

REQUIREMENTS FOR SELECTED FOODS

LONG-RANGE REQUIREMENTS FOR SELECTED FOODS IN THE PHILIPPINES

By

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Main Highlights

In this study the requirements for selected foods are projected to 1965, a period of 10 years and on to 1975, a period of 20 years. Food items are selected which are the most important volumewise of each major group: namely, grains, meats, vegetables and miscellaneous foods. These projections should be useful for appraising the production job ahead for Filipino farmers. The job is suggested in Table 1 on the basis of which, at 2.3 per cent rate of increase in population, the requirements are projected to 1965 and 1975 as shown in the following table for some of the major items:

Comparison of Projected 1965 and 1975 Requirments
for Selected Foods with 1956 Production,
Philippines

Food Item	Unit	1956 Production	Projected Requirements ¹			
			Per cent of 1956 production	1965 Quantity	Per cent of 1956 production	1975 Quantity
Rice (clean)	1,000 cav.	37,940	143	54,100	188	71,400
Fish	Metric ton	393,650	163	639,860	239	942,000
Beef	" "	13,870	393	54,500	579	80,200
Pork	" "	53,300	161	85,800	258	137,300
Chicken	" "	54,750	146	79,990	211	115,500
*p-1Y Tomatoes	" "	54,840	156	91,500	218	128,400

¹With estimated population increase at rate of 2.3 per cent. According to the foregoing table, by 1975, the rice requirement of the country will have increased by 88 per cent or around 33,000 metric tons more than the present requirement; the fish requirement by 139 per cent or an increase of about 548,000 metric tons; and the pork requirement by 158 per cent or an increase of around 84,000 metric tons.

Introduction

In this study the requirements for selected foods are projected to 1975, a period of 20 years. Foods are selected which are the most important volumewise of each major group, grains, meats, fruits, vegetables and miscellaneous ones. The projections should be useful for appraising the production job ahead for Philippine farmers. The analysis of long-term prospects for demand likewise is an essential part of working out a plan of development for the economy as a whole.

Nearly half the total income of the average Filipino (47.5%) is spent for food (Table 2). Levels of economic activity must increase tremendously before the percentage will fall very much. Unemployment is high, with estimates ranging from 12 to 20 per cent. As economic activity increases and the unemployed are absorbed into the working force a major share of their earnings may go for traditional foods. Incomes are low, averaging only P371.00 per capita for the year 1956. The farm average was P202.00 and the non-farm average was P801.00. Income increases which may be expected in the next 20 years can hardly change the food tastes very much within that time.

Projections for longer than five years have been made only in five West European countries and in the United States. In all these countries there is a long background of research on demand, together with reliable time series of prices, incomes, consumption data, and various other series which are basic to time series analysis. Further, the economies of these countries are considered as highly developed. This makes projections of incomes, production rates, tastes and so on, less uncertain because the economy is more stable than in the Philippines.

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TABLE 2

DISTRIBUTION OF AVERAGE CONSUMER EXPENDITURES
AMONG VARIOUS ITEMS, PHILIPPINES, 1955

<u>Item</u>	<u>Per cent Total</u>
Food	47.50
Clothing	8.32
House Rent	7.81
Education	5.93
Utilities	5.23
Transportation	4.89
Beverages and Tobacco	4.87
Household Operation	4.43
Recreation	3.26
Personal Care	2.82
Household furnishings.....	2.42
Medical Care	2.32
Taxes	0.20
T o t a l	100.00

Source: Calculated from table of weights for Consumer Price Index, Central Bank of the Philippines

Even in those countries the analyst always stresses that he is not forecasting consumption, but that instead he is projecting what food would be required (demanded) at the future date under a given set of assumptions.

In the Philippines, one of the greatest uncertainties of the future is what may be expected by way of production, and its consequent effect on consumption and requirements. Not only do changes in quantity and composition of production affect purchasing power, they also affect price relationships among commodities, availability of specific foods, rates of urbanization with attendant changes in tastes and so on.

Another uncertainty is the degree of inflation which may be expected. It is well known that the effects of inflation are unequal as among various segments of the economy, resulting in changes in price relationships which, if continued long enough, may have profound effects on consumption.

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Other uncertainties are the administration of exchange controls, tariff policy, import controls and so on. All these affect production, availability, and price relationships for food.

Yet, to forecast any of the above is a matter of guessing in which direction a government may move in the numerous new situations that will arise, and how effective these moves will be in an economy that is essentially a private enterprise economy.²

In spite of the imperfections of data and the hazardous nature of these projections, this work should have two values: (a) for appraising the production job ahead for Filipino farmers and possible need for imports; and (b) as an exercise in use of various data issued by Philippine agencies, for economic analysis basic to planning and policy development.

Method of Projecting

Long-range projections of food requirements are established in two stages: (a) estimates of per capita requirements, and (b) estimates of requirements of the total population.

To project changes in per capita requirements, it is necessary to consider the influence of various factors which are likely to affect requirements, such as consumer incomes, prices, composition of population by age and sex, changes in tastes and in availability of the foods for which the studies are made as well as their close substitutes.

Requirements for the total population is figured from per capita requirements and population projections.

As in most studies of this type, the most recent price level is assumed for which data are available, which is 1956. The effect of this is to assume that the relationship of the price of the food item, for example rice, to others remains about the same, although all prices may move up or down during the period. This is not a forecast. To make this, reasonable

² Under a nationalistic government for a private enterprise economy, over-emphasis of protectionism as a policy measure tending to discourage foreign investments would contribute to uncertainty. The government may not force its citizens to save or carry out its targets and, being nationalistic, it may discourage the application of the principle of greatest comparative advantage as a guide to what should then be produced nationally. The chances of achieving the goals for national development would then be much less than under the welfare state or a laissez-faire government.

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peace must exist, inflation must be controlled and roughly offset by increases in productivity, import exchange restrictions must be such as not to affect sharply price relationship, and production changes much be gradual.

As a first step in making projections, trend was calculated for the post-war years (1946-1956). For coffee and cacao the trend was calculated beginning with the year 1950, the year exchange controls began, which allowed less exchange for coffee and cacao imports. For the sake of simplicity and uniformity a straight line trend was used. Data are total production plus net imports divided by official population estimates (see Appendix Tables 11 to 21). The annual changes are shown in Table 3. Each of the changes is positive. In most cases the data fits the trend line reasonably well, and with some commodities very well.

Table 3 — Per Capita Consumption of Principal Food Items in Filipino Diet for 1956 and Annual Increase from 1946-1956

Food Item and Unit	1956 Actual	1956 From Trend Line	Annual Increases
Rice (cavan)	1.73	1.838	.055
Coffee (kilo)	0.41	0.323	.037
Cacao (kilo)	0.17	0.174	.008
Tomatoes (kilo)	2.68	2.950	.259
Sweet Potatoes (kilo)	36.30	36.990	2.404
Bananas (kilo)	13.62	13.567	-.671
Sugar (kilo)	10.18	15.169	.919
Coconut Oil (kilo)	5.18	5.076	.279
Beef (kilo)	1.69	1.503	.046
Pork (kilo)	2.40	2.405	.072
Chicken (kilo)	2.46	2.508	.203
Fish (kilo)	19.61	19.677	.921

By regression techniques, analyses for each of the selected foods were made of the time series. Although the regression equations are not useful for projecting more than a year or two in advance, several things were learned from the analysis. They were:

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1. That per capita income, price of the specific food item, and the general wholesale price index explain per capita consumption changes at a fairly good level of significance. (R^2 at around .75 in analysis of most items, ranging from R^2 of .12 for cacao to R^2 of .99 for chicken. T tests were almost always significant at less than the 2.5 per cent level.) Basic data are shown in Tables 22-24. Regression values are listed in Table 26.

2. That in all cases income furnished by far the greater part of the explanation for changes in per capita consumption.

3. That there was no significant correlation between any two of the independent variables.

4. Long-range projections from these regression equations result in per capita increases which for most food items are unreasonable and illogical.

5. That a time series of 11 years is too short for projection for more than a year or so with any degree of significance. Inherent in projecting from this analysis is the assumption that time trend in each of the independent variables will continue.

After examining the regression analysis it was decided to base these projections largely on estimated income effects on per capita consumption as shown by family expenditures data together with estimated population increases. The resulting per capita estimates are therefore much below what would be expected from trends of the last 11 years, as calculated from official data.

Several influences are reflected in the trends which make continuation of the trend exceedingly doubtful. Some of these are:

1. During this period the availability of foods in general was improved, which could increase per capita consumption regardless of prices and incomes. It was around 1948 when availability was restored to pre-war levels.

2. As pointed out elsewhere, official population estimates may be low. If rates of increase are underestimated, this would have the effect of overstating per capita consumption.

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The increase in per capita real incomes that may be expected in the next 20 years is assumed to be 80 per cent. No official estimates are available beyond 1960. The Central Bank has forecast the annual rate of increase in real incomes per capita at 4 per cent for the period 1956-1961. At the rate of 4 per cent by 1975 the increase would amount to 110 per cent of the 1956 base. However, some who have studied the rates of growth within the economy, by evaluating changes in gross national product and national incomes since 1950, feel that 4 per cent per capita is overly optimistic and not justified by rates of increase in investment or in productivity per person.

Income estimation is a field of economics in itself and certainly beyond the scope of this study. The aggregate 80 per cent increase assumed here would be a reasonable achievement with the investment targets established by the N.E.C. This amounts to an annual per capita rate of about 3 per cent. The figure is also well below the per capita incomes reported for recent years (Appendix Table 22).

Selection of Food Items for Analysis

Expenditures Pattern

In selecting the food items for study, an effort was made to choose the principal item from each food class. The average Filipino spends his food peso as shown in Table 4.

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Table 4 — Food Consumption Pattern of the Average Filipino, 1955

Food Class	Per cent Total Food Expenditures
Cereals	30.96
Fish	17.91
Meat	14.52
Vegetables	8.70
Eggs and Milk	8.48
Fats and Oils	3.43
Fruits	3.30
Miscellaneous Foods	12.70
Total	100.00

Source: Calculated from Table of weights for Consumer Price Index, Central Bank of the Philippines.

The food items selected and the per cent of total food expenditures in each class are shown in Table 5.

Table 5 — Principal Food Items in the Consumption Pattern of the Average Filipino, 1957

Food Item	Per cent Total Food Expenditures
Rice	23.07
Fresh Fish	15.20
Pork	7.13
Beef (and Carabao meat)	4.44
Coffee	3.21
Bananas	2.66
Chicken	1.71
Tomatoes	1.59
Sugar, Centrifugal	1.53
Sweet Potatoes and Gabi	0.63
Coconut Oil	Not available
Total	61.17

Source: Calculated from Table of weights for Consumer Price Index, Central Bank of the Philippines.

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There follows a brief description of Filipino consumption habits for each of the food items selected for study. These are somewhat different from the western world where most consumption studies have been made. This description includes tentative observations on changes in family expenditures as incomes increase, largely based on Appendix Table 25, together with informal observations of Filipino marketing habits and food preparation and consumption habits.

Since these projections rest chiefly on estimated income effects, it may be well to review the conditions under which income elasticity may be expected to be low. This means that changes in expenditures for the particular food item may be low as family incomes increase.

Each of the following conditions will tend to make elasticity low, other things being equal:

1. A uniform taste for the item throughout the population, for example rice.

2. If the product is relatively homogenous throughout the supply, as to qualities and prices. This would be especially important in affecting elasticity of expenditures, because as the product becomes more homogenous, the family tends to consume more of the same qualities.

3. If various aspects of availability were uniform to all income groups. Here again rice is a good example. It can be bought anywhere, stored without refrigeration in the home, cooked on any kind of kitchen equipment, and served to the Filipino with any kind of meal.

4. If the family whatever its income level can afford all the staples, such as rice, corn, cassava and camote.

Of course all these conditions are important only in relative terms. The reverse of any one condition tends to result in higher elasticity. It should be stressed that elasticity refers to the rate of change, not the absolute amount. Thus the rate of change in rice consumption per capita is low as we move between income levels, though the absolute amount consumed is higher than for any other food.

Food Consumption Habits

Food Grains

Rice accounts for three-fourths of the expenditure on cereals and accounts for 23 per cent of total food expenditures. Substantial quantities of rice are eaten by 78 per cent

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*b187Wa of the population at all income levels, usually three times each day, although in upper brackets some bread is added at breakfast and at "meriendas" (snacks between meals). Expenditure of rice increases somewhat until the income bracket of P500 monthly is reached. White corn grits prepared like rice is eaten instead of rice or with rice in Mindanao and the Visayas. This is cheaper than rice, and apparently rice is substituted as the family income increases where it is available.

>p>q> It appears unlikely that the Filipino taste for rice will decrease as family income increases. Under the above conditions, a low income elasticity would be expected.

Fish

Next to rice, fish is the most basic food in the Philippine diet. Fresh fish accounts for 85 per cent of expenditures for fish and 15 per cent of all food expenditures. This is more than expenditure for all other meats. Fresh fish is cheap and available all over the islands.

Expenditures for fish increase at all income levels. More fish is eaten by weight as family income increases and there also is some change to the more expensive species.

Meat

Pork, beef and chicken combined account for 13.25 per cent of food expenditures and for about 90 per cent of all meat expenditures.

Pork accounts for 7 per cent of total food expenditure followed by beef and chicken. Pork is usually the cheapest meat (other than fish) in the Philippines. It is generally sold fresh with no distinction as to cut. Although the upper income brackets tend to buy imported canned meats, ham, sausage, and bacon at relatively high prices, there is no particular price distinction among cuts of pork bought by the masses. Pork is usually cooked with vegetables. Apparently when the family begins to cook pork separately it begins to distinguish among cuts.

Beef accounts for 4.44 per cent of consumer expenditures for meat. It likewise is generally sold without price distinction among cuts. A small percentage of the imported beef is distinct as steaks and of course the canned meats are distinct. Steaks and canned meats are usually bought by upper income consumers and the more expensive restaurants.

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Chicken accounts for 1.71 per cent of consumer expenditures for meat according to the Central Bank data. However, there is evidence that this figure is low. The DANR reports more chicken consumed by weight than pork and there is more likelihood of under-reporting for chicken than for any meat except fish, because so much of it does not move through trade channels. Expenditures for chicken are somewhat higher than for pork in the lowest income brackets and significantly higher than for beef but responds somewhat less to family income increases than the other two. One reason may be that chicken is an even more homogeneous product in the Philippines than is either pork or beef. Very few chickens are fattened by grain or raised on wire. They are sold at retail alive. The chief quality difference is a small one among hens, roosters, and chickens less than 6 months old. Hens are the most expensive, being about the same price per kilo of live weight as fresh slaughtered beef, whereas other chickens are slightly above the price of pork. This again is live weight price compared to fresh slaughtered. Considering net meat yields, chicken becomes the most expensive meat. Either the low income brackets (a) do not consider yields, (b) do regard chicken as a delicacy and are willing to spend more for it, or (c) find it more available and easier to store and to use than other meats. In any case, the upper income brackets appear to shift from chicken to the more expensive forms of pork and beef as the family income improves.

Based on consuming habits and the nature of the commodities as marketed in the Philippines, it would be expected that income elasticity would be lower for fish and chicken than for pork and beef.

Vegetables

As a staple item in the Filipino diet, vegetables as a food class ranks near rice and fish although there are several items on which more money is expended. Lower and middle income brackets tend to alternate vegetables with fish. At those levels consumption runs heavily to the cheaper items such as camote (sweet potato) gabi and cassava together with various items in the squash family, and beans such as mongo beans. Above the lowest income brackets tomatoes are brought into the diet, and remain as a staple item. As incomes increase, more is spent for each vegetable, but relatively more is spent for tomatoes and other fresh vegetables, and relatively less is spent for camote, gabi, cassava and such root crops.

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The fact that vegetables are staple to the diet suggests that income elasticity is low.

Fruits

Fruits apparently are not staple to the Filipino diet. As incomes increase such fruits as papaya, mango, pineapple and bananas are added to the diet in fairly large quantities. Papaya is the cheapest of these and pineapple may be the most expensive in many areas. All of these except pineapple are likely to be cooked or pickled for serving as vegetables. Due to their cheapness, convenience and general availability, bananas account for the greatest expenditure among fruits.

Coconut Oil

Coconut oil appears to be the principal fat used in vegetable shortening, although it is not separated from other fats and oils in official data. Use of fats and oil increases substantially as family incomes increase. Families shift to more frying of foods as they move up the income scale and their cooking facilities improve. Also shortenings are regarded as expensive. (In this respect cooking habits are the reverse of those in the U.S., where upper income groups fry less foods and use less visible fats in all forms.) Under the above conditions coconut oil would be expected to show a fairly high income elasticity in the Philippines.

Miscellaneous

Coffee — is by far the favorite beverage of the Philippines, followed by cacao and carbonated beverages. The use of coffee tends to increase at all income levels, and there is a tendency to shift to imported packs as incomes increase.

Cacao — Total family expenditure data on cacao do not appear satisfactory, but it is probably much less than for coffee. Apparently, it is used chiefly for drinking, and is less preferred than coffee.

Sugar — Most of the sugar consumed by Filipinos is brown centrifugal, which is considerably cheaper than the white. All sugar accounts for 1.53 per cent of total food expenditures. The lower income Filipino has no oven facilities for baking cakes, pies, custards, and so on, and therefore uses sugar chiefly in drinks such as coffee, and in cakes that can be baked over

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an open fire. All income brackets consume sugar in soft drinks. Upper income brackets consume little more sugar than lower although they tend to shift to white sugar. This suggests that their tastes for sweets are not much different from the lower brackets. Since there are few refrigeration facilities in the Philippines, ice-cream and cold beverages are not an important home use for sugar. However, domestic use of sugar could reasonably be expected to increase in the long run as refrigeration and household facilities for baking become more plentiful.

Income Effects

Rough calculation of the effect of income increases on expenditures for various foods is made from data shown in Appendix Table 25. This survey of 580 households was taken in Manila in 1954, but a large percentage of the Manila population in the brackets considered here are recently from rural Philippines. The data appear reasonably useful for purposes of this study. Data from the Survey of Households for 1947 will be available for the Philippines as a whole and may be tabulated by early 1958. The Manila data, however, are all that are now at hand.

The method of calculation was simply to obtain averages of the expenditures for household income levels below P300 per month for each food item, and averages of expenditures from P300 to P599 per month. Elasticity coefficients were calculated by standard formula between these two average points. Further refinement did not appear worthwhile partly because of the small number of samples in each income bracket. "Income elasticity" means here the percentage increase in expenditures for a food item that will be associated with a one per cent increase in incomes (Table 6).

$$\frac{E_1 - E_2}{E_1} \div \frac{I_1 - I_2}{I_1}$$

Where E — expenditure
I — income bracket

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Table 6—Estimated Income Elasticities for Selected Foods,
Manila, 1954

<u>I t e m</u>	<u>Income Elasticities</u>
	(ratio)
Pork	0.7605
Beef	0.6290
Fish	0.4358
Chicken	0.3715
Bananas	0.6120
Coconut Oil	0.500*
Tomatoes	0.2827
Rice	0.1185
Coffee	0.4242
Sugar	0.2584
Cacao	0.2284

* Estimated from another Manila Survey of Household Expenditures.

Each of these elasticity figures is positive, indicating that an increase occurs in expenditures for each food item as the family income increases. This is probably what actually occurs in the Philippines for all foods at income levels below P600 per month, though there may be points of negative elasticity on some curves such as camote.

Considering the low average income, P30.91 per month for the Philippines, and only P66.27 per month for urban consumers, even if incomes increase 80 per cent by 1975, the average will still be so low that elasticities will continue positive for the so-called inferior foods.

Elasticity calculations from family expenditure data for long-range forecasting assumes that as a family moves from one income bracket to another over a generation their pattern of change in food expenditure will be the same as that observed between two families in different income brackets at any one time. In support of this it may be argued that (a) tastes will not change much in the Philippines in one generation, (b) even with high percentage changes in incomes, the actual average amount will still be so small that no radical change in food habits will be likely.

The technical fault is acknowledged, of using elasticity figures derived from expenditures data for estimating changes in quantity of foods that may be used as incomes increase. To

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the extent that increased expenditures (as incomes rise) are for higher qualities, the elasticities are too high for quantity estimates. Again it can only be said that no other data are available. The over-estimation probably is small.

It should be emphasized that long-range estimates of food requirements may be much too low if the income effect on per capita consumption is ignored. This is especially important where consumers substantially increase purchases of an item in response to rising incomes (income elasticity).

For example, by 1975 one-third or more of expected requirements are due to per capita increases (which result from expected income changes) for bananas, beef, and pork (Table 7). One-fourth or more are due to per capita increases for coffee, coconut oil, and fish. For rice per capita increase may be only around 8.7 per cent of expected totals, which, however, could be an important amount.

Table 7—Causes of Increased Requirements for Selected Foods, by Per cent Due to Per Capita Increase and Per cent Due to Population Increase, Philippines, 1965 and 1975.

Food Item	Increased Per Capita		Increased Population	
	1965 (Per cent Total)	1975 (Per cent Total)	1965 (Per cent Total)	1975 (Per cent Total)
Rice	3.9	8.7	96.1	91.3
Coffee	12.7	25.4	87.3	74.6
Cacao	7.3	15.4	92.7	84.6
Tomatoes	8.9	18.5	91.1	81.5
Bananas	17.4	32.9	82.6	67.1
Sugar	8.2	17.2	91.8	82.8
Coconut Oil	14.7	28.6	85.3	71.4
Beef	17.8	33.5	82.2	66.5
Pork	20.7	37.8	79.3	62.2
Chicken	11.3	23.0	88.7	77.0
Fish	13.0	25.9	87.0	74.1

Source: Tables 9 and 10.

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Estimated Total Requirements

Total requirements for selected foods are derived from population estimates for 1975 and from per capita consumption estimates. Changes in age and sex composition of the population may affect demand for some foods, as well as changes in numbers. The fertility of the population is expected to remain constant for the next 30 years, according to some ICA estimates. Life expectation at birth is expected to increase 2 1/2 years each five years that pass. The proportion between male and female is expected to remain roughly the same, though female mortality is expected to decline more than male mortality at ages above 35 years. The changes named would hardly influence demand for the food items in this report.

Sources differ as to rates of population increase. Census Bureau (Philippines) estimates project at the rate of 1.91 per cent, a figure derived from the rate of increase between census years 1939 and 1948. ICA sources project at the rate of 2.3 per cent, but report that the rate could reasonably be 3.0 per cent.¹

The difference which results from using these different rates becomes more important in long time periods than in short ones. A comparison follows by five-year periods (Table 8).

Table 8 — Projection of Population Estimates, Philippines
1956 - 1957

Year	Philippine Census Bureau (thousands)	ICA Sources (thousands)
1956	22,265	22,527
1960	24,012	25,240
1965	26,389	28,279
1970	29,002	31,684
1975	31,873	35,499

¹See memo of M. D. Lieberman to Henry White, dated September 30, 1957 files ICA Manila.

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In the present study, total food requirements are estimated at both rates of increase.

Table 9 shows as the end product the projected 1975 requirements estimates as a percentage of current (1956) production. In effect this table draws together estimates described in previous sections of this report. There follows an explanation of the table columns:

Column 2 results from applying the elasticity figure to the requirement for the base year and multiplying by the assumed increase in incomes between 1956-75. Thus, for rice, an increase of 0.1185 per cent of the present 1.838 cavans consumed per capita may occur for each 1.0 per cent increase in incomes. Thus,

$$\frac{0.1185 (1.838) (80)}{100} = .1742$$

The base year is read from the trend to avoid abnormalities that may be associated with any one year.

Column 3: Adding the projected increase (0.1742) to the base 1.838 cavans gives the expected per capita requirement for 1975 (2.0122).

Columns 4 and 5: Projected per capita requirement times the projected population gives projected total requirement. Alternative population estimates are used in the two columns.

Columns 6 and 7: To estimate the production job ahead for Filipino farmers, the total requirement data may be compared with present production levels.

The production job ahead for Filipino farmers if they expect to supply the domestic market is suggested by **Column 8**. In round figures the production job would amount to approximately doubling the present output of rice, coffee, tomatoes and chicken. For bananas and pork the production job would amount to somewhat more than doubling the present output. For cacao a nearly four-fold increase and for beef a nearly five-fold increase would be required to supply the domestic market.

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It will be noted that the present production of coconut oil could be entirely used in the domestic market and a little over half of present sugar output, whereas both these items are now chiefly exported.

The same projections also have been made for 1965 which is half-way through the 1956-1975 period (Table 10). In general the increase in expected requirements by 1965 is somewhat less than one-half the expected increase by 1975. This results from the fact that population and incomes are assumed to increase at a constant rate. This gives a compounding effect so that by 1975 both variables are more than twice what they were at the first half of the period. However, where per capita increases are fairly high (beef, pork, bananas), the increase by 1965 may be somewhat more than half the increase by 1975.

Table 9 — Projected Requirements for Selected Foods, Per Capita and Totals by 1975, Compared with 1956 Production, Philippines

Food Item	Unit	1956 Per Capita Require- ment ¹	Projected Per Capita Increase 1956-1975	Total Per Capita Require- ment 1975	Total Requirement by 1975		1956 Production	Projected 1975 Requirement as a Percentage of 1956 Production	
					Projected Population A ²	B ³		A ²	B ³
Rice (clean)	Cavan	1.838	.1742	2.0122	64,135,655	71,430,887	37,940,890	169	188
Coffee	Kg.	.323	.1096	.4326	13,788,433	15,356,824	7,100,000	194	216
Cacao	Kg.	.174	.0318	.2058	6,599,546	7,305,674	1,500,000	437	487
Tomatoes	Kg.	2.950	.6672	3.6172	115,292,462	128,406,621	58,841,100	196	218
Bananas	Kg.	13.567	6.6424	20.2094	644,142,290	717,411,470	303,218,400	212	237
Sugar (Cent.)	Kg.	15.169	3.1357	18.3047	583,433,025	649,796,715	1,102,406,500	53	59
Coconut Oil	Kg.	5.076	2.0304	7.1064	226,505,130	252,269,383	219,800,000	103	115
Beef	Kg.	1.503	.7563	2.2593	72,011,573	80,202,665	13,866,536	519	578
Pork	Kg.	2.405	1.4632	3.8682	123,292,686	137,316,845	53,313,128	231	258
Chicken	Kg.	2.508	.7454	3.2534	103,696,920	115,492,121	54,753,347	189	211
Fish	Kg.	19.677	6.8602	26.5372	845,830,790	942,041,409	393,648,176	215	239

¹ Read from trend which may be above or below the official reported figure.

² A is based on Census Bureau estimates of 31,873,400 population.

³ B is based on ICA estimates of 35,498,900 population.

Table 10 — Projected Requirements for Selected Foods, Per Capita and Totals by 1965, Compared with 1956 Production, Philippines

Food Item	Unit	1956 Per Capita Requirement ¹	Projected Per Capita Increase 1956-1965	Total Per Capita Requirement 1965	Total Requirement by 1965		1956 Production	Projected 1965 Requirement as a Percentage of 1956 Production	
					Projected Population A ²	B ³		A ²	B ³
Rice (clean)	Cavans	1.838	0.0749	1.9129	50,480,092	54,094,325	37,940,890	133	143
Coffee	Kilos	0.323	0.0471	0.3701	9,766,680	10,465,947	7,100,000	138	147
Cacao	Kilos	0.174	0.0137	0.1877	4,953,272	5,307,912	1,500,000	330	354
Tomatoes	Kilos	2.950	0.2869	3.2369	85,419,525	91,535,324	58,841,100	145	156
Bananas	Kilos	13.567	2.8562	16.4232	433,396,752	464,426,746	303,218,400	143	153
Sugar (Cent.)	Kilos	15.169	1.3484	16.5174	435,882,624	467,090,599	1,105,406,500	39	42
Coconut Oil	Kilos	5.076	0.3731	5.9491	156,992,585	168,232,814	219,800,000	71	77
Beef	Kilos	1.503	0.3252	1.8282	48,244,913	54,526,989	13,866,536	348	393
Pork	Kilos	2.405	0.6292	3.0342	80,070,414	85,803,232	53,313,126	150	161
Chicken	Kilos	2.508	0.3205	2.8285	74,642,135	79,986,303	54,753,347	136	146
Fish	Kilos	19.677	2.9499	22.6269	597,108,052	639,859,317	393,648,176	152	163

¹ Read from trend, which may be above or below the official reported figure.

² A is based on Census Bureau estimates of 26,389,300 population.

³ B is based on ICA estimates of 28,278,700 population.