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Annex 3

CONVERSION OF NITROGEN TO PROTEIN

In the present report, protein requirements are expressed as "crude protein" (nitrogen \times 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		
<i>Wheat, hard, medium, or soft</i>		
Whole meal or flour or bulgur	5.83	1.07
Flour, medium or low extraction	5.70	1.10
Macaroni, spaghetti, wheat pastes	5.70	1.10
Bran	6.31	0.99
<i>Rice</i>		
Husked or brown (only hulls removed)	5.95	1.05
Home-pounded, undermilled, parboiled		
Milled, white		
<i>Rye</i>		
Whole meal, dark flour	5.83	1.07
Flour, medium extraction		
Flour, light, low extraction		
<i>Barley</i>		
Whole seed, except hulls and groats	5.83	1.07
Pearled, light or dark		
<i>Oats</i>		
Oatmeal, rolled oats	5.83	1.07

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
<i>Treenuts</i>		
Almond	5.18	1.21
Brazil nut	5.46	1.14
Coconuts (outer husk removed)	5.30	1.18
old, ripe, in shell		
young, under-ripe, in shell		
Chestnuts	5.30	1.18
fresh		
dry		
Treenuts, other		
<i>Seeds</i>		
Sesame, safflower, sunflower	5.30	1.18
MILK AND CHEESE		
Milk, all species, fresh or dry	6.38	0.98
Cheese, hard or soft		
Whey cheese		
OIL AND FATS		
Margarine (either vegetable or animal)	6.38	0.98
Butter		
OTHER FOODS	6.25	1.00