

cost of baking and gain if any. The cost will include yeast, which will vary from 1d. to 1½d., salt and the cost of the firing, which would not be so much as the balance, 3d. or 3½d. The labour of the housewife need not be taken into the account, and where there is convenience for baking, it is probable that 2d. to 3d. per peck will be saved where fuel is cheap. In London the cost of bakers' bread and flour is nearly the same.

Oatmeal and Indian corn are not baked into loaves, and wherever they are eaten it is most usual to eat them in a moist state. Oatmeal is richer in nitrogen than wheaten flour, but this is owing very much to the husk, which is not thoroughly removed, and which when taken into the body is not digested. The price of oatmeal is now universally 2d. to 4d. per peck of 14 lbs. higher than that of household flour, so that the gain in the use of oatmeal is lessened. The amount of carbon and nitrogen to be obtained for 1d. when oatmeal costs 2s. 2d. the 14 lbs., is 1513 grains of the former and 75 grains of the latter.

Indian corn, or maize, may be purchased here at the price of barley, and as it contains much more nitrogen and carbon than the latter, it is by far the cheapest food hitherto mentioned. Thus at 1s. 2d. per stone of 14 lbs. there will be no less than 2,800 grains of carbon and 121 grains of nitrogen obtained for 1d.

RICE AND PEAS.—Rice has already been mentioned, and it remains to speak of peas and beans in connection with this part of the subject, since whilst peas are usually eaten after boiling, there are parts of the country where they are added to other foods in making bread. Split peas may be purchased at 1½d. per lb. retail, and at that price will yield 1820 grains of carbon and 170 grains of nitrogen for 1d. Hence in the latter particular, they far exceed in economy all the foods already mentioned. It must, however, be stated that this analysis refers to whole peas, and assumes that the whole will be ground into meal, but when they are boiled the shells are indigestible, as has been already pointed out, and lead to waste of food. Hence, although split peas are somewhat dearer, it is probable they are more economical.

The foods which are thus associated offer a wide range in their relative economy, so that some have twice as much carbon and others twice as much nitrogen as the standard quantity found in bread, and in relation to the same monetary value and in their effect upon the system would probably differ but little from that proportion. Hence it may be asked, "Why is it that the cheaper foods are not universally selected?" The answer must have reference to the income and the tastes of the people. So long as good wheaten bread can be obtained its approved flavour will commend it, whilst other and cheaper foods will only be used as adjuncts. It is only as the real wants of the system are greater than the income spent on bread will supply, that unusual and less agreeable foods, as peas and beans, barley, rye and maize, will be accepted. In all these discussions a practical as well as scientific view must be taken, and to the destitute class only can we commend the use of such foods with success (and only then as a temporary expedient), whilst any general attempt to enlist the

sympathies of those who can purchase white bread will certainly fail.

FRESH VEGETABLES.—Potatoes will be dear or cheap as they are purchased or grown, and therefore their value will be differently estimated by persons occupying the two positions. Moreover, when they are purchased their cost varies much at different seasons and in different parts of the country so that it will not be easy to obtain an approved standard for our calculations. I propose to select ½d. per lb. as a medium cost, and at that price 1540 grains of carbon and 49 grains of nitrogen, would be obtained for 1d., but as the price is often 1d. per lb. in London and other large towns, only one half of that quantity would be then purchased for 1d.; hence their inferiority to the standard quantity in reference to nitrogen is very striking, and at either price they are dear food.

Other fresh vegetables may be classed together, and if we consider that 2 lbs. in weight could be purchased in London and large towns for 1d., and 4 lbs. in country villages for the same sum, we shall find that the carbon and nitrogen obtained would be respectively 820 grains, and 1640 grains of the former and 28 grains or 56 grains of the latter, and hence would closely correspond with the nutritive value of potatoes when purchased at ½d. per lb.

When potatoes and green vegetables are grown by the consumer, their cost is represented only by the rent of the land and the manure, and often by the former only, for manure is often collected, and the planting and gathering of the crops effected by the labour of the family, and as that labour could not be otherwise profitably employed, the potatoes add to the wages of the family, or are obtained almost without cost, as the question may be regarded. Such persons have great advantages over those who must buy their food, and exhibit a real economy in extending the use of fresh vegetables as far their appetite and health or their means of production will allow.

FATS are allied to the class of foods now discussed in that both constitute the chief supply of carbon to the system, but they differ in offering no nitrogen. They also contain much free hydrogen, which is useful to the system, but for the reason already given I shall refer only to the carbon. Those fats which are in common use, when separated from other foods, are butter, lard, dripping, and suet. The prices differ greatly, and particularly that of butter, so that I must take a medium, and shall select 1s. 2d. per lb. for butter, 9d. per lb. for lard 6d. per lb. for dripping, and 7d. per lb. for suet. At these prices the following are the quantities of carbon which can be obtained for 1d.:—Butter, 327 grains; lard, 591 grains; dripping 886 grains; and suet, 657 grains. Hence butter is by far the dearest of the fats, and dripping the cheapest, whilst the average of the whole is not nearly half of the standard quantity of carbon, omitting any reference to nitrogen.

SUGARS, like fats, yield no nitrogen, but supply carbon largely. The two kinds are sugar and treacle, each having much variation in price, but little in nutritive value. I propose to consider sugar to be worth 4½d. per lb., and treacle 3d. per lb., and at these prices the quantity of car-