 1971.9 - 1974.6
000107 000      -70
000108 000      DIMENSION VLRG(16)
000109 000      -28
000110 000      DI = 1.
000111 000      -79

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000112 000      KI = 11
000113 000    -44,44
000114 000      PCCONO(IR,3) = .034
000115 000    -66,68
000116 000      ELASIR(1) = .04
000117 000      ELASIR(2) = -.08
000118 000      ELASIR(3) = .5
000119 000    -72,73
000120 000      ELASIR(7) = .2
000121 000      ELASIR(8) = -.1
000122 000    -78,80
000123 000      ELASIR(13) = .6
000124 000      ELASIR(14) = 1.0
000125 000      ELASIR(15) = .8
000126 000    -82,82
000127 000      ELASIR(17) = 1.0
000128 000    -117,117
000129 000      PAVGO(IR,6) = 97000.
000130 000    -177,177
000131 000      DO 38 JC=1,3
000132 000      DO 36 J=1,16
000133 000      36 VLPRG(J) = VALPRG(I,J,JC)
000134 000      TPAVG(JC) = TABLIE (VLPRG,SMALL,D,K,1,YEAR)
000135 000      38 CONTINUE
000136 000      DO 40 JC=4,19
000137 000  *FOR,S   KASH,PRODLV,,PRODLV,,PRODLV
000138 000  *FOR,S   KASH,REGAC,,REGAC,,REGAC
000139 000    -29
000140 000      KASS = 1971.9 - 1974.6
000141 000    -31
000142 000  C          VALNFI = NON-FARM INCOME (PERCENT OF AG VALUE ADDED)
000143 000  DIMENSION VALNFI(11)
000144 000  DATA VALNFI/.22, .22, .22, .23, .24, .25, .26, .27, .28, .29,
000145 000  I          .30/, SMALL/1971.0/, DIFF/1.0/, K/10/
000146 000    -70
000147 000  C
000148 000      PCNFI = TABEXE(VALNFI,SMALL,DIFF,K,1,EAR)
000149 000    -168
000150 000  C          REPLACES CALCULATION OF OTHINC IN INPUTS
000151 000      OTHINC(IR) = (VAA(IR)/(1.0-PCNFI)) * PCNFI
000152 000  *FOR,S   KASH,VALDAT,,VALDAT,,VALDAT
000153 000    -240,240
000154 000      A1(1,1, 1) = 345000.
000155 000    -244,246
000156 000      A2(1,2, 1) = 347000.
000157 000      A2(1,3, 1) = 351000.
000158 000      A2(1,4, 1) = 355000.
000159 000    -250,250
000160 000      A1(2,1, 1) = 725000.
000161 000    -254,256
000162 000      A2(2,2, 1) = 727000.
000163 000      A2(2,3, 1) = 736000.
000164 000      A2(2,4, 1) = 744000.
000165 000    -260,260
000166 000      A1(3,1, 1) = 131000.
000167 000    -264,266
000168 000      A2(3,2, 1) = 131000.

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000169	000	A2(3,3, 1) = 133000.
000170	000	A2(3,4, 1) = 134000.
000171	000	-596,607
000172	000	VALPRG(2, 1,1) = 75000.
000173	000	VALPRG(2, 2,1) = 82000.
000174	000	VALPRG(2, 3,1) = 93000.
000175	000	VALPRG(2, 4,1) = 98700.
000176	000	VALPRG(2, 5,1) = 104200.
000177	000	VALPRG(2,6,1) = 109600.
000178	000	VALPRG(2, 7,1) = 115000.
000179	000	VALPRG(2, 8,1) = 118000.
000180	000	VALPRG(2, 9,1) = 121000.
000181	000	VALPRG(2,10,1) = 124000.
000182	000	VALPRG(2,11,1) = 127000.
000183	000	VALPRG(2,12,1) = 130000.
000184	000	VALPRG(3, 1,1) = 160. * 400.
000185	000	VALPRG(3, 2,1) = 160. * 400.
000186	000	VALPRG(3, 3,1) = 190. * 400.
000187	000	VALPRG(3, 4,1) = 250. * 400.
000188	000	VALPRG(3, 5,1) = 185. * 400.
000189	000	DO 50 IY=6,12
000190	000	50 VALPRG(3,IY,1) = 180. * 400.
000191	000	-409,620
000192	000	VALPRG(2, 1,2) = 40800.
000193	000	VALPRG(2, 2,2) = 49500.
000194	000	VALPRG(2, 3,2) = 55600.
000195	000	VALPRG(2, 4,2) = 58000.
000196	000	VALPRG(2, 5,2) = 60300.
000197	000	VALPRG(2, 6,2) = 62700.
000198	000	VALPRG(2, 7,2) = 65000.
000199	000	VALPRG(2, 8,2) = 66000.
000200	000	VALPRG(2, 9,2) = 67000.
000201	000	VALPRG(2,10,2) = 68000.
000202	000	VALPRG(2,11,2) = 69000.
000203	000	VALPRG(2,12,2) = 70000.
000204	000	VALPRG(3, 1,2) = 78. * 400.
000205	000	VALPRG(3, 2,2) = 78. * 400.
000206	000	VALPRG(3, 3,2) = 90. * 400.
000207	000	VALPRG(3, 4,2) = 95. * 400.
000208	000	VALPRG(3, 5,2) = 90. * 400.
000209	000	DO 55 IY=6,12
000210	000	55 VALPRG(3,IY,2) = 85. * 400.
000211	000	-422,633
000212	000	VALPRG(2, 1,3) = 24100.
000213	000	VALPRG(2, 2,3) = 25900.
000214	000	VALPRG(2, 3,3) = 29200.
000215	000	VALPRG(2, 4,3) = 35000.
000216	000	VALPRG(2, 5,3) = 35000.
000217	000	VALPRG(2, 6,3) = 32000.
000218	000	VALPRG(2, 7,3) = 30000.
000219	000	VALPRG(2, 8,3) = 30000.
000220	000	VALPRG(2, 9,3) = 30000.
000221	000	VALPRG(2,10,3) = 30000.
000222	000	VALPRG(2,11,3) = 30000.
000223	000	VALPRG(2,12,3) = 30000.
000224	000	VALPRG(3, 1,3) = 65. * 400.
000225	000	VALPRG(3, 2,3) = 65. * 400.

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000226 000 VALPRG(3, 3, 3) = 105. * 400.
000227 000 VALPRG(3, 4, 3) = 105. * 400.
000228 000 VALPRG(3, 5, 3) = 95. * 400.
000229 000 VALPRG(3, 6, 3) = 85. * 400.
000230 000 DO 56 IY=7,12
000231 000 56 VALPRG(3, IY, 3) = 75. * 400.
000232 000 -465,668
000233 000 VALPR(2, 1, 6) = 97000.
000234 000 VALPR(2, 2, 6) = 112000.
000235 000 VALPR(2, 3, 6) = 127000.
000236 000 VALPR(2, 4, 6) = 142000.
000237 000 -766,767
000238 000 VALPR(2, 3, 17) = 164000.
000239 000 VALPR(2, 4, 17) = 144000.
000240 000 C FOR,S KASH.POPSET..POPSET..POPSET
000241 000 -39,39
000242 000 BRCTLV(2, 1) = 0.95
000243 000 -49,49
000244 000 BRCTLV(2, 2) = 0.90
000245 000 C FOR,S KASH.POPSTR..POPSTR..POPSTR
000246 000 -13
000247 000 C TEMPORARY ADJUSTMENT OF TOTAL POPULATION TO COINCIDE
000248 000 C MORE CLOSELY WITH EPB PROJECTIONS
000249 000 DO 5 KRU=RUR+L+URBAN
000250 000 DO 5 JSEX=MALE+FEMALE
000251 000 DO 5 IA=1,NAGE
000252 000 POPC(IA,JSEX,KRU) = POPC(IA,JSEX,KRU) * (31849./32202.0)
000253 000 5 CONTINUE
000254 000 GMAP,1 .ABS
000255 000 IN KASH.
000256 000 HXQT .ABS
000257 000 SCNTRL KCSD=2, KOTH=1, NYEARS=12, IALTEX(2)=5: KP3=1 SEND
000258 000 HAF/KASS ALTERNATIVE 5
000259 000 1970 1971 1972 1976 1981

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- 24

QASG,T TAPE1,17H,KASS2

QASG KASH,F

QCOPIH TAPE1,17H,KASH.
FURPUR 0024-07/21 14:47
36 SYM 35 REL

QFREE TAPE1.

APPENDIX C

Projected Consequences

for

Alternatives I - V

1970, 1971, 1972, 1976, 1981

PROJECTED CONSEQUENCES FOR ALTERNATIVE # 1
TO COMPARE WITH MAF/KASS

CONSEQUENCES	UNITS	1970	1971	1972	1976	1981
1 POPULATION TOTAL	1000 PER.	31690.	32331.	32934.	35235.	38234.
2 POPULATION URBAN	1000 PER.	15820.	16422.	17089.	20088.	25842.
3 POPULATION RURAL	1000 PER.	15870.	15909.	15845.	15147.	12392.
4 CALORIES RURAL (REG. 2)	CAL/CAP-DAY	2630.	2630.	2619.	2618.	2693.
5 CALORIES URBAN	CAL/CAP-DAY	2536.	2574.	2617.	2739.	2805.
6 PROTEIN RURAL (REG. 2)	GRAMS/CAP-DAY	65.	65.	63.	65.	69.
7 PROTEIN URBAN	GRAMS/CAP-DAY	72.	75.	77.	83.	88.
8 URBAN CONSUMER PRICE INDEX	1970=100	100.	103.	103.	103.	103.
9 URBAN NONFOOD EXPENDITURE TOT.	BIL. WON	253.	952.	1048.	1564.	2606.
10 URBAN NONFOOD EXPENDITURE PC	1000 WON/CAP	54.	58.	61.	78.	101.
11 URBAN FOOD EXPENDITURE TOT.	BIL. WON	592.	635.	688.	924.	1296.
12 URBAN FOOD EXPENDITURE PC	1000 WON/CAP	37.	39.	40.	46.	50.
13 TOTAL URBAN EXPENDITURE	BIL. WON	1450.	1587.	1736.	2488.	3902.
14 FOOD / TOTAL	PERCENT	40.8	40.0	39.6	37.2	33.2
15 GROSS AG. INCOME (AGR. + OTHR)	BIL. WON	619.	831.	881.	1056.	1201.
16 GROSS AG. INCOME PC (AGR. + 2THER)	1000 WON/CAP	39.0	52.4	55.4	68.3	91.8
17 AG. VALUE ADDED TOT.	BIL. WON	509.	541.	580.	717.	821.
18 AG. VALUE ADDED PC	1000 WON/CAP	32.1	34.1	36.5	46.4	62.7
19 RETURNS PER HA. (RICE, REG. 2)	1000 WON/HA	147.	150.	164.	210.	213.
20 RETURNS PER MAN-YR (RICE, REG. 2)	1000 WON/MAN-YR	210.	216.	234.	291.	290.
21 FERTILIZER REQUIRED	MILL. MT	.77	.84	.91	1.18	1.60
22 PESTICIDE INDEX	1970=100	100.	101.	106.	125.	151.
23 CAPITAL REQUIRED INDEX	1970=100	100.	109.	118.	156.	237.
24 EXPENDITURE ON FERTILIZER	BIL. WON	17.8	18.7	19.7	22.6	23.4
25 EXPENDITURE ON PESTICIDE	BIL. WON	6.9	6.6	6.6	6.3	5.8
26 EXPENDITURE ON CAPITAL	BIL. WON	35.1	37.3	39.4	46.8	62.5
27 TAXES PAID INDEX	1970=100	100.	120.	129.	161.	193.
28 VALUE OF AG. IMPORTS (LESS YG)	BIL. WON	90.	93.	94.	120.	193.
29 VALUE OF AG. EXPORTS	BIL. WON	14.	33.	43.	54.	86.
30 NET EXPORT (EXPORT - IMPORT)	BIL. WON	-68.	-59.	-51.	-66.	-108.

PROJECTED CONSEQUENCES FOR ALTERNATIVE 2
TO COMPARE WITH MAF/KASS

CONSEQUENCES	UNITS	1970	1971	1972	1974	1981
1 POPULATION TOTAL	1000 PER.	31690.	32331.	32934.	35153.	37672.
2 POPULATION URBAN	1000 PER.	15820.	16422.	17089.	20040.	25481.
3 POPULATION RURAL	1000 PER.	15870.	15909.	15845.	15113.	12190.
4 CALORIES RURAL (REG. 2)	CAL/CAP-DAY	2630.	2630.	2620.	2634.	2732.
5 CALORIES URBAN	CAL/CAP-DAY	2536.	2570.	2606.	2721.	2796.
6 PROTEIN RURAL (REG. 2)	GRAMS/CAP-DAY	65.	65.	64.	66.	71.
7 PROTEIN URBAN	GRAMS/CAP-DAY	72.	74.	73.	82.	89.
8 URBAN CONSUMER PRICE INDEX	1970=100	100.	104.	105.	107.	107.
9 URBAN NONFOOD EXPENDITURE TOT.	BIL. WON	858.	934.	1020.	1490.	2496.
10 URBAN NONFOOD EXPENDITURE PC	1000 WON/CAP	54.	57.	60.	74.	98.
11 URBAN FOOD EXPENDITURE TOT.	BIL. WON	592.	652.	716.	998.	1406.
12 URBAN FOOD EXPENDITURE PC	1000 WON/CAP	37.	40.	42.	50.	55.
13 TOTAL URBAN EXPENDITURE	BIL. WON	1450.	1587.	1736.	2488.	3902.
14 FOOD / TOTAL	PERCENT	40.8	41.1	41.3	40.1	36.0
15 GROSS AG. INCOME (AGR.+ OTHER)	BIL. WON	619.	858.	931.	1204.	1418.
16 GROSS AG. INCOME PC (AGR.+ OTHER)	1000 WON/CAP	39.0	54.1	58.5	77.9	109.7
17 AG. VALUE ADDED TOT.	BIL. WON	509.	566.	628.	859.	1026.
18 AG. VALUE ADDED PC	1000 WON/CAP	32.1	35.7	39.5	55.6	79.4
19 RETURNS PER HA. (RICE, REG. 2)	1000 WON/HA	147.	160.	186.	276.	297.
20 RETURNS PER MAN-YR (RICE, REG. 2)	1000 WON/MAN-YR	210.	231.	264.	376.	391.
21 FERTILIZER REQUIRED	MILL. MT	.77	.90	1.02	1.52	1.97
22 PESTICIDE INDEX	1970=100	100.	101.	106.	126.	152.
23 CAPITAL REQUIRED INDEX	1970=100	100.	112.	124.	172.	253.
24 EXPENDITURE ON FERTILIZER	BIL. WON	17.8	20.0	22.1	29.1	33.0
25 EXPENDITURE ON PESTICIDE	BIL. WON	6.9	6.6	6.6	6.3	5.8
26 EXPENDITURE ON CAPITAL	BIL. WON	35.1	38.4	41.5	51.5	66.7
27 TAXES PAID INDEX	1970=100	100.	126.	140.	196.	248.
28 VALUE OF AG. IMPORTS (LESS FG)	BIL. WON	90.	89.	85.	98.	143.
29 VALUE OF AG. EXPORTS	BIL. WON	14.	34.	44.	59.	89.
30 NET EXPORT (EXPORT - IMPORT)	BIL. WON	-68.	-55.	-41.	-40.	-54.

PROJECTED CONSEQUENCES FOR ALTERNATIVE = 3
 TO COMPARE WITH MAF/KASS

CONSEQUENCES	UNITS	1970	1971	1972	1976	1981
1 POPULATION TOTAL	1000 PER.	31690.	32331.	32934.	35153.	37672.
2 POPULATION URBAN	1000 PER.	15820.	16422.	17089.	20040.	25481.
3 POPULATION RURAL	1000 PER.	15870.	15909.	15845.	15113.	12190.
4 CALORIES RURAL (REG. 2)	CAL/CAP-DAY	2630.	2630.	2637.	2686.	2763.
5 CALORIES URBAN	CAL/CAP-DAY	2536.	2604.	2652.	2794.	2877.
6 PROTEIN RURAL (REG. 2)	GRAMS/CAP-DAY	65.	65.	64.	66.	69.
7 PROTEIN URBAN	GRAMS/CAP-DAY	72.	78.	80.	85.	89.
8 URBAN CONSUMER PRICE INDEX	1970=100	100.	100.	99.	97.	98.
9 URBAN NONFOOD EXPENDITURE TOT.	BIL. WON	858.	967.	1084.	1676.	2750.
10 URBAN NONFOOD EXPENDITURE PC	1000 WON/CAP	54.	59.	63.	84.	108.
11 URBAN FOOD EXPENDITURE TOT.	BIL. WON	592.	620.	652.	812.	1152.
12 URBAN FOOD EXPENDITURE PC	1000 WON/CAP	37.	38.	38.	41.	45.
13 TOTAL URBAN EXPENDITURE	BIL. WON	1450.	1567.	1736.	2488.	3902.
14 FOOD / TOTAL	PERCENT	40.8	39.0	37.6	32.6	29.5
15 GROSS AG. INCOME (AGR.+ OTHER)	BIL. WON	619.	784.	790.	821.	904.
16 GROSS AG. INCOME PC (AGR.+ OTHER)	1000 WON/CAP	39.0	49.4	49.7	53.2	69.9
17 AG. VALUE ADDED TOT.	BIL. WON	509.	501.	504.	526.	606.
18 AG. VALUE ADDED PC	1000 WON/CAP	32.1	31.5	31.7	34.1	46.8
19 RETURNS PER HA. (RICE, REG. 2)	1000 WON/HA	147.	134.	131.	123.	135.
20 RETURNS PER MAN-YR (RICE, REG. 2)	1000 WON/MAN-YR	210.	193.	188.	173.	188.
21 FERTILIZER REQUIRED	MILL. MT	.77	.80	.83	.95	1.05
22 PESTICIDE INDEX	1970=100	100.	100.	104.	122.	145.
23 CAPITAL REQUIRED INDEX	1970=100	100.	100.	101.	104.	129.
24 EXPENDITURE ON FERTILIZER	BIL. WON	17.8	17.8	17.9	18.1	17.6
25 EXPENDITURE ON PESTICIDE	BIL. WON	6.9	6.6	6.5	6.1	5.6
26 EXPENDITURE ON CAPITAL	BIL. WON	35.1	34.4	33.7	31.1	34.0
27 TAXES PAID INDEX	1970=100	100.	111.	112.	118.	143.
28 VALUE OF AG. IMPORTS (LESS FG)	BIL. WON	90.	128.	138.	199.	319.
29 VALUE OF AG. EXPORTS	BIL. WON	14.	33.	37.	57.	91.
30 NET EXPORT (EXPORT - IMPORT)	BIL. WON	-68.	-96.	-101.	-142.	-227.

PROJECTED CONSEQUENCES FOR ALTERNATIVE = 4
TO COMPARE WITH HAF/KASS

CONSEQUENCES	UNITS	1970	1971	1972	1974	1981
1 POPULATION TOTAL	1000 PER.	31690.	32331.	32934.	35153.	37672.
2 POPULATION URBAN	1000 PER.	15820.	16422.	17089.	20040.	25481.
3 POPULATION RURAL	1000 PER.	15870.	15909.	15845.	15113.	12190.
4 CALORIES RURAL (REG. 2)	CAL/CAP-DAY	2630.	2630.	2613.	2598.	2696.
5 CALORIES URBAN	CAL/CAP-DAY	2536.	2534.	2539.	2606.	2706.
6 PROTEIN RURAL (REG. 2)	GRAMS/CAP-DAY	65.	65.	63.	66.	71.
7 PROTEIN URBAN	GRAMS/CAP-DAY	72.	73.	74.	79.	87.
8 URBAN CONSUMER PRICE INDEX	1970=100	100.	104.	106.	109.	108.
9 URBAN NONFOOD EXPENDITURE TOT.	BIL. WON	858.	929.	1009.	1461.	2465.
10 URBAN NONFOOD EXPENDITURE PC	1000 WON/CAP	54.	57.	59.	73.	97.
11 URBAN FOOD EXPENDITURE TOT.	BIL. WON	592.	658.	727.	1027.	1437.
12 URBAN FOOD EXPENDITURE PC	1000 WON/CAP	37.	40.	43.	51.	56.
13 TOTAL URBAN EXPENDITURE	BIL. WON	1450.	1587.	1736.	2488.	3902.
14 FOOD / TOTAL	PERCENT	40.8	41.5	41.9	41.3	36.8
15 GROSS AG. INCOME (AGR.+ OTHER)	BIL. WON	619.	868.	952.	1258.	1461.
16 GROSS AG. INCOME PC (AGR.+ OTHER)	1000 WON/CAP	39.0	54.7	59.8	81.4	113.0
17 AG. VALUE ADDED TOT.	BIL. WON	509.	576.	649.	914.	1069.
18 AG. VALUE ADDED PC	1000 WON/CAP	32.1	36.3	40.8	59.2	82.7
19 RETURNS PER HA. (RICE, REG. 2)	1000 WON/HA	147.	169.	203.	328.	357.
20 RETURNS PER MAN-YR (RICE, REG. 2)	1000 WON/MAN-YR	210.	242.	288.	442.	464.
21 FERTILIZER REQUIRED	HILL. MT	.77	.89	1.00	1.48	1.94
22 PESTICIDE INDEX	1970=100	100.	101.	106.	126.	152.
23 CAPITAL REQUIRED INDEX	1970=100	100.	112.	124.	172.	255.
24 EXPENDITURE ON FERTILIZER	BIL. WON	1.0	1.3	21.7	28.2	32.6
25 EXPENDITURE ON PESTICIDE	BIL. WON	6.9	6.6	6.6	6.3	5.8
26 EXPENDITURE ON CAPITAL	BIL. WON	35.1	38.4	41.5	51.6	67.3
27 TAXES PAID INDEX	1970=100	100.	128.	146.	213.	261.
28 VALUE OF AG. IMPORTS (LESS FG)	BIL. WON	90.	86.	79.	83.	108.
29 VALUE OF AG. EXPORTS	BIL. WON	14.	34.	45.	61.	95.
30 NET EXPORT (EXPORT - IMPORT)	BIL. WON	-68.	-52.	-34.	-22.	-12.

PROJECTED CONSEQUENCES FOR ALTERNATIVE - 5
MAF/KASS ALTERNATIVE 5

CONSEQUENCE	UNITS	1970	1971	1972	1973	1981
1 POPULATION TOTAL	1000 PER.	31690.	31849.	32385.	34382.	36724.
2 POPULATION URBAN	1000 PER.	15820.	16178.	16805.	19606.	24860.
3 POPULATION RURAL	1000 PER.	15870.	15671.	15580.	14776.	11864.
4 CALORIES RURAL (REG. 2)	CAL/CAP-DAY	2430.	2672.	2661.	2787.	3155.
5 CALORIES URBAN	CAL/CAP-DAY	2036.	2883.	2874.	2941.	3005.
6 PROTEIN RURAL (REG. 2)	GRAMS/CAP-DAY	65.	66.	64.	70.	84.
7 PROTEIN URBAN	GRAMS/CAP-DAY	72.	85.	85.	89.	95.
8 URBAN CONSUMER PRICE INDEX	1970=100	100.	103.	105.	107.	107.
9 URBAN NONFOOD EXPENDITURE TOT.	BIL. WON	858.	1150.	1179.	1548.	2700.
10 URBAN NONFOOD EXPENDITURE PC	1000 WON/CAP	54.	71.	70.	79.	109.
11 URBAN FOOD EXPENDITURE TOT.	BIL. WON	592.	661.	721.	940.	1368.
12 URBAN FOOD EXPENDITURE PC	1000 WON/CAP	37.	41.	43.	48.	55.
13 TOTAL URBAN EXPENDITURE	BIL. WON	1450.	1811.	1900.	2488.	4067.
14 FOOD / TOTAL	PERCENT	40.8	36.5	38.0	37.8	33.6
15 GROSS AG. INCOME (AGR.+ OTHER)	BIL. WON	619.	822.	927.	1282.	1792.
16 GROSS AG. INCOME PC (AGR.+ OTHER)	1000 WON/CAP	39.0	52.5	59.2	84.8	142.3
17 AG. VALUE ADDED TOT.	BIL. WON	509.	548.	621.	829.	1079.
18 AG. VALUE ADDED PC	1000 WON/CAP	32.1	35.0	39.6	54.8	85.7
19 RETURNS PER HA. (RICE, REG. 2)	1000 WON/HA	147.	171.	207.	298.	371.
20 RETURNS PER MAN-YR (RICE, REG. 2)	1000 WON/MAN-YR	210.	246.	295.	405.	488.
21 FERTILIZER REQUIRED	MILL. MT	.77	.89	1.02	1.52	1.96
22 PESTICIDE INDEX	1970=100	100.	100.	105.	125.	151.
23 CAPITAL REQUIRED INDEX	1970=100	100.	111.	123.	170.	251.
24 EXPENDITURE ON FERTILIZER	BIL. WON	17.8	19.9	22.0	29.0	32.9
25 EXPENDITURE ON PESTICIDE	BIL. WON	6.9	6.5	6.5	6.3	5.8
26 EXPENDITURE ON CAPITAL	BIL. WON	35.1	38.1	41.2	51.0	66.2
27 TAXES PAID INDEX	1970=100	100.	123.	140.	191.	260.
28 VALUE OF AG. IMPORTS (LESS FG)	BIL. WON	90.	111.	128.	111.	156.
29 VALUE OF AG. EXPORTS	BIL. WON	14.	38.	47.	71.	101.
30 NET EXPORT (EXPORT - IMPORT)	BIL. WON	-68.	-72.	-81.	-40.	-55.

APPENDIX D

Commodity Supply-Disappearance Tables

for

Alternatives I - V

1970, 1971, 1972, 1976, 1981

SUPPLY-DISAPPEARANCE TABLE FOR ALTERNATIVE # 1

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF-SUFFICIENCY	CONSUMPTION			UNACC. COUNTED FOR	UNACC. FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT		PERCENT		MILLION MT				
RICE	1970	3,816	.822	4,638	82.3	1,742	2,020	3,762	.877	14.7
	1971	3,894	.731	4,625	84.2	1,746	1,984	3,730	.895	19.4
	1972	3,970	.769	4,739	83.8	1,762	2,063	3,826	.913	19.3
	1976	4,214	.953	5,167	81.6	1,783	2,412	4,195	.972	18.8
	1981	4,327	1,299	5,626	76.9	1,563	3,057	4,620	1,006	17.9
BARLEY	1970	2,004	.019	2,023	99.0	1,378	.393	1,771	.252	12.4
	1971	2,029	.127	2,156	94.1	1,381	.519	1,900	.256	11.9
	1972	2,053	.139	2,192	93.7	1,394	.539	1,933	.259	11.8
	1976	2,160	-.005	2,155	100.2	1,320	.559	1,879	.277	12.8
	1981	2,339	-.404	1,934	120.9	1,048	.576	1,623	.311	16.1
WHEAT	1970	.372	.831	1,203	30.9	.475	.681	1,156	.037	3.0
	1971	.373	.868	1,241	30.0	.476	.737	1,214	.037	3.0
	1972	.373	.903	1,276	29.2	.446	.801	1,247	.037	2.9
	1976	.375	1,054	1,429	26.2	.329	1,062	1,391	.038	2.7
	1981	.385	1,469	1,854	20.7	.312	1,501	1,813	.041	2.2
O. G.	1970	.133	.015	.148	89.8	.089	.044	.133	.015	10.1
	1971	.133	.020	.152	87.1	.089	.049	.138	.015	9.7
	1972	.132	.022	.154	85.7	.090	.050	.140	.015	9.5
	1976	.123	.036	.158	77.5	.089	.056	.145	.013	8.4
	1981	.094	.060	.154	61.1	.077	.067	.144	.010	6.4
FRUITS	1970	.491	.015	.476	103.1	.095	.243	.338	.138	28.9
	1971	.492	.004	.495	99.3	.095	.262	.357	.138	27.9
	1972	.542	.006	.536	101.2	.095	.286	.381	.154	28.8
	1976	.752	.010	.741	101.4	.115	.409	.524	.218	29.4
	1981	1,056	.023	1,034	102.2	.121	.599	.720	.314	30.4
PULSES	1970	.280	.019	.299	93.6	.111	.166	.277	.022	7.3
	1971	.288	.026	.314	91.7	.111	.180	.291	.023	7.2
	1972	.295	.034	.329	89.8	.112	.194	.306	.023	7.1
	1976	.328	.088	.416	78.9	.134	.257	.391	.025	6.1
	1981	.380	.144	.523	72.6	.143	.351	.493	.030	5.7

CONTINUED...

Alternative I

TABLE CONTINUED...

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC-	IMPORT	TOTAL	SELF-	CONSUMPTION			UNAC-	UNACC.
		TION	(SURPLUS)	FOOD	SUFFIC-	RURAL	URBAN	TOTAL	COUNTED	FOR
		MILLION MT			PERCENT	MILLION MT				PERCENT
VEGTAB	1970	2,399	.092	2,491	96.3	.824	1,064	1,888	.603	24.2
	1971	2,612	.035	2,648	98.7	.825	1,152	1,977	.671	25.3
	1972	2,829	.006	2,823	100.2	.832	1,252	2,085	.739	26.2
	1976	3,620	-.040	3,580	101.1	.913	1,691	2,604	.976	27.3
	1981	4,243	-.075	4,168	101.8	.886	2,101	2,987	1,180	28.3
POTATO	1970	.784	.038	.822	95.3	.285	.416	.701	.120	14.5
	1971	.840	.003	.837	100.3	.286	.420	.706	.131	15.6
	1972	.896	-.004	.893	100.4	.289	.463	.751	.141	15.8
	1976	1,106	.007	1,113	99.4	.273	.657	.930	.183	16.4
	1981	1,271	.034	1,305	97.4	.217	.868	1,085	.220	16.8
BEEF	1970	.037	.000	.037	100.0	.003	.031	.034	.002	5.4
	1971	.041	.001	.040	102.6	.003	.034	.038	.003	6.8
	1972	.046	.002	.044	104.1	.003	.038	.041	.003	7.0
	1976	.067	.003	.065	104.2	.004	.056	.060	.005	7.1
	1981	.119	.003	.116	102.9	.005	.102	.107	.008	7.1
MILK	1970	.041	.003	.043	95.3	.006	.031	.037	.007	16.2
	1971	.053	.001	.052	101.6	.006	.037	.043	.009	17.7
	1972	.065	.002	.063	103.0	.009	.043	.052	.011	17.6
	1976	.136	.014	.122	111.3	.013	.085	.098	.024	19.9
	1981	.347	-.023	.324	107.2	.021	.239	.260	.064	19.7
PORK	1970	.078	.004	.082	95.1	.024	.055	.079	.003	3.6
	1971	.089	.001	.090	98.9	.026	.063	.086	.004	4.1
	1972	.100	.002	.098	102.3	.024	.070	.093	.004	4.4
	1976	.133	.002	.132	101.4	.029	.097	.126	.006	4.5
	1981	.148	.005	.143	103.6	.025	.111	.136	.007	4.8
CHICK	1970	.045	.006	.051	88.2	.008	.041	.049	.001	1.9
	1971	.052	.001	.052	98.6	.009	.043	.051	.001	1.6
	1972	.058	.002	.057	103.4	.008	.047	.055	.001	1.8
	1976	.085	.003	.082	104.2	.011	.069	.080	.001	1.8
	1981	.120	.005	.115	104.2	.011	.102	.113	.002	1.9

CONTINUED...

Alternative I
TABLE CONTINUED

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC-	IMPORT	TOTAL	SELF-	CONSUMPTION			UNAC-	UNACC.
		YTION	(SURPLUS)	FOOD	SUFFIC-	RURAL	URBAN	TOTAL	COUNTED	FOR
		MILLION MT			PERCENT	MILLION MT				PERCENT
EGGS	1970	.128	.004	.132	96.9	.034	.079	.113	.019	14.3
	1971	.142	.001	.143	99.3	.034	.087	.121	.022	15.5
	1972	.157	.003	.154	102.1	.034	.095	.128	.025	16.4
	1976	.226	.008	.218	103.7	.042	.138	.180	.037	17.1
	1981	.362	.008	.354	102.1	.055	.238	.293	.061	17.3
FISH	1970	.630	.002	.628	100.3	.158	.398	.556	.071	11.3
	1971	.683	.008	.691	98.9	.159	.453	.612	.079	11.4
	1972	.736	.023	.713	103.2	.130	.492	.622	.091	12.7
	1976	.974	.009	.965	100.9	.162	.682	.844	.122	12.6
	1981	1.380	.031	1.349	102.3	.160	1.006	1.166	.183	13.6

SUPPLY-DISAPPEARANCE TABLE FOR ALTERNATIVE # 2

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF-SUFFICIENCY	CONSUMPTION			UNAC-COUNTED FOR	UNACC. FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT		PERCENT		MILLION MT		PERCENT		
RICE	1970	3.816	.822	4.638	82.3	1.742	2.020	3.762	.877	14.7
	1971	3.961	.762	4.723	83.9	1.746	2.065	3.812	.912	19.3
	1972	4.106	.728	4.834	84.9	1.765	2.122	3.887	.946	19.6
	1976	4.631	.640	5.271	87.9	1.800	2.398	4.198	1.073	20.4
	1981	5.086	.685	5.770	88.1	1.578	3.002	4.580	1.190	20.6
BARLEY	1970	2.004	.019	2.023	99.0	1.378	.393	1.771	.252	12.4
	1971	2.063	.008	2.071	99.6	1.381	.429	1.810	.261	12.6
	1972	2.122	.002	2.120	100.1	1.386	.465	1.851	.269	12.7
	1976	2.374	.243	2.131	111.4	1.267	.554	1.821	.310	14.5
	1981	2.747	.853	1.894	145.0	.962	.559	1.521	.373	19.7
WHEAT	1970	.372	.831	1.203	30.9	.475	.681	1.156	.037	3.0
	1971	.378	.867	1.245	30.4	.476	.741	1.217	.038	3.0
	1972	.383	.903	1.287	29.8	.449	.807	1.256	.038	3.0
	1976	.607	1.058	1.465	27.8	.347	1.077	1.423	.042	2.9
	1981	.644	1.432	1.877	23.7	.336	1.492	1.828	.049	2.6
O. S.	1970	.133	.015	.148	89.8	.089	.044	.133	.015	10.1
	1971	.137	.012	.149	92.2	.089	.044	.133	.015	10.4
	1972	.141	.010	.151	93.5	.090	.045	.135	.016	10.6
	1976	.144	.010	.154	93.6	.089	.049	.138	.016	10.7
	1981	.122	.027	.149	81.6	.076	.059	.135	.014	9.3
FRUITS	1970	.491	.015	.476	103.1	.095	.243	.338	.138	28.9
	1971	.492	.009	.500	98.2	.095	.267	.362	.138	27.6
	1972	.542	.003	.545	99.4	.098	.293	.391	.154	28.2
	1976	.752	.012	.763	98.5	.131	.418	.549	.214	28.1
	1981	1.056	.024	1.033	102.3	.141	.582	.723	.310	30.0
PULSES	1970	.280	.019	.299	93.6	.111	.166	.277	.022	7.3
	1971	.290	.016	.307	94.7	.111	.173	.284	.023	7.4
	1972	.300	.019	.319	94.1	.115	.181	.296	.024	7.4
	1976	.352	.057	.409	86.1	.150	.232	.382	.027	6.6
	1981	.477	.061	.538	88.7	.166	.334	.500	.038	7.1

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Alternative II
TABLE CONTINUED...

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC-	IMPORT	TOTAL	SELF-	CONSUMPTION			UNACC-	UNACC-
		YTION	(SURPLUS)	FOOD	SUFFIC-	RURAL	URBAN	TOTAL	COUNTED	FOR
		MILLION MT		PERCENT			MILLION MT		PERCENT	
VEGTAB	1970	2.399	.092	2.491	96.3	.824	1.064	1.888	.603	24.2
	1971	2.583	.044	2.627	98.3	.825	1.140	1.965	.662	25.2
	1972	2.771	.008	2.779	99.7	.843	1.218	2.061	.718	25.8
	1976	3.444	-.010	3.433	100.3	.973	1.553	2.526	.907	26.4
	1981	3.915	.035	3.950	99.1	.970	1.921	2.891	1.059	26.8
POTATO	1970	.784	.038	.822	95.3	.285	.416	.701	.120	14.5
	1971	.849	.024	.873	97.3	.286	.454	.740	.133	15.2
	1972	.916	.015	.931	98.4	.287	.499	.786	.145	15.6
	1976	1.176	-.014	1.161	101.2	.262	.702	.964	.197	17.0
	1981	1.421	-.043	1.378	103.1	.199	.929	1.128	.250	18.2
BEEF	1970	.037	.000	.037	100.0	.003	.031	.034	.002	5.4
	1971	.040	-.001	.039	103.1	.003	.033	.037	.003	6.8
	1972	.044	-.002	.042	104.4	.003	.036	.039	.003	7.0
	1976	.060	-.002	.058	103.8	.004	.050	.054	.004	6.9
	1981	.101	-.004	.097	103.6	.006	.085	.090	.007	7.1
MILK	1970	.041	.003	.043	95.3	.006	.031	.037	.007	16.2
	1971	.051	-.001	.050	101.7	.006	.035	.041	.009	17.7
	1972	.061	-.001	.060	101.6	.010	.040	.050	.010	17.1
	1976	.119	-.007	.112	106.3	.016	.075	.092	.020	18.3
	1981	.287	-.012	.275	104.4	.025	.198	.223	.051	18.7
PORK	1970	.078	.004	.082	95.1	.024	.055	.079	.003	3.6
	1971	.085	.002	.087	97.8	.024	.059	.083	.003	3.9
	1972	.091	.000	.091	100.2	.023	.064	.087	.004	4.2
	1976	.114	-.000	.114	100.0	.028	.081	.109	.005	4.2
	1981	.135	-.004	.131	103.3	.027	.098	.125	.006	4.6
	1970	.045	.006	.051	88.2	.008	.041	.049	.001	1.9
	1971	.055	.002	.057	96.9	.009	.047	.056	.001	1.6
	1972	.065	-.001	.064	101.3	.009	.054	.063	.001	1.7
	1976	.106	-.001	.105	101.2	.015	.088	.103	.002	1.7
	1981	.165	-.006	.159	103.9	.016	.140	.156	.003	1.9

CONTINUED...

Alternative II
TABLE CONTINUED

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC-	IMPORT	TOTAL	SELF-	CONSUMPTION			UNAC-	UNACC.
		TYTION	(SURPLUS)	FOOD	SUFFIC-	RURAL	URBAN	TOTAL	COUNTED	FOR
		MILLION MT			PERCENT	MILLION MT				PERCENT
EGGS	1970	.128	.004	.132	96.9	.034	.079	.113	.019	14.3
	1971	.144	-.001	.143	100.7	.034	.087	.121	.023	15.8
	1972	.141	-.004	.137	102.7	.036	.095	.131	.026	16.3
	1976	.240	-.004	.236	101.9	.056	.141	.198	.038	16.0
	1981	.402	-.010	.392	102.6	.073	.252	.325	.066	17.0
FISH	1970	.650	-.002	.648	100.3	.158	.398	.556	.071	11.3
	1971	.683	-.004	.679	100.6	.159	.442	.600	.079	11.6
	1972	.736	-.038	.698	105.4	.126	.481	.607	.092	13.1
	1976	.974	-.019	.955	102.0	.156	.676	.832	.123	12.8
	1981	1.380	-.000	1.380	100.0	.163	1.034	1.197	.183	13.2

SUPPLY-DISAPPEARANCE TABLE FOR ALTERNATIVE # 3

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC- TION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF- SUFFIC- ENCY	CONSUMPTION			UNAC- COUNTED FOR	UNACC. FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT		PERCENT		MILLION MT			PERCENT	
RICE	1970	3.816	.822	4.638	82.3	1.742	2.020	3.762	.877	14.7
	1971	3.800	.923	4.723	80.5	1.746	2.105	3.851	.872	18.5
	1972	3.779	1.053	4.832	78.2	1.756	2.209	3.965	.867	17.9
	1976	3.645	1.569	5.214	69.9	1.751	2.628	4.379	.835	16.0
	1981	3.411	2.057	5.468	62.4	1.515	3.168	4.683	.785	14.4
BARLEY	1970	2.004	.019	2.023	99.0	1.378	.393	1.771	.252	12.4
	1971	1.975	.030	2.006	98.5	1.381	.377	1.758	.248	12.4
	1972	1.945	.068	2.014	98.6	1.411	.361	1.771	.243	12.0
	1976	1.844	.124	1.968	93.7	1.396	.344	1.740	.228	11.6
	1981	1.802	-.007	1.795	100.4	1.127	.438	1.565	.230	12.8
WHEAT	1970	.372	.831	1.203	30.9	.475	.661	1.136	.037	3.0
	1971	.365	.896	1.261	28.9	.476	.758	1.234	.036	2.9
	1972	.357	.975	1.331	26.8	.467	.839	1.306	.036	2.7
	1976	.328	1.234	1.562	21.0	.436	1.103	1.539	.033	2.1
	1981	.303	1.635	1.939	15.6	.393	1.524	1.917	.030	1.6
O. G.	1970	.133	.015	.148	89.8	.089	.044	.133	.015	10.1
	1971	.126	.027	.153	82.5	.089	.050	.139	.014	9.1
	1972	.120	.036	.156	76.8	.090	.054	.143	.013	8.3
	1976	.093	.073	.166	55.9	.089	.068	.157	.009	5.6
	1981	.064	.103	.167	38.4	.076	.085	.161	.006	3.8
FRUITS	1970	.491	.015	.476	103.1	.095	.243	.338	.138	28.9
	1971	.492	.000	.491	100.1	.095	.258	.353	.138	28.1
	1972	.542	.010	.532	101.8	.089	.287	.377	.156	29.2
	1976	.752	.005	.747	100.7	.093	.431	.525	.222	29.7
	1981	1.056	.009	1.047	100.9	.096	.632	.728	.319	30.5
PULSES	1970	.280	.019	.299	93.6	.111	.166	.277	.022	7.3
	1971	.278	.052	.330	84.1	.111	.198	.309	.022	6.5
	1972	.275	.068	.343	80.2	.107	.215	.321	.021	6.1
	1976	.268	.134	.401	66.7	.109	.272	.381	.021	5.1
	1981	.272	.215	.487	55.8	.113	.353	.466	.021	4.3

CONTINUED...

Alternative III
TABLE CONTINUED...

COMMODITY		SUPPLY			SELF-SUFFICIENCY PERCENT	DISAPPEARANCE				
		PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY		CONSUMPTION			UNACCOUNTED FOR	UNACC. FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT			MILLION MT					
VEGTAB	1970	2.399	.092	2.491	96.3	.824	1.064	1.888	.603	24.2
	1971	2.603	.040	2.642	98.5	.825	1.149	1.975	.668	25.3
	1972	2.810	.007	2.803	100.2	.813	1.253	2.066	.736	26.3
	1976	3.549	.057	3.492	101.4	.819	1.701	2.521	.972	27.8
	1981	4.040	.002	4.038	100.1	.772	2.127	2.899	1.138	28.2
POTATO	1970	.784	.038	.822	95.3	.285	.416	.701	.120	14.5
	1971	.817	.020	.837	97.7	.286	.424	.710	.127	15.1
	1972	.850	.027	.878	96.9	.292	.454	.745	.132	15.1
	1976	.965	.066	1.031	93.6	.289	.587	.876	.154	15.0
	1981	1.017	.202	1.219	83.4	.233	.816	1.049	.170	13.9
BEEF	1970	.037	.000	.037	100.0	.003	.031	.034	.002	5.4
	1971	.038	.003	.042	91.8	.003	.036	.039	.003	6.1
	1972	.040	.008	.048	82.7	.003	.042	.045	.003	5.5
	1976	.044	.037	.082	54.2	.004	.075	.079	.003	3.6
	1981	.052	.087	.138	37.3	.005	.131	.135	.003	2.4
MILK	1970	.041	.003	.043	95.3	.006	.031	.037	.007	16.2
	1971	.041	.007	.048	85.7	.006	.035	.041	.007	14.5
	1972	.041	.014	.055	73.9	.005	.043	.048	.007	12.9
	1976	.036	.076	.112	32.2	.006	.100	.106	.006	5.4
	1981	.016	.239	.255	6.3	.010	.243	.253	.002	.6
PORK	1970	.078	.004	.082	95.1	.024	.055	.079	.003	3.6
	1971	.081	.010	.091	88.7	.024	.064	.088	.003	3.5
	1972	.083	.012	.095	87.6	.023	.068	.091	.003	3.5
	1976	.093	.022	.115	80.8	.024	.087	.111	.004	3.4
	1981	.106	.044	.150	70.5	.023	.123	.146	.005	3.1
CHICK	1970	.045	.005	.051	88.2	.008	.041	.049	.001	1.9
	1971	.055	.002	.057	96.1	.009	.047	.056	.001	1.6
	1972	.065	.001	.064	101.0	.008	.055	.063	.001	1.8
	1976	.106	.002	.104	102.0	.010	.092	.102	.002	1.8
	1981	.165	.007	.158	104.4	.011	.144	.155	.003	2.0

CONTINUED...

Alternative III

TABLE CONTINUED

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC-	IMPORT	TOTAL	SELF-	CONSUMPTION			UNAC-	UNACC.
		YTION	(SURPLUS)	FOOD	SUFFIC-	RURAL	URBAN	TOTAL	COUNTED	FOR
		MILLION MT		PERCENT	MILLION MT					PERCENT
EGGS	1970	.128	.004	.132	96.9	.034	.079	.113	.019	14.3
	1971	.144	.002	.146	98.8	.034	.089	.123	.023	15.5
	1972	.161	.002	.158	101.5	.032	.100	.132	.026	16.5
	1974	.240	.007	.233	102.9	.035	.157	.192	.041	17.5
	1981	.402	.010	.392	102.4	.047	.275	.322	.070	17.9
FISH	1970	.630	.002	.628	100.3	.158	.398	.556	.071	11.3
	1971	.683	.092	.775	88.2	.159	.537	.696	.079	10.2
	1972	.736	.067	.803	91.7	.157	.559	.716	.087	10.8
	1974	.974	.031	.943	103.3	.158	.663	.820	.122	13.0
	1981	1.380	.143	1.237	111.5	.147	.906	1.052	.185	14.9

SUPPLY-DISAPPEARANCE TABLE FOR ALTERNATIVE # 4

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC- TION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF- SUFFIC- IENCY	CONSUMPTION			UNAC- COUNTED FOR	UNACC- FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT		PERCENT		MILLION MT		PERCENT		
RICE	1970	3.816	.822	4.638	82.3	1.742	2.020	3.762	.877	14.7
	1971	3.977	.725	4.702	84.6	1.746	2.040	3.787	.916	19.5
	1972	4.138	.662	4.800	86.2	1.767	2.079	3.846	.954	19.9
	1976	4.728	.457	5.185	91.2	1.810	2.279	4.089	1.097	21.1
	1981	5.246	.302	5.548	94.6	1.587	2.732	4.318	1.229	22.2
BARLEY	1970	2.004	.019	2.023	99.0	1.378	.393	1.771	.252	12.4
	1971	2.081	.010	2.091	99.5	1.381	.447	1.828	.263	12.6
	1972	2.159	-.008	2.151	100.4	1.381	.495	1.876	.275	12.8
	1976	2.386	-.217	2.170	110.0	1.242	.616	1.858	.312	14.4
	1981	2.150	-.205	1.945	110.5	.939	.719	1.658	.287	14.7
WHEAT	1970	.372	.831	1.203	30.9	.475	.681	1.156	.037	3.0
	1971	.378	.819	1.197	31.6	.476	.692	1.169	.038	3.2
	1972	.383	.800	1.184	32.4	.437	.715	1.152	.038	3.2
	1976	.450	.807	1.259	35.8	.290	.917	1.206	.053	4.2
	1981	.733	1.030	1.763	41.6	.288	1.376	1.664	.099	5.6
O. G.	1970	.133	.015	.148	89.8	.089	.044	.133	.015	10.1
	1971	.137	.012	.149	92.2	.059	.044	.133	.015	10.4
	1972	.191	.010	.151	93.5	.090	.045	.135	.016	10.6
	1976	.144	.010	.154	93.6	.089	.049	.138	.016	10.7
	1981	.122	.027	.149	81.6	.076	.059	.135	.014	9.3
FRUITS	1970	.491	-.015	.476	103.1	.095	.243	.338	.138	28.9
	1971	.492	.008	.499	78.5	.095	.266	.361	.138	27.7
	1972	.542	.002	.544	99.7	.099	.291	.390	.154	28.2
	1976	.752	.011	.763	98.5	.138	.412	.550	.213	27.9
	1981	1.056	-.024	1.032	102.3	.148	.576	.724	.309	29.9
PULSES	1970	.280	.019	.299	93.6	.111	.166	.277	.022	7.3
	1971	.290	.016	.306	94.9	.111	.172	.283	.023	7.4
	1972	.300	.019	.319	94.1	.116	.180	.296	.023	7.4
	1976	.352	.062	.415	84.9	.159	.230	.388	.026	6.4
	1981	.477	.067	.545	87.6	.173	.333	.507	.038	7.0

CONTINUED...

Alternative IV
TABLE CONTINUED...

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF-SUFFICIENCY PERCENT	CONSUMPTION			UNACCOUNTED FOR	UNACCOUNTED FOR TOTAL PERCENT
						RURAL	URBAN	TOTAL		
		MILLION MT			MILLION MT					
VEGTAB	1970	2.399	.092	2.491	96.3	.824	1.064	1.888	.603	24.2
	1971	2.583	.091	2.625	98.4	.825	1.138	1.963	.662	25.2
	1972	2.771	.008	2.779	99.7	.848	1.214	2.062	.717	25.8
	1976	3.444	.005	3.449	99.9	1.004	1.543	2.548	.901	26.1
	1981	3.915	.050	3.965	98.7	.998	1.914	2.911	1.053	26.6
POTATO	1970	.784	.038	.822	95.3	.285	.416	.701	.120	14.5
	1971	.849	.038	.887	95.8	.286	.468	.754	.133	15.0
	1972	.916	.036	.952	96.3	.286	.520	.806	.145	15.3
	1976	1.211	.023	1.235	98.1	.257	.773	1.030	.204	16.6
	1981	1.619	-.095	1.573	102.9	.194	1.091	1.285	.288	18.3
BEEF	1970	.037	.000	.037	100.0	.003	.031	.034	.002	5.4
	1971	.040	-.001	.039	103.7	.003	.033	.036	.003	6.9
	1972	.044	-.002	.041	105.4	.003	.035	.038	.003	7.0
	1976	.060	-.003	.057	105.2	.005	.049	.053	.004	7.0
	1981	.101	-.004	.096	104.6	.006	.083	.089	.007	7.1
MILK	1970	.041	.003	.043	95.3	.006	.031	.037	.007	14.2
	1971	.051	-.001	.050	102.5	.006	.035	.041	.009	17.8
	1972	.061	-.002	.059	102.7	.010	.039	.049	.010	17.2
	1976	.119	-.009	.111	107.8	.018	.072	.090	.020	18.2
	1981	.287	-.016	.270	106.0	.027	.193	.219	.051	18.9
PORK	1970	.078	.004	.082	95.1	.024	.055	.079	.003	3.6
	1971	.085	.002	.086	98.0	.024	.059	.083	.003	3.9
	1972	.091	-.000	.091	100.3	.024	.063	.087	.004	4.2
	1976	.114	.000	.114	95.6	.030	.080	.110	.005	4.1
	1981	.135	-.004	.131	102.9	.028	.097	.125	.006	4.6
CHICK	1970	.045	.006	.051	88.2	.008	.041	.049	.001	1.9
	1971	.055	.002	.056	97.2	.009	.047	.055	.001	1.6
	1972	.065	-.001	.064	101.7	.009	.053	.063	.001	1.7
	1976	.106	-.002	.104	101.6	.015	.087	.103	.002	1.7
	1981	.165	-.007	.158	104.2	.017	.138	.155	.003	1.9

CONTINUED...

Alternative IV
TABLE CONTINUED...

COMMODITY	SUPPLY				DISAPPEARANCE					
	PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF-SUFFICIENCY	CONSUMPTION			UNACCOUNTED FOR	UNACCOUNTED FOR TOTAL	
					RURAL	URBAN	TOTAL			
	MILLION MT			PERCENT	MILLION MT			PERCENT		
EGGS	1970	.128	.004	.132	96.9	.034	.079	.113	.019	14.3
	1971	.144	-.002	.143	101.1	.034	.086	.120	.023	15.9
	1972	.161	-.005	.156	102.9	.037	.094	.131	.025	16.3
	1976	.240	-.003	.237	101.5	.061	.139	.199	.037	15.7
	1981	.402	-.010	.392	102.5	.077	.249	.326	.066	16.8
FISH	1970	.630	-.002	.628	100.3	.158	.398	.556	.071	11.3
	1971	.683	-.005	.678	100.7	.159	.441	.599	.079	11.6
	1972	.736	-.038	.698	105.5	.127	.479	.606	.091	13.1
	1976	.974	-.018	.956	101.9	.161	.673	.834	.122	12.8
	1981	1.380	-.000	1.380	100.0	.168	1.030	1.198	.182	13.2

SUPPLY-DISAPPEARANCE TABLE FOR ALTERNATIVE = 5

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUC- TION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF- SUFFIC- IENCY	CONSUMPTION			UNAC- COUNTED FOR	UNACC. FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT		PERCENT		MILLION MT		PERCENT		
RICE	1970	3.816	.822	4.638	82.3	1.742	2.020	3.762	.877	14.7
	1971	3.867	.504	4.371	88.5	1.723	1.946	3.669	.702	16.1
	1972	4.008	.462	4.470	89.7	1.741	2.000	3.741	.729	16.3
	1976	4.522	.282	4.804	94.1	1.762	2.213	3.976	.828	17.2
	1981	4.967	.198	5.166	96.2	1.551	2.693	4.244	.922	17.8
BARLEY	1970	2.004	.019	2.023	99.0	1.378	.393	1.771	.252	12.4
	1971	2.063	.239	2.301	89.6	1.363	.377	1.740	.561	24.4
	1972	2.122	.277	2.399	88.5	1.368	.452	1.820	.578	24.1
	1976	2.374	.124	2.498	95.0	1.301	.543	1.844	.654	26.2
	1981	2.747	-.413	2.334	117.7	1.013	.549	1.562	.772	33.1
WHEAT	1970	.372	.831	1.203	30.9	.475	.681	1.156	.037	3.0
	1971	.378	1.496	1.874	20.2	.533	1.300	1.833	.045	2.4
	1972	.383	1.466	1.849	20.7	.509	1.298	1.807	.046	2.5
	1976	.407	1.800	2.207	18.5	.505	1.656	2.161	.049	2.2
	1981	.444	2.573	3.018	14.7	.686	2.284	2.970	.053	1.8
O. G.	1970	.133	.015	.148	89.8	.089	.044	.133	.015	10.1
	1971	.137	.005	.142	96.4	.088	.044	.131	.011	7.6
	1972	.141	.003	.144	97.9	.088	.044	.133	.011	7.7
	1976	.144	.002	.147	98.4	.088	.048	.135	.012	7.8
	1981	.122	.026	.142	85.9	.074	.058	.132	.010	6.8
FRUITS	1970	.491	-.015	.476	103.1	.095	.243	.338	.138	28.9
	1971	.492	.040	.531	92.5	.094	.299	.393	.138	26.1
	1972	.542	.025	.567	95.7	.099	.314	.413	.154	27.1
	1976	.752	.007	.759	99.0	.139	.408	.546	.213	28.0
	1981	1.056	-.015	1.041	101.5	.177	.562	.738	.303	29.1
PULSES	1970	.280	.019	.299	93.6	.111	.166	.277	.022	7.3
	1971	.290	.051	.342	85.0	.110	.209	.319	.023	6.7
	1972	.300	.052	.352	85.2	.115	.214	.329	.024	6.7
	1976	.352	.078	.431	81.9	.159	.245	.404	.026	6.1
	1981	.477	.088	.565	84.5	.207	.321	.529	.036	6.4

CONTINUED...

Alternative V
TABLE CONTINUED...

COMMODITY		SUPPLY				DISAPPEARANCE				
		PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF-SUFFICIENCY	CONSUMPTION			UNACCOUNTED FOR	UNACC. FOR TOTAL
						RURAL	URBAN	TOTAL		
		MILLION MT			MILLION MT			PERCENT		
VEGTAB	1970	2.399	.097	2.491	96.3	.824	1.064	1.888	.603	24.2
	1971	2.583	.087	2.670	96.7	.815	1.192	2.007	.664	24.9
	1972	2.771	.030	2.801	98.9	.830	1.250	2.080	.721	25.7
	1976	3.444	-.091	3.353	102.7	.907	1.524	2.432	.921	27.5
	1981	3.915	-.067	3.847	101.7	.903	1.872	2.775	1.072	27.9
POTATO	1970	.784	.038	.822	95.3	.285	.416	.701	.120	14.5
	1971	.849	-.084	.765	111.0	.282	.273	.556	.210	27.4
	1972	.916	-.111	.805	113.8	.283	.294	.577	.228	28.4
	1976	1.176	-.209	.966	121.7	.266	.397	.664	.303	31.3
	1981	1.421	-.310	1.111	127.9	.202	.531	.734	.378	34.0
BEEF	1970	.037	.000	.037	100.0	.003	.031	.034	.002	5.4
	1971	.040	.006	.046	87.9	.003	.040	.043	.003	5.8
	1972	.044	.002	.046	95.2	.007	.040	.043	.003	6.4
	1976	.060	-.006	.055	110.8	.003	.047	.050	.004	7.6
	1981	.101	-.011	.090	111.7	.004	.079	.083	.007	7.8
MILK	1970	.041	.003	.043	95.3	.006	.031	.037	.007	16.2
	1971	.051	.011	.062	82.1	.006	.047	.053	.009	14.3
	1972	.061	.005	.066	92.7	.009	.046	.055	.010	15.7
	1976	.119	-.023	.096	124.5	.010	.064	.074	.021	22.4
	1981	.287	-.053	.234	122.5	.015	.166	.181	.053	22.6
PORK	1970	.078	.004	.082	95.1	.024	.055	.079	.003	3.6
	1971	.085	.005	.090	94.2	.024	.063	.086	.003	3.8
	1972	.091	.002	.093	97.4	.024	.066	.090	.004	4.0
	1976	.114	.003	.117	97.1	.033	.079	.113	.005	3.8
	1981	.135	.007	.142	94.9	.042	.095	.137	.005	3.7
CHICK	1970	.045	.006	.051	88.2	.008	.041	.049	.001	1.9
	1971	.055	.007	.062	88.7	.008	.052	.061	.001	1.5
	1972	.065	.003	.068	95.9	.009	.057	.067	.001	1.6
	1976	.106	-.003	.103	102.5	.015	.086	.102	.002	1.8
	1981	.165	-.007	.158	104.4	.020	.135	.155	.003	1.8

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Alternative V
TABLE CONTINUED...

COMMODITY	SUPPLY				DISAPPEARANCE					
	PRODUCTION	IMPORT (SURPLUS)	TOTAL FOOD SUPPLY	SELF-SUFFICIENCY	CONSUMPTION			UNACCOUNTED FOR	UNACCOUNTED FOR TOTAL	
					RURAL	URBAN	TOTAL			
	MILLION MT			PERCENT	MILLION MT			PERCENT		
EGGS	1970	.128	.004	.132	96.9	.034	.079	.113	.019	14.3
	1971	.144	.012	.156	92.4	.034	.100	.134	.023	14.5
	1972	.161	.004	.165	97.3	.036	.103	.140	.026	15.4
	1976	.240	-.011	.229	104.8	.055	.136	.191	.038	16.5
	1981	.402	-.029	.373	107.7	.078	.230	.307	.066	17.6
FISH	1970	.630	-.002	.628	100.3	.158	.398	.556	.071	11.3
	1971	.683	.015	.698	97.9	.157	.462	.619	.079	11.3
	1972	.736	-.024	.712	103.4	.125	.495	.620	.092	12.9
	1976	.974	-.023	.951	102.4	.160	.669	.829	.122	12.8
	1981	1.380	.003	1.383	99.8	.188	1.016	1.204	.179	12.9