Appendix 6

FOOD AND NUTRITION

(a) The Food combinations discussed herein are designed to supply a basic minimum of 2,000 calories per day, conditions permitting. It is contemplated that a supplement of 2 ozs evaporated milk per day should be provided for children—6 months to 1 year, nursing mothers in full lactation, children of the 1-3 and 3-6 year age groups, and expectant mothers during the 5-9 months of pregnancy, in the order of importance as listed. For those individuals engaged in heavy labor, an additional 1,000 calories is desirable, affording a total daily consumption of 3,000 calories for this group, if possible.

(b) Classes of foods and supply planning.

The following information may be utilised in planning supplies for communal feeding and in reviewing the allotment of supplies.

Foods are grouped into classes because of their approximate similar nutritive value or due to the fact that they are unique, or appear in considerable quantity in the dietary. Most natural foods contain varying amounts of all nutrients. Some foods, such as potatoes, while low in certain constituents, are nutritionally important in view of the large quantities consumed, thereby making an important contribution to the dietary. Other foods, rich in cerain of the nutritional constituents, are relatively unimportant to the dietary as a whole, due to the small quantities consumed. Many varied combinations of foods will supply an adequate (balanced) diet. If certain foods are not available, substitutions can be made, but compensation should be made for the interchange of foods which may differ in important nutritional constituents. Substitution ma y be made in food classes but attention must be accorded proportionate values. In making substitutions, attention must also be given to the effect they will have on the food habits of the population and the general acceptability (edibility) of the combinations of foods offered.

(c) Equivalent Foods and food substitutions.

The accompanying table lists foods in their respective classes together with their equivalents (by weight), which factors may be used in the substitution of foods. The following examples illustrate the use of the substitution factors. Assume the equivalent of 100 lbs fresh meat is desired in terms of cannet meat. From the table of equivalents the substitution factor for carcass meat is established as 1.00 and for canned meat o.8. Therefore, multiply 100 lbs by 0.8 which gives 80 lbs of canned meat required. To substitute carcass meat for 100lbs of canned meat, divide by the factor 0.8, i.e., 100 lbs divided by 0.8 equals 125 lbs of carcass meat to be used

(d) Foods-Listed According to Classes.

Class of Food	Items	Substitution factors (weight equivalent)
Meat, Fish and Poultry	Carcass	1.0
	Canned—(French 0.66)	0.8
	Boneless	0.7
	Fish salted, dried	0.8
	Hashes and Stews	1.4
	Cheese to, Meat canned)	(0.8)
	(or to, Meat, carcass)	(0.64)
	(French 1.0)	
Milk and Products (except butter).	Whole Milk	1.0
	Evap "	0.5
	Dried "	0.125
	Cheese	0.14
Eggs	Shell	1.0
	Dehydrated	0.25
Fats	Butter or Margarine	(Equal values)
Other Fats		(Equal values)
Sugar and Syrups	Sugar—gran. or brown	1.0
	Syrup, Honey	1.25
	Jams, Jellies	1.50
Grain Products (cereals)	Bread	1.0
	Cereals	0.7
	Flour	0.75
	Macaroni	0.75
	Rice	0.75
	Biscuits, Army (French 0.8)	0.6
Dried Legumes (pulses)	Beans, dried	1.0
	Peas, "	1.0
	Beans, baked	3.0
Vegetables, leafy green and yellow	Canned	1.0
	Fresh	2.5
	Dehydrated	0.2
Tomatoes and Citrus Fruits	Fresh	1.0
	Canned	0.5
Potatoes	Irish	1.0
	Sweet	1.0
	Dehydrated	0.2
	(Bread plus other vegetables)	(0.2)
Other Vegetables. Other Fruits.	Fresh	1.0
	Canned	0.5
	Dehydrated	0.2

Class of Food	Items	Substitution factors (weight equivalent
Fruits, Dried and Dehydrated.	Dried	1.0
	Dehydrated	0.4
Beverages.	Wine, or in place of wine	1.0
	(Bread)	(0.28)
	(Sugar)	(0.18)

(e) *Typical Food Patterns*

The table of Typical Food Patterns below illustrates the quantities of food that will supply approximately 2,000 calories in five different combination (or with supplements, 3,000 calories for working men). They are prepared with quantities of basic foods considered for rations or distribution plus certain indigenous supplies, which, if used as illustrated, will supply fairly satisfactory dietaries. The table must nos, however, be constructed as definite requirements since many other combinations might do as well. Footnotes indicate certain variations:

Typical Food Patterns—Based on available rationed food (2) (4)
(Expressed as ounces per capita per day)

CLASS OF FOOD	I ozs	II ozs	III ozs	IV ozs	V (3) ozs
Meat					
Corned Beef	4.00	4.00	4.00	4.00	2.00
Milk Products					
Milk, Evap (1)					
Cheese		.50	1.00	.50	1.00
Eggs					
Fats					
Butter					
Oleo (fort)	.50	.50	.50		
Fats, other (lard)	.75	.75	.75	.50	
Sugar	1.25	1.00	.50		
Grain Products					
Bread—85 per cent. Extraction.	11.00	10.00	11.00	10.00	11.00
Flour—85 per cent. Extraction.		1.00	2.00	2.00	3.00
Legumes—Pulses	1.00	1.00	2.00	2.00	2.00
Vegetables					
Leafy Green and Yellow (5)	4.00	4.00	4.00	5.00	4.00
Tomatoes—Citrus					
Potatoes	16.00	16.00		18.00	21.00
Other Vegetables			6.00	4.00	4.00
Other Fruits					
Fruit—Dried					
Beverages					
Coffee—Tea					
Wine					
Chocolate					

Footnotes:

1. Two (2) ounces evaporated milk or equivalent for children six (6) months to one (1) year, nursing women, children one (1) to three (3) and three (3) to six (6) years of age, and pregnant women, in the order listed depending upon availability.

2. Examples are restricted in kind and amount, with the exception of vegetables, to items considered for rations or rationing.

3. Thi scombination of foods will be difficult to consume because it lacks extra fat. It should be used only in emergencies.

4. The caloric content of the above food patterns may be increased to three thousand (3,000) calories for heavy workers as follows:

Example I.—Add Meat and Vegetable Stew, 2.25 ozs; Cheese .50 oz; Flour 2 ozs; Wine 4.70 ozs. Increase Bread to 21 ozs, and Legumes (Pulses) to 2 ozs.

Example II.—Add corned beef 2.25 ozs and Wine 4 ozs (by wt). Increase Sugar to 1.25 oz; Bread to 18 ozs; Flour to 2 ozs; Legumes (Pulses) to 2 ozs.

Example III.—Add Wine 5 ozs (by wt) and increase Sugar to 1.25 ozs; Bread to 24 ozs.

Example IV.—Add Wine 8 ozs, and increase Bread to 18 ozs; Potatoes to 30 ozs.

Example V.—Add Sugar 1.50 oz; Wine 8 ozs; increase Cheese to 1.50 ozs; Bread to 16 ozs; Potatoes to 33 ozs.

5. Four ounces of Leafy Green and Yellow Vegetables is a minimum quantity, more than this amount is desirable. Tomatoes actually belong to this class and are an excellent source of Vitamin C.

(f) *Caloric Value of Some Rationed Foods*

(Expressed in Terms of 100 gms and 1 oz)

ITEM	CALORIES-100 gms.	CALORIES-1 oz.
Meat—Fresh, Carcass (Weighted Av.)	197	56
Fresh, Lean Meat	120	34
Meat & Veg. Stew & Hashes	120	34
Corned Beef (canned)	244	70
Fish, canned	170	48
Milk Products		
Milk—Fresh	53	15
Milk—Evap	140	40
Milk—POW (whole)	485	138
Milke—POW (skimmed)	360	102
Cheese, 20 per cent, Fat	308	87
Fats, Butter	745	212
Oleo (Fortified)	768	218
Other Fats (Lard, Oils, etc.)	891	253
Sugar	400	113
Grain Products		
Bread (85 per cent)	247	70
Flour (85 per cent)	346	98
Rice	349	99
Biscuits	412	117
Legumes (Pulses)	305	886
Soups, dehydrated	334	95

ITEM	CALORIES- 100 gms.	CALORIES- 1 oz.
Vegetables		
L.G. & Y.	26	8
Potatoes	65	18
Other vegetables	15	4
Beverages		
Wine	70	20
Chocolate (Vitaminized)	522	148

Table of Weight Equivalents

28.4 gms—1. oz.
100 gms—3.5 ozs.
(1 Kg) 1,000 gms—2.2 lbs.
454 gms—1 lb (16 ozs).