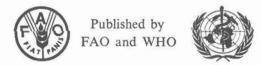
ENERGY AND PROTEIN REQUIREMENTS

Report of a Joint FAO/WHO Ad Hoc Expert Committee

Rome, 22 March - 2 April 1971



Annex 3

CONVERSION OF NITROGEN TO PROTEIN

In the present report, protein requirements are expressed as "crude protein" (nitrogen × 6.25) and are derived from an examination of data on nitrogen intake rather than protein intake. However, most food composition tables derive estimates of protein content by applying different factors to the nitrogen content of individual foods. These factors are shown in the accompanying table. To compare the protein requirements suggested in the present report with the reported protein content of foods, a correction of the reported protein content must be made. The correction factors to convert reported protein to crude protein are shown in the table. Before these corrections are applied, it must be ascertained how the original values in the composition table were derived. The nitrogen conversion factors given in the table below are taken from Food and Agriculture Organization (1970) Amino acid content of foods and biological data on proteins, Rome (FAO Nutritional Studies, No. 24).

TABLE 32. FACTORS USED IN CONVERTING NITROGEN TO PROTEIN

Foodstuff	Conversion factor for protein content as reported in food composition tables	Correction factor for conversion of reported protein to "crude protein"
CEREALS		
Wheat, hard, medium, or soft Whole meal or flour or bulgur Flour, medium or low extraction Macaroni, spaghetti, wheat pastes Bran	5.83 5.70 5.70 6.31	1.07 1.10 1.10 0.99
Rice Husked or brown (only hulls removed) Home-pounded, undermilled, parboiled Milled, white	5.95	1.05
Rye Whole meal, dark flour Flour, medium extraction Flour, light, low extraction		
Barley Whole seed, except hulls and groats Pearled, light or dark	5.83	1.07
Oats Oatmeal, rolled oats		

TABLE 32 (cont.)

Foodstuff	Conversion factor for protein content as reported in food composition tables	Correction factor for conversion of reported protein to "crude protein"
PULSES, NUTS, AND SEEDS		
Groundnuts	5.46	1.14
Soya bean, seeds, flour or products	5.71	1.09
Treenuts		
Almond	5.18	1.21
Brazil nut	5.46	1.14
Coconuts (outer husk removed) old, ripe, in shell young, under-ripe, in shell Chestnuts fresh dry Treenuts, other	5.30	1.18
Seeds Sesame, safflower, sunflower	5.30	1.18
MILK AND CHEESE Milk, all species, fresh or dry Cheese, hard or soft	6.38	0.98
Whey cheese OIL AND FATS Margarine (either vegetable or animal) Butter	6.38	0.98
OTHER FOODS	6.25	1.00