

given in the following tables were obtained by multiplying the total number of grams of digestible protein by the factor 1.25, deducting the amount got in this way from the calories representing the fuel value of the digested portion of the food, dividing this by the number of calories of heat got from the total food and multiplying by 100. This gives the per cent. of the total energy of the food which is available to the body, or the co-efficient of availability of the food.

To calculate the digestibility of the breakfast food alone, it is necessary to know the digestibility of the several nutrients contained in the food fed with it. It will be remembered that cream and sugar only were eaten with the cereal. As the digestibility of these has been determined in many experiments, it was assumed that the averages of the results obtained would represent the digestibility of the nutrients in the present experiments. According to these results, 97 per cent. of the protein and 95 per cent. of the fat of cream, and 98 per cent. of the carbohydrates of cream and sugar would be digested;‡ or, in other words, that 3 per cent. of the protein, 5 per cent. of the fat, and 2 per cent. of the carbohydrates would not be digested and should be found in the feces. By use of these factors it is possible to calculate how much of the total feces should be credited to the cream and sugar and how much to the breakfast food experimented with. Having this data, it is an easy matter to figure the percentage digestibility of each of the nutrients of the cereal alone. Reference to the table showing this data reveals the fact that no figures are given for the digestibility of the fat in the breakfast food alone. This is because the amount of fat in the cereal is so small compared with that in the cream that it was thought that any figures obtained would not be reliable.

The data required to compute the available energy of the cereal alone consists of the total fuel value of the cereal, the fuel value of the feces for cereal alone, and the fuel value of the organic matter lost in the urine from the incomplete oxidation of the protein of the cereal. By adding the figures for the last two points together and subtracting the sum from the fuel value of the cereal alone, we have the fuel value, or the available energy, of the cereal alone, and by dividing this by the total fuel value of the cereal and multiplying by 100, we obtain the per cent. of the energy of the cereal available to the body. A full statement of the results of the 46 successfully completed experiments, figured out as above described, furnished a mass of data which it has been found more convenient to place in the appendix. The average results for each food, however, are given in Table No. 6.

‡Storrs Experiment Station Report, 1899, p. 86.