

The 1947 Food Crisis and its Aftermath: Worker and Peasant Consumption in Non-Famine Regions of the RSFSR

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THE FOOD CRISIS OF 1947 AND ITS IMPACT ON URBAN MORTALITY

In the summer and autumn of 1946 a drought hit the Western areas of the USSR, causing a severe harvest failure. The worst hit regions were Moldavia and Southern Ukraine. The repercussions of the harvest failure were immense. Famine broke out which, according to the most recent estimates by Michael Ellman, cost between 1 million and 1.5 million deaths. As we might expect, the burden of the famine fell heaviest on the areas which suffered from drought. Although in absolute terms the number of excess deaths was greatest in the RSFSR, then Ukraine, and lastly Moldavia, as a percentage of their respective populations the burden was exactly the reverse: roughly five per cent of the population died in Moldavia; one per cent in Ukraine; and 0.6 per cent in Russia.¹ In fact, during 1947 deaths exceeded births in Moldavia by at least 107,000.²

When the Soviet regime realized that the drought of summer and autumn 1946 was going to lead to a serious harvest failure it chose to deal with the situation not by releasing food reserves and maintaining existing levels of consumption, but rather by suppressing consumption in order to bring it into line with the reduced harvest.³ In time honoured Stalinist practice, the state virtually denuded the countryside of grain, irrespective of the effect this had on peasant living standards. For urban residents and workers in rural areas the attack on living standards was two-pronged. In early September, 1946 the regime substantially raised prices on rationed goods. Later that month it pruned from the ration lists

¹Michael Ellman, "The 1947 Soviet Famine and the Entitlement Approach to Famines," *Cambridge Journal of Economics*, vol. 24, no. 5 (September 2000), pp. 603-30, here citing p. 613.

²RGAE, f. 1562, op. 329, d. 2648, l. 241. These are from the preliminary birth and death registrations collected by the TsSU and therefore are only approximate.

³The discussion in this and the following paragraph is from Donald Filtzer, *Soviet Workers and Late Stalinism: Labour and the Restoration of the Stalinist System After World War II* (Cambridge, 2002), ch. 2. The classic study of the famine itself remains V. F. Zima, *Golod v SSSR 1946-1947 godov: proiskhozhdienie i posledstviya* (Moscow, 1996). Though dealing mainly with the countryside, Zima also details the famine's wider ramifications for the rest of Soviet society.

some 25 million people – in the main clerical employees, workers’ dependents, and workers themselves if they lived in rural localities. The reduction in access to food did not end there. Factories, vocational training schools, and care institutions (children’s homes, for example) lost supplemental food supplies which up to then had allowed them to maintain nutrition levels above the minimum provided by the basic ration. In many enterprises workers had had the right to receive extra portions or even entire extra meals in factory dining rooms. These supplemental food entitlements disappeared, with a corresponding impact on workers’ diet and health.

The most immediate victims of this policy were workers and their families in Ukraine and Moldavia. During late 1946 the trade unions reported a number of deaths by starvation among the families of railway workers in Moldavia and construction workers in Ukraine. Yet these deaths, as tragic as they were, were only part of the story. Not just dependents, but workers themselves suffered widespread hunger from one end of the USSR to the other. Factory doctors in the engineering industry reported a pronounced rise in acute malnutrition [*alimentarnaya distrofiya*]. Young workers were perhaps hardest hit of all, because although they were notionally entitled to three full meals a day in factory canteens, their wages were so low that they could not afford to pay for them at the new, much higher prices. In many factories the daily cost of factory meals exceeded young workers’ daily earnings.

The famine, therefore, resembled a nuclear explosion. The worst devastation was at the epicentre in Moldavia and Ukraine, but its destructiveness rippled outwards to the very ends of the USSR. Although, as Ellman notes, the RSFSR suffered proportionately less than these two republics, the food crisis had a measurable impact on mortality. Deaths in the urban areas of Rostov oblast’ leapt from around 6,500 in 1946 (a figure which already reflects the first famine deaths of late 1946) to around 12,400 in 1947 – an increase of some 90 per cent. In Taganrog the rise was 110 per cent; in Shakhty around 93 per cent. In the city of Rostov-on-Don (recorded separately from the oblast’ figures) the number of deaths went up by over 80 per cent.⁴ Rostov oblast’ was close to the famine region; it also suffered severe drought, and so such a surge in deaths might not be unexpected. The oblast’ medical

⁴RGAE, f. 1562, op. 329, d. 2230, l. 8 (1946), and d. 2648, l. 208-9 (1947).

authorities had certainly warned that it was coming⁵ However, the industrial regions of the Urals showed increases in mortality almost as large: 54 per cent in the industrial centres of Sverdlovsk oblast'; 58 per cent in the urban centres of Molotov oblast'; and 63 per cent in the towns of Chelyabinsk oblast', including 83 per cent in Magnitogorsk.⁶ These figures may overstate the magnitude of the crisis: a true comparison should take account of population increases during 1947, and calculate deaths per 10,000 population. Yet we can state with certainty that however much these urban centres may have grown – especially in the Urals, which saw a massive in-migration of mobilized workers – such growth was not remotely proportional to the increase in the number of deaths. Moreover, there are some cities for which we do have fairly accurate population data, from which we can estimate a crude death rate. In Ivanovo, deaths per 10,000 population went from 119 in 1946 to 182 in 1947 – an increase of 40 per cent.⁷ In Kuibyshev deaths per 10,000 rose from 125 to 157, an increase of 25 per cent.⁸ Even in Moscow, which was far and away the best provisioned city, there was a significant, though smaller, increase of around 7 per cent, from 125 deaths per 10,000 population in 1946, to 134 in 1947.⁹

An even clearer indicator of these trends is infant mortality. Table 1¹⁰ gives infant mortality between 1945-1950 in urban centres and rural areas in those oblasti of the RSFSR for which I also have household consumption data. Infant mortality data show that in most regions infant mortality was higher in the towns than in the countryside. To this extent the Soviet Union displayed the same tendency towards an “urban penalty” as other industrializing and urbanizing societies – although given uncertainties over rural under-reporting the size of this “urban penalty” was probably smaller than these figures suggest. Yet for the towns the picture is absolutely clear: the leap in infant mortality in 1947

⁵See the 1946 oblast' GSI report, GARF-RSFSR, f. A-482, op. 47, d. 4947, l. 146.

⁶RGAE, f. 1562, op. 329, d. 2230, l. 7, 9-10 (1946), and d. 2648, l. 206, 208, 210 (1947).

⁷Calculated from mortality figures in RGAE, f. 1562, op. 329, d.2230, l. 4 (1946), and d. 2648, l. 212 (1947), and population estimates in GARF-RSFSR, f. A-482, op. 47, d. 4925, l. 23.

⁸GARF-RSFSR, f. A-482, op. 52s, d. 224, l. 50-1.

⁹GARF-RSFSR, f. A-482, op. 52s, d. 224, l. 172.

¹⁰All tables are given in an appendix at the end of the paper.

is unambiguous all the way to the Urals and beyond. More precisely, with the exception of Leningrad, in every major city and industrial district of the RSFSR infant mortality increased by 50, 100, and in the case of Magnitogorsk as much as 150 per cent. In cities like Ivanovo, Gor'kii, Sverdlovsk, Yaroslavl', and Zlatoust, one out of every five new-born babies died in their first year. In other centres – Kuibyshev, Kazan', Molotov, Chelyabinsk, Ufa – the death rate was one in six or slightly worse. Only Moscow and Leningrad showed lower rates, “just” one in eight.¹¹

This then, was the most dramatic and most visible effect of the food crisis. Yet, as I briefly discuss in the next section, the collapse of nutrition did not by itself cause the increased mortality; rather it was the fact that the crisis hit a population already vulnerable due to years of war-time deprivation and extremely unhealthy, if not hazardous, living conditions.

THE NUTRITIONAL LEGACY OF THE WAR

The 1946 harvest failure came at an especially difficult time for the Soviet population. Food supplies had sunk to below-subsistence levels during the war, and in 1942-1943 were not sufficient to keep alive the entire civilian population behind the front.¹² The food situation then began to improve, although the official ration to non-combatants in 1944 was well below subsistence norms, with the possible exception of special groups of manual workers doing exceptionally heavy work in strategic sectors.

¹¹To put these figures in perspective, such levels of infant mortality were still lower than the Russian average in Tsarist times, and the RSFSR average prior to World War II. Russian infant mortality in 1913 was 27.3 per cent; for the RSFSR in 1940, 26.2 per cent. G. F. Konstantinov, *Zdravookhranenie v SSSR (Statisticheskii spravochnik)* (Moscow, 1957), p. 40. I am grateful to Chris Burton for calling this reference to my attention. Infant mortality in 1940 was 25.2 per cent in the city of Sverdlovsk (GARF-RSFSR, f. 482, op. 47, d. 3443, l. 7); 16.9 per cent in Moscow (GARF-RSFSR, f. 482, op. 47, d. 4941, l. 13ob., and op. 52s, d. 224, l. 173); and 26.4 per cent in the urban areas of Moscow oblast' (RGAE, f. 1562, op. 329, d. 4559, l. 89-93).

We see the same trend if we look at deaths among toddlers, aged between one and two years. We have data for this age group only for urban areas in the RSFSR as a whole, but they nonetheless reveal a striking trend. Here, too, there was a dramatic rise in deaths during 1947, which lessened only slightly in 1948, and did not return to more normal levels until 1949. Specifically, if we take deaths in each given year as a percentage of children born the year before (their notional birth year), death rates were 4 per cent in 1946; 5.25 per cent in 1947; 4.9 per cent in 1948; 3.2 per cent in 1949; and 3 per cent in 1950. Data calculated from RGAE, f. 1562, op. 329, d. 1883, l. 12; d. 2229, l. 1; d. 2235, l. 4ob.; d. 2648, l. 35ob., 242; d. 3157, l. 2; d. 3166, l. 6ob.; d. 3807, l. 1; d. 3814, l. 4ob.; d. 4703, l. 383ob.

¹²Mark Harrison, *Accounting for War. Soviet production, employment, and the defence burden, 1940-1945* (Cambridge, 1996), pp. 141, 159-61.

Children under 13 years were rationed at barely 1,000 calories a day; non-working dependents at just 780; clerical employees at just over 1,000; and manual workers between 1,900 and 3,460. For all categories it was assumed that roughly 80 per cent of calories would come from bread.¹³ Official ration allowances, however, do not necessarily give an accurate guide to what people actually consumed: on the one hand, there was never any guarantee that available food supplies allowed workers or their families to acquire their entire allocation. On the other hand, the allowances themselves make it obvious that the state did not assume that the ration alone would be enough to keep people alive. One supplemental source of food, of course, was the local peasantry, from whom many people, including workers, bought food. Factories had their own allotments and farms, and workers and clerical employees had private plots (some 16.5 million in 1944).¹⁴ In fact, one of the problems of maintaining basic levels of communal sanitation after the war was the fact that during the war localities had ploughed up waste dumps, and in some cases even their water filtration beds, and used them to grow food.¹⁵ Moreover, it is almost certain that different regions were affected in different ways and to different degrees by these or similar factors.

It is perhaps to restate the obvious, but the harvest failure of 1946 hit a population whose health and physical development were already badly compromised by the cumulative effects of substandard, and in many cases sub-subsistence nutrition. Moreover, the potential impact of another food crisis was magnified by other environmental factors: poor sanitation; insecure supplies of safe drinking water; bad housing; and inadequate heating. It is easy to forget that in most cities and towns, including Moscow, a large minority, and in some cases a majority, of the population lived in single- or two-storey wooden houses without basic amenities, and certainly without central heating.¹⁶ Domestic fuel was in very short

¹³John Barber and Harrison, Mark, *The Soviet Home Front, 1941-1945: A Social and Economic History of the USSR in World War II* (London, 1991), pp. 214-5.

¹⁴Eugene Zaleski, *Stalinist Planning for Economic Growth, 1933-1952* (London, 1980), p. 336.

¹⁵GARF-RSFSR, f. A-482, op. 47, d. 4925, l. 194; d. 4937, l. 56; and d. 6347, l. 145.

¹⁶In Moscow in 1946, roughly 40 per cent of the housing stock (measured by area) was wooden or “semi-wooden” buildings; just over 30 per cent of the population did not have sewerage; and nearly a quarter did not even have indoor running water. GARF-RSFSR, f. A-482, op. 47, d. 4941, l. 144, 145ob. In Gor’kii in 1948 only 13 per cent of the housing stock (though perhaps a higher percentage of the population) had central heating; and

supply: family budget surveys show that in most towns purchases of firewood were negligible; the surveys did not even record purchases of hard coal until spring 1950, and people began to buy significant amounts of coal only at the end of that year.¹⁷ In short, as in war time, though clearly to a much less severe degree, people had to cope with a sharp fall in nutrition together with intense cold and severe difficulties maintaining basic hygiene.

The toll which the war years had taken can be seen from the scattered evidence of local studies. Medical examinations during 1946 of teenage workers in Moscow oblast' (aged 14 to 18) in metalworking and textiles, and young Labour Reserve school trainees found unusually high numbers who were undernourished [*upadok pitaniya*]: 18 per cent of boys and 10.5 of girls in metalworking; 20 per cent of boys and 13.4 per cent of girls in textiles; and 30.5 per cent of boys and 9.7 per cent of girls in the Labour Reserve schools. Many also suffered from anaemia: 7.0 of boys and 10.5 of girls in metalworking; 11.5 per cent of boys and 17.5 of girls in textiles; and 21.8 per cent of boys and 20.6 per cent of girls in the Labour Reserve schools.¹⁸ The Moscow oblast' findings are among the worst I have found in the files prior to 1947, when such results became a more common occurrence, but they were not altogether exceptional. The mass medical examinations of school children in the city of Molotov in late 1945 recorded 10 per cent suffering from anaemia and 10 per cent from severe undernourishment.¹⁹ Less direct, but nonetheless indicative evidence came from Gor'kii. During the 1944-1945 school year the city organized special dining rooms to provide extra food, with a caloric value of just

fewer than 30 per cent of residents had sewerage and running water. GARF, f. 9226, op. 1, d. 798, l. 45, and d. 895, l. 108ob. In the towns of Ivanovo oblast' in 1946 almost none of the urban population was hooked up to a sewerage system or piped water; 60 per cent lived in low-lying private wooden dwellings. GARF-RSFSR, f. A-482, op. 47, d. 4925, l. 221, 228. In almost every Soviet city waste collection – including the emptying of cess pits – was sporadic, and residents spent large parts of the year wending their way through garbage and raw sewage.

¹⁷In Gor'kii purchases of fire-wood during the first six months of 1947, averaged 0.01 cubic metres of firewood per family member. There were no measurable purchases of hard coal even by the end of 1950. GARF-RSFSR, f. A-374, op. 3, d. 2225, l. 2. Workers in Sverdlovsk were much better off in this regard, acquiring 0.23 cubic metres of firewood per family member during the first half of 1947. That is the rough equivalent of 4one-metre-long logs, 25 cm. thick, per person for the entire winter. GARF-RSFSR, f. A-374, op. 3, d. 2240, l. 3.

¹⁸GARF-RSFSR, f. A-482, op. 47, d. 4939, l. 173.

¹⁹GARF-RSFSR, f. A-482, op. 47, d. 3431, l. 100. It is not necessarily the case that these were always the same children. The total suffering from either problem would have been greater than 10 per cent, but by how much or how little we do not know.

over 500 kcal per day, for those school children whom doctors had diagnosed as in need of supplemental nutrition. During their first year of operation 89 per cent of all school-age children in the city received a medical referral to use them. In 1945-1946 this dropped significantly, but the dining rooms still catered for 40 per cent of the city's school children. This fell to just 12 per cent in the fall of 1946, but not because the need had eased, but because government ration cuts had deprived the dining rooms of the extra food supplies they needed to feed the children.²⁰

We see these trends more systematically in the small number of postwar anthropometric studies of school children and young workers which make a direct comparison with the local prewar population.²¹ Table 2 shows height and weight comparisons between school children in Gor'kii city and the towns of Gor'kii oblast' in 1937/8, and 1946 data for school children in the city of Dzerzhinsk (the largest industrial centre in Gor'kii oblast'), teenage students in Gor'kii city trade schools (*remeslennye uchilishcha*, or RU), and school children in Ivanovo city (the neighbouring oblast' to Gor'kii oblast'). The results are quite unambiguous. Boys and girls in every age group were considerably shorter and several kilograms lighter than their pre-war cohort. Table 3 makes the same comparison for the city of Moscow, with the same result. There we have two prewar standards: 1936/7 examinations of Moscow school children and 1940 examinations of young workers in Moscow factories. We can compare these with data for Moscow RU students and young workers in 1946. Not all the Moscow RU students would have been local Muscovites, but many of them were, and the majority of the rest would have come from surrounding areas in Moscow oblast'. Unlike the Gor'kii and Ivanovo comparison, however, they suggest that teenage girls from the Moscow area had coped far better than boys; the latter, however,

²⁰GARF-RSFSR, f. A-482, op. 47, d. 4923, l. 352-6. The 1945-1946 figure was roughly four times the number of children officially diagnosed with either anaemia or serious undernourishment. If nothing else this highlights the fact that there was a large mass of children whose physical condition and nutritional state may not have qualified as "severe malnourishment," but were nonetheless a cause for alarm. GARF, f. 9226, op. 1, d. 798, l. 102ob.

²¹Most of the postwar anthropometric studies make no reference to a local prewar comparator. They refer instead to a 1940 study of Moscow children, which was then taken as a national standard. The problem is that this tells us nothing about prewar variations between Moscow children and those in other cities and regions. To assess the effects of the war, for example, on children in Ivanovo, we would need to know the height and weight of Ivanovo children before the war.

were approximately two years behind their prewar cohort in terms of height and some three to five kilograms lighter.

All of this helps explain why the regime's response to the harvest failure had such devastating effects. This was a population already weakened by years of malnourishment and living in towns and cities which can only be termed an environmental disaster. For those who had survived the war, millions were as if standing on the edge of an abyss. It would require relatively little to push them over the edge – which is precisely what the Stalinist regime did.

COPING WITH THE CRISIS: WORKERS' AND PEASANTS' HOUSEHOLD CONSUMPTION

In his analysis of excess mortality caused by the famine, Michael Ellman notes what appears to be a paradox. Deaths among the urban population rose more sharply in percentage terms than deaths among the peasantry. Yet qualitative accounts of the famine, both in official documents and survivors' reports, give the impression that the countryside suffered the worst. Ellman suggests that the answer to this conundrum may lie in large-scale under-reporting of famine-related deaths in rural areas, although he is careful to caution that this is by no means a certainty.²² In this section I present material from the Central Statistical Administration's surveys of household consumption in workers' and peasants' families in the RSFSR's main industrial oblasti for the years 1946-1950. These suggest that, in the RSFSR at least, the higher urban death rate may not have been an artifact at all, and that peasants genuinely did have a nutritional advantage over workers.

The surveys give average monthly per capita consumption of major food items in grams, from which we can calculate consumption in grams per day.²³ From these I have calculated average per capita daily calorie and protein intake for families in each city and oblast', using the nutritional values applied by the VTsSPS trade union federation in its own, smaller-scale household budget surveys which it began

²²Ellman, pp. 614-5.

²³Lack of space means that I cannot explain here how the surveys were constructed or discuss some of their methodological weaknesses. Perhaps this will come up in discussion. Readers will have to take it on faith that, their inherent problems notwithstanding, the surveys are relatively reliable. If they err in any direction they will somewhat overestimate how much food families consumed; they will not underestimate it. Therefore we can take our results as an upper threshold.

to carry out in 1950. These values in turn were derived, with slight modifications, from the detailed nutrition tables published by TsSU in 1925.²⁴ The TsSU and VTsSPS figures differ from modern-day foods in a few, but significant ways. The most important difference is that Soviet bread had lower calorie and protein content than our modern-day Western bread, or even Soviet bread from the early 1950s. Given the importance of bread in the postwar diet this had major nutritional implications. Another difference is in meat produces. VTsSPS assumed that almost all meat consumed was from scrawny animals. It was thus low in calories, although not in protein. Similarly, salami and sausage products were not the high-fat, calorie-laden foods we would expect today, because most of it was boiled and loaded with filler, not smoked (which was a rare delicacy). Yet even these values over-estimate the nutritional content of key foods, especially in the earlier postwar years. We know from the local reports of the State Sanitary Inspectorate (*Gosudarstvennaya Sanitarnaya Inspektsiya*, or GSI) that much of the bread had excessive moisture content and was baked with flour contaminated with impurities, such as chaff and husks. The same was true of meat products.²⁵

Let me now summarize the results.

Calorie and protein intake. Table 4 gives per capita calorie intake in workers' and peasants' families by half-year from 1946 through 1950. Table 5 gives comparable results for per capita daily protein intake. The calorie intake of workers' families – as distinct from the peasantry – was already precariously low in early 1946, that is, before the crisis erupted. Once it hit, workers' consumption in most oblasti – including Moscow oblast' – fell below 2,000 calories a day. Even in those cities and oblasti where consumption stayed above that level (Moscow, Leningrad, and Sverdlovsk cities and Sverdlovsk and Kemerovo oblasti), it exceeded it only marginally, even in Moscow. There is thus a strong *a priori* association between the drop in calorie intake and accelerated urban death rates – most notably infant mortality – in these localities.

²⁴*Trudy TsSU*, vol. xxii, vypusk 1, 1925: *Normal'nii sostav i pishchevoe znachenie prodovol'stvennykh produktov*. The VTsSPS food values are calculated from GARF, f. 5451, op. 43s, d. 997, l. 231.

²⁵See for example, GARF-RSFSR, f. A-482, op. 47, d. 6335, l. 201-2, and d. 7656, l. 274-80 (Gor'kii oblast'); d. 6340, l. 80-2, 85-6 (Kemerovo oblast'); d. 7677, l. 78-9 (Rostov-on-Don); d. 6367, l. 101-4 (Yaroslavl' oblast').

If we look at protein intake the picture is less clear. Protein consumption fell, and in some localities to dangerously low levels, but this situation did not persist for very long. Elsewhere it remained above accepted international minimum levels, and in Moscow, Leningrad, and Sverdlovsk it stayed within reach of recommended adult maxima (around 70 gm. per day). This ability to sustain minimum protein intake almost certainly attenuated the effects of the food crisis.

We can derive a clearer picture of the seriousness of the situation by comparing daily calorie intake with actual requirements. Unlike prewar budget surveys, the figures for physical consumption are not converted to adult equivalent units, that is, they are straight per capita averages and do not take into account the lower food needs of small children. We do, however, know the age and gender composition of the average worker household in each region, and can use this to calculate its average per capita daily calorie requirement, adjusted for age and gender. In fact, I have used two different measures. First, I compare actual intake to the official Soviet recommendations, which considerably exceeded international standards, both then and now. Secondly, I have constructed a modified daily standard, which averages the Soviet and Western recommendations, to allow for the fact that Western norms underestimate the needs of adults doing heavy physical labour and living in cold climates.²⁶ These results are shown in Table 6, which also explains how I calculated the standards. What we see is that even using the lower, modified standard, daily calorie intake in 1947 in most localities was between two-thirds and three-quarters of the actual requirement. Measured against the Soviet standard consumption fell to between half and two-thirds of actual need. In either case the picture is quite clear. Workers' families suffered an acute nutritional deficit from late 1946 through to the end of 1947, after which the diet gradually improved. By 1949 and 1950 calorie intake was hovering around, or slightly exceeding, our modified standard, although it was still very far below what the Soviets themselves considered essential.

The other crucial observation is that in every region for which we have comparative data peasant households had a clear nutritional advantage over the families of workers, most notably in calorie intake,

²⁶*Crisis in Mortality, Health and Nutrition*, Economies in Transition Studies, Regional Monitoring Report, No. 2, August 1994 (Florence: UNICEF, 1994), p. 79.

and to a lesser extent in terms of protein. The main reason for this was peasant access to two foods: potatoes and milk. The importance of milk I discuss below. Peasants grew grain, but because the state confiscated almost all of it, peasants ate relatively little bread. Unlike the famine of 1932-1933, however, they were able to grow and store potatoes. Workers' families also relied on potatoes as a substitute for bread, but could not grow potatoes in sufficient quantities fully to compensate for the state-sponsored cut in the bread supply. We see this clearly in Tables 7 and 8. Peasant households consumed vast amounts of potatoes – at least one kilogram a day per family member, and in many oblasti from 1.5 to 2 kg. For all practical purposes potatoes kept the peasantry alive. Compared to bread, potatoes are a relatively low-calorie and low-protein food source. This somewhat understates their nutritional importance. Aside from their vitamin C, thiamin, and iron, the protein in potatoes has a high biological value – sufficient to sustain life even where potatoes are the sole source of protein.²⁷ At the same time, we need to keep in mind that the nutritional content of potatoes is compromised by spoilage, which increases with age and length of storage. The important point here is that, while a diet heavily reliant on potatoes may be monotonous and lack nutritional balance, it can sustain a population through periods of dearth. In the case of the Russian peasantry, this is precisely what happened in the early postwar years, and to a large extent explains the generally higher daily calorie intake of peasant families versus those of workers during the food crisis.

Although I have not shown the calculations here, there was a more or less reciprocal relationship between potato and bread consumption. For both workers' and peasants' families, bread and potato consumption combined provided between 75 and 80 per cent of total daily calories, a figure which changed very little from 1946 through to the end of 1950. Total calorie and protein intake may have risen, but the nutritional balance of the daily diet did not improve. Almost all nutrition came from starch. We should bear this in mind when discussing access to other major food items.

²⁷J. S. Garrow and W. P. T. James, eds., *Human Nutrition and Dietetics*, ninth edition (Edinburgh, 1993), p. 290. I am grateful to Mark Harrison for bringing this source to my attention.

Meat and milk consumption. Soviet dietary standards called for the average member of a workers' family – adjusted for typical age composition – to consume 167 gm. of meat and 51 gm. of fish per day.²⁸ At no point in the late Stalin period did consumption even remotely approach these levels. The closest were workers' families in Moscow city at the end of 1950, when aggregate consumption of fish and meat reached 133 gm. a day – a full 40 per cent below the recommended intake. As Table 9 shows, everywhere else consumption of animal proteins was negligible, and with the exception of Moscow city, never provided more than 17 to 20 per cent of workers' total protein intake, and for peasant families much lower still.

It is a different story altogether with milk. Access to milk has special significance for any discussion of the food crisis because of its alleged influence on infant mortality. I addressed this question in a conference paper two years ago, where I cited the arguments of Soviet medical authorities who were attempting to explain the sudden jump in infant mortality during 1947. These went as follows.²⁹ It was common practice to wean babies early in Russia, both in town and countryside, and infants were put on cows' milk from the age of three months. We can reasonably assume that this was not simply a question of culture and traditions of mothering. If mothers worked full time in factory or field, and if they were themselves malnourished, early weaning could be a practical necessity. It did, however, expose infants to a number of obvious risks. One was that it made infant nutrition dependent on the availability of cows' milk. In the towns, as Table 10 shows quite clearly, consumption of milk was already very low and came under further strain in 1947. Milk was virtually unavailable in state shops. Mothers were reliant on urban "milk kitchens," which dispensed ready-made formula, but in towns such as Ivanovo these could meet only a quarter of overall demand, yet families were too poor to buy milk at the kolkhoz market.³⁰ Those urban families which, according to Table 10, had some reasonable access to milk, namely those in the Urals and Siberia, either had their own cows, as in

²⁸GARF, f. 9226, op. 1, d. 1119, l. 44.

²⁹Donald Filtzer, "Infant Mortality in Soviet Towns and Cities During the Early Postwar Years", British Association for Slavonic & East European Studies annual conference, March 2003, pp. 18-19.

³⁰GARF-RSFSR, f. A-482, op. 52s, d. 221, l. 80.

Kemerovo oblast', and/or were able to supplement what they produced themselves with purchases at kolkhoz markets, as in Molotov oblast'. Nowhere did urban families buy significant quantities of milk from state outlets. In Kemerovo oblast', 95 per cent of the milk consumed by workers' families during the first half of 1947 came from their own production; in the second half of 1947 the corresponding figure was 88 per cent. Between 1946-1948 only two to three per cent of milk came from state stores, a figure that had risen to only 10 per cent by 1950. The rest of what they consumed came from the kolkhoz market. In Molotov oblast' between 75 and 80 per cent of milk came from families' own cows; the rest came from the kolkhoz market. Through 1948 they bought no milk whatsoever from the state supply system, and even in 1950 state stores gave them only two to five per cent of what they consumed.³¹

The other danger was infection. This was a general problem, especially in the summer, when both towns and countryside witnessed a peak of infant deaths due to gastro-enteric infections. In 1947, however, as mothers made greater use of the urban milk kitchens, and as the kitchens themselves began to dispense lower-quality powdered formula instead of whole milk or pre-prepared formula, the general lack of urban sanitation and access to clean drinking water increased this risk still further. The 1947 data on infant mortality confirm this hypothesis. Analysis of causes of infant deaths in that year show a clear shift away from deaths in the first weeks of life, due mainly to poor viability, and towards infections among older infants, among whom the death rate usually decreased with age. Moreover, there was a shift in the relative percentages of infants dying of gastric infections as opposed to pneumonia, with gastric infections showing a noticeable increase in 1947.³²

If we look again at Table 10, we see that milk was the one food group where the peasantry had a clear advantage over urban families. During the first half of 1947, average peasant consumption of milk and dairy products – almost all of which was milk, as opposed to cheeses or curds – was five, six, or even ten times that of workers in the same region. The difference was smaller in the Urals, but still

³¹For sources, see the list of sources for the household budget surveys, at the start of the Tables section of this paper.

³²M. Ya. Kassatsier, *Detskaya smertnost' po RSFSR v 1946-1948 gg.* (Moscow, 1949), in GARF-RSFSR, f. A-482, op. 52s, d. 207, l. 34, 35.

significant. In Sverdlovsk oblast', peasants in early 1947 consumed six times as much milk as workers in Sverdlovsk city and over twice as much as workers in the oblast'. The disparity was even greater in Molotov oblast' and Bashkiriya.

In every region for which we have peasant data, peasant families derived from one-sixth to one-quarter of their daily protein from dairy products. In this sense we can say that just as peasants replaced bread with potatoes relative to workers' households, they also replaced meat and fish with milk as their main animal-based source of protein.

Yet for all its obvious importance in allowing peasant families to withstand the food crisis and long-term rural poverty, we cannot explain the leap in infant mortality in terms of availability of milk alone. Nor can it in all cases account for the generally observed lower rates of infant mortality in rural areas as opposed to the towns. It was in the Urals that workers in the oblasti had better access to milk, yet infant mortality there was no lower than in cities and towns where milk consumption was minimal. What is more, in Sverdlovsk and Molotov oblasti, infant mortality among peasant households was actually slightly higher than in the towns, despite their superior access to milk. Yet for other regions, especially Central Russia, the Volga, and Moscow oblast', the relationship appears so strong as to cast doubt on any assumption that lower rural infant mortality was simply due to under-reporting. Even in the Urals, the data do not necessarily mean that there was no link between infant deaths and milk supplies. Given what we know about the dreadful environmental conditions there, we could just as strongly argue that the dismal state of housing and sanitation in the oblast' towns simply overwhelmed any dietary advantage families may have obtained from higher levels of milk consumption. Put another way, it is possible that if the milk situation for workers in the Urals had been the same as in Ivanovo or Gor'kii, the infant death toll there would have been even higher.³³

³³The other major food groups for which I have detailed information are fruits and vegetables, and sugar and confectionary. Space does not allow me to discuss these here, except to say that fruit and vegetable consumption never exceeded a third of recommended requirements, even as late as 1950. Sugar consumption, by contrast, rose rapidly in 1950, and in many towns (but not among the peasantry) supplied as much as 10 per cent of daily calories. It is hard to avoid the suspicion that for the regime this was a relatively cheap and easy way to increase calorie consumption – far easier than expanding supplies of milk, meats, fruits, vegetables, and even grains.

CONCLUSION

The food crisis of 1947 came at the end of a period of chronic mass malnutrition which affected very large parts of the Soviet population. It was an acute crisis. It took a very high toll in human life and brought millions more people – mainly urban residents – to a point where, had the crisis persisted, it almost certainly would have caused serious, perhaps irreversible damage to health and longevity. However, by early 1948 calorie intake for workers' families – always bearing in mind that our data exclude the very low-paid – had risen to a point where people were malnourished, but their lives were not at risk.

Outside of the immediate famine areas of Southern Ukraine and Moldavia, peasants were better equipped to cope with the crisis than urban workers. The state's depredations of grain substantially reduced the importance of bread in the peasant diet, and peasants compensated primarily by relying on potatoes. But the surveys also show that peasants had far superior access to one vital food source, namely milk, and this may perhaps explain the lower infant mortality in the countryside compared to the towns, a phenomenon observed in almost every industrial oblast'. In some ways the true extent of rural poverty is more accurately revealed not by access to food, but by other data in the household surveys which I do not deal with in this paper, namely the almost total exclusion of peasant families from acquisition of even the most rudimentary consumer goods, such as underwear and shoes.³⁴

We also see significant differences in the consumption patterns of workers' families in different regions. The privileged position of Moscow and to a lesser degree of Leningrad and Sverdlovsk, is immediately obvious. But even Moscow workers' suffered during the food crisis and suffered quite badly: their bread consumption fell, but meat and fish supplies were essentially protected, and so the decline in their protein intake was less than the fall in calories. Workers in Sverdlovsk and Molotov oblasti were also able to mitigate the impact of the crisis by growing potatoes and providing their families with milk. This was not true of their Urals neighbours in Chelyabinsk or Chelyabinsk oblast'.

³⁴As late as 1948, for example, the average member of a peasant household in Moscow oblast' could buy a pair of leather shoes once every two years and a set of underwear once every 10 years. In Gor'kii oblast' it took 10 years to acquire a pair of shoes and 16 years to buy a set of underwear. Peasants in Sverdlovsk oblast' were somewhere in between: it took "only" six years to buy a pair of shoes, and twelve years to get hold of a piece of underwear. RGAE, f. 1562 [TsSU], op. 324, d. 2655, l. 97-98.

For reasons that are not clear, the food crisis hit the Chelyabinsk region especially hard, and its workers were unable to augment their diets with home-grown foods. This is in line with adult and infant mortality trends in that oblast', which remained high even after the immediate crisis had passed. Despite the allegedly privileged status of Magnitogorsk, there really was widespread hunger in this region.³⁵

Yet Chelyabinsk was an exception only when compared to Sverdlovsk. It differed little from most other cities and regions: the Autonomous Republics of Bashkiriya and Tatariya, the cities and towns of Central Russia (Gor'kii city and Gor'kii, Ivanovo, and Yaroslavl' oblasti), Molotov city, Kuibyshev, even the towns of Moscow oblast'. In all these localities the data on food consumption reinforce the picture already suggested by their infant mortality statistics and the environmental health reports of the local State Sanitary Inspectorate. It is for this reason that we can say the crisis was truly general.

There remains one final question, namely whether the food crisis had longer-term consequences for public health. On the one hand, the information we have assembled here throws the improvements of the Khrushchev and Brezhnev period into sharper relief. On the other hand, further research into this topic may tell us something about the deterioration in the population's health which set in later in the Brezhnev years, when the youth and younger adults of the postwar period were reaching middle and old age.

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³⁵Medical reports from the Magnitogorsk iron and steel works make clear that acute malnutrition among workers was widespread. GARF-RSFSR, f. A-482, op. 47, d. 6415, l. 54. The only sense in which the factory may have been privileged was that the regime, by way of rare exception, did grant an appeal for emergency rations, after its food allocation had been cut. Filtzer, *Soviet Workers and Late Stalinism*, pp. 62-3.

TABLES

Sources for Tables 1 through Table 3 are given with the tables. Tables 4 through 11 are drawn from the TsSU household consumption surveys, and are constructed from the following sources.

Bashkiriya Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 11-11ob., 12-12-ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2220, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2572, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2912, l. 4-4ob., 9-9ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3318, l. 1-1ob., 2, 3, 4-4ob., 5-5ob.

Bashkiriya Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-9, 163-4.

Chelyabinsk City Workers:

- 1946: RGAE, f. 1962, op. 15, d. 2133, l. 209-209ob., 210-210ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2243, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2595, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2935, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3341, l. 1-1ob., 2, 3, 16-16ob., 17-17ob.

Chelyabinsk Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 200-200ob., 201-201ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2242, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2594, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2934, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3340, l. 1-1ob., 3, 5, 18-18ob., 19-19ob.

Gor'kii City Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 38-38ob., 39-39ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2225, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2577, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2917, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3323, l. 1-1ob., 2, 3, 16-16ob., 17-17ob.

Gor'kii Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, 29-29ob., 30-30ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2224, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2576, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2916, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3322, l. 1-1ob., 2, 4, 8-8ob., 9-9ob.

Gor'kii Oblast' Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-9, 163-4.

Ivanovo Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 47-47ob., 48-48ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2226, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2578, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2918, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3324, l. 1-1ob., 2, 3, 16-16ob., 17-17ob.

Kemerovo Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 56-56ob., 57-57ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2227, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2579, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2919, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3325, l. 1-1ob., 2, 3, 16-16ob., 17-17ob.

Kuibyshev City Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 83-83ob., 84-84ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2230, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2582, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2922, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3328, l. 1-1ob., 2, 3, 19-19ob., 20-20ob.

Kuibyshev Oblast' Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-9, 163-4.

Leningrad City Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 92-92ob., 93-93ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2231, l. 7-7ob., 8-8ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2583, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2923, l. 2-2ob., 3-3ob.

Molotov City Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 116-116ob. 117-117ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2233, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2585, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2925, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3331, l. 4-4ob., 8, 15, 19-19ob., 26-26ob.

Molotov Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 101-101ob., 102-102ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2232, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2584, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2924, l. 3-3ob., 6-6ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3330, l. 1-1ob., 11, 18, 22-22ob., 29-29ob.

Molotov Oblast' Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-9, 163-4.

Moscow City Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 128-128ob., 129-129ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2231, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2587, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2927, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3333, l. 1-1ob., 2, 2a, 3-3ob., 4-4ob.

Moscow Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 125-125ob. 126-126ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2234, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2586, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2926, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3332, l. 1-1ob., 2, 3-3ob., 4, 6-6ob.

Moscow Oblast' Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-79, 163-164.

Sverdlovsk City Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 173-173ob., 174-174ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2240, l. 3-3ob., 4-4ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2592, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2932, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3338, l. 1-1ob, 2, 3, 4-4ob., 5-5ob.

Sverdlovsk Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 164-164ob., 165-165ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2239, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2591, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2931, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3337, l. 1-1ob., 2, 3, 7-7ob., 8-8ob.

Sverdlovsk Oblast' Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-9, 163-4.

Tatariya Workers (Kazan' City):

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 182-182ob., 183-183ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2221, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2573, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2913, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3319, l. 1-1ob., 8, 9, 19-19ob. 20-20ob.

Tatariya Peasants:

- 1946 & 1947, 1st half: RGAE, f. 1562, op. 324, d. 2221, l. 99-100.
1946 & 1947, 2nd half: RGAE, f. 1562, op. 324, d. 2222, l. 99-100.
1948, 1st half: RGAE, f. 1562, op. 324, d. 2655, l. 99-100.
1948, 2nd half: RGAE, f. 1562, op. 324, d. 2656, l. 99-100.
1949 & 1950: RGAE, f. 1562, op. 324, d. 3707, l. 78-9, 163-4.

Yaroslavl' Oblast' Workers:

- 1946: RGAE, f. 1562, op. 15, d. 2133, l. 218-218ob., 219-219ob.
1947: GARF-RSFSR, f. A-374, op. 3, d. 2244, l. 2-2ob., 3-3ob.
1948: GARF-RSFSR, f. A-374, op. 3, d. 2596, l. 2-2ob., 3-3ob.
1949: GARF-RSFSR, f. A-374, op. 3, d. 2936, l. 2-2ob., 3-3ob.
1950: GARF-RSFSR, f. A-374, op. 3, d. 3342, l. 1-1ob., 2, 3, 4-4ob., 5-5ob.

TABLE 1
INFANT MORTALITY IN URBAN AND RURAL AREAS OF SELECTED OBLASTI, RSFSR, 1945-1950

Oblast'	1945	1946	1947	1948	1949	1950
RSFSR	8.5	8.1	13.2	9.5	8.6	8.9
<i>urban</i>	<i>9.0</i>	<i>9.1</i>	<i>15.2</i>	<i>10.2</i>	<i>9.2</i>	<i>10.2</i>
<i>rural</i>	<i>8.1</i>	<i>7.3</i>	<i>11.7</i>	<i>9.0</i>	<i>8.1</i>	<i>7.9</i>
Gor'kii oblast'	9.7	8.8	12.2	10.2	7.8	8.3
<i>urban settlements</i>	<i>10.3</i>	<i>9.7</i>	<i>14.4</i>	<i>9.8</i>	<i>7.4</i>	<i>9.6</i>
<i>rural areas</i>	<i>9.5</i>	<i>8.4</i>	<i>11.4</i>	<i>10.3</i>	<i>7.9</i>	<i>8.1</i>
Gor'kii city	10.7	11.7	19.0	10.6	7.8	9.1
Ivanovo oblast'	10.3	10.3	15.2	10.8	8.3	9.2
<i>urban settlements</i>	<i>10.6</i>	<i>10.8</i>	<i>17.7</i>	<i>11.7</i>	<i>8.8</i>	<i>10.6</i>
<i>rural areas</i>	<i>9.9</i>	<i>9.7</i>	<i>11.4</i>	<i>9.6</i>	<i>7.7</i>	<i>7.2</i>
<i>Ivanovo city</i>	<i>11.8</i>	<i>12.5</i>	<i>21.4</i>	<i>13.5</i>	<i>9.1</i>	<i>11.0</i>
Kemerovo oblast'	7.9	8.3	13.3	10.2	9.9	11.7
<i>urban settlements</i>	<i>8.1</i>	<i>9.0</i>	<i>14.1</i>	<i>11.2</i>	<i>10.6</i>	<i>12.4</i>
<i>rural areas</i>	<i>7.4</i>	<i>6.9</i>	<i>11.7</i>	<i>8.5</i>	<i>8.4</i>	<i>10.1</i>
Kuibyshev oblast'	6.8	6.0	10.2	8.1	8.1	6.5
<i>urban settlements</i>	<i>7.3</i>	<i>7.5</i>	<i>12.8</i>	<i>9.7</i>	<i>8.4</i>	<i>7.4</i>
<i>rural areas</i>	<i>6.7</i>	<i>5.6</i>	<i>9.3</i>	<i>7.6</i>	<i>8.1</i>	<i>6.1</i>
Kuibyshev city	8.9	9.9	16.2	10.5	11.1	9.5
Leningrad city	12.6	11.0	13.4	9.6	8.9	8.8
Molotov oblast'	11.2	11.1	17.9	14.7	12.8	13.2
<i>urban settlements</i>	<i>8.7</i>	<i>9.6</i>	<i>16.9</i>	<i>12.3</i>	<i>11.8</i>	<i>14.1</i>
<i>rural areas</i>	<i>13.2</i>	<i>12.1</i>	<i>18.6</i>	<i>16.3</i>	<i>13.6</i>	<i>12.4</i>
Molotov city	9.1	9.9	17.4	11.1	11.0	11.2
Moscow oblast'	8.4	8.8	13.6	8.7	7.6	7.8
<i>urban settlements</i>	<i>8.7</i>	<i>9.9</i>	<i>15.4</i>	<i>9.6</i>	<i>8.3</i>	<i>8.8</i>
<i>rural areas</i>	<i>7.9</i>	<i>7.4</i>	<i>11.3</i>	<i>7.5</i>	<i>6.6</i>	<i>6.7</i>
Moscow city*	10.1	8.5	12.6	8.8	6.9	6.6
Sverdlovsk oblast'	7.4	8.5	16.6	12.8	10.3	11.3
<i>urban settlement</i>	<i>6.7</i>	<i>8.0</i>	<i>15.7</i>	<i>12.4</i>	<i>10.1</i>	<i>11.8</i>
<i>rural areas</i>	<i>8.7</i>	<i>9.3</i>	<i>18.1</i>	<i>13.7</i>	<i>10.9</i>	<i>10.4</i>
Sverdlovsk city	8.2	11.5	19.3	12.1	10.6	13.4
Chelyabinsk oblast'	7.2	7.9	15.6	11.4	10.7	11.3
<i>urban settlements</i>	<i>7.0</i>	<i>8.3</i>	<i>16.6</i>	<i>12.1</i>	<i>11.3</i>	<i>12.1</i>
<i>rural areas</i>	<i>7.8</i>	<i>7.1</i>	<i>13.8</i>	<i>10.1</i>	<i>9.5</i>	<i>9.7</i>
<i>Magnitogorsk</i>	<i>7.8</i>	<i>6.9</i>	<i>17.6</i>	<i>14.8</i>	<i>15.7</i>	<i>16.5</i>

<i>Zlatoust</i>	6.2	10.2	20.7	11.1	9.7	12.5
Chelyabinsk city	9.0	10.5	18.6	12.0	11.3	11.6
Yaroslavl' oblast'	10.7	9.6	16.7	10.4	8.3	8.7
<i>urban settlements</i>	<i>11.3</i>	<i>10.9</i>	<i>19.6</i>	<i>11.8</i>	<i>8.9</i>	<i>10.6</i>
<i>rural areas</i>	<i>10.0</i>	<i>8.2</i>	<i>13.7</i>	<i>9.1</i>	<i>7.7</i>	<i>6.9</i>
<i>Yaroslavl' city</i>	<i>12.1</i>	<i>11.9</i>	<i>20.5</i>	<i>12.5</i>	<i>9.5</i>	<i>11.6</i>
Bashkiriya	5.7	5.3	10.5	9.6	8.5	8.8
<i>urban settlements</i>	<i>7.5</i>	<i>7.9</i>	<i>13.3</i>	<i>11.4</i>	<i>9.9</i>	<i>10.8</i>
<i>rural areas</i>	<i>5.0</i>	<i>4.3</i>	<i>9.5</i>	<i>9.0</i>	<i>8.0</i>	<i>7.9</i>
<i>Ufa city</i>	<i>9.3</i>	<i>8.8</i>	<i>16.3</i>	<i>12.7</i>	<i>11.2</i>	<i>11.8</i>
Tatariya	8.4	7.9	12.1	9.2	8.7	8.5
<i>urban settlements</i>	<i>9.6</i>	<i>10.5</i>	<i>14.9</i>	<i>10.4</i>	<i>9.0</i>	<i>9.7</i>
<i>rural areas</i>	<i>7.8</i>	<i>6.7</i>	<i>10.8</i>	<i>8.7</i>	<i>8.6</i>	<i>7.9</i>
<i>Kazan' city</i>	<i>10.4</i>	<i>11.6</i>	<i>16.0</i>	<i>11.4</i>	<i>9.5</i>	<i>10.3</i>

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Cities in italics were included in the general urban data; cities in roman type were recorded separately.

Source:

RGAE, f. 1562 [TsSU], op. 329:

1945: d. 1883, l. 3-11

1946: d. 2229, l. 1, 4-11 and d. 2230, l. 3-12

1947: d. 2648, l. 196, 197, 198, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 242.

1948: d. 3157, l. 2, 27-35, 37

1949: d. 3807, l. 1, 24-33

1950: d. 3806, l. 32, 33, 34, 36, 37, 41, 42, 46, 47, 49-55, 58-61, 65, 66, 68, 69, 71, 72, 74, 75, 77, 80, 81, 84, 85, 86, 94, and d. 4703, l. 7-9, 181-4, 186-90.

Table 2
Height and Weight Comparisons of Gor'kii City, Gor'kii Oblast',
and Ivanovo Children and Teenagers, 1937/8 and 1946

Age	Height in cm.				Weight in kg.			
Boys	Gor'kii City & Gor'kii oblast' urban children 1937/8	Gor'kii City RU 1946	Dzerzhinsk School Children 1946	Ivanovo School Children 1946	Gor'kii City & Gor'kii oblast' urban children 1937/8	Gor'kii City RU 1946	Dzerzhinsk School Children 1946	Ivanovo School Children 1946
8	123.63		117.77	117.24	24.00		22.07	22.00
9	125.42		120.34	120.14	24.94		23.33	22.56
10	131.21		126.27	124.14	27.60		24.97	25.14
11	134.72		128.71	128.86	30.14		27.31	27.44
12	138.74		133.75	134.82	32.90		29.52	29.90
13	143.40		137.05	139.72	35.70		32.37	33.18
14	150.78	145	142.69	144.40	40.28	37.4	35.29	36.56
15	154.76	145	152.61	152.28	44.76	38.5	43.31	42.04
Girls								
8	122.82		116.85	119.70	23.10		21.23	22.17
9	125.85		120.69	121.52	24.57		22.93	22.93
10	129.44		125.12	124.96	28.90		24.96	24.76
11	135.68		130.37	129.04	30.14		27.91	27.64
12	139.80		135.42	135.12	33.02		30.64	30.36
13	145.68		142.63	142.98	37.70		34.91	33.48
14	150.18	145.7	146.79	145.08	42.78	36.2	38.81	38.28
15	154.06	144.0	150.33	149.42	46.72	38.5	42.21	43.54

Source:

GARF-RSFSR, f. A-482, op. 47, d. 4925, l. 484-5 (Ivanovo), and d. 7656, l. 382-3 (Gor'kii oblast' and Dzerzhinsk); GARF, f. 9226, op. 1, d. 798, l. 103ob.-104 (Gor'kii city RU).

Table 3
Height and Weight Comparisons, Moscow School Children
and Young Workers, 1936/7, 1940, and 1946

Age	Height in cm.				Weight in kg.			
Boys	Moscow school children 1936/37	Moscow young workers 1940	Moscow RU students 1946	Moscow young workers 1946	Moscow school children 1936/37	Moscow young workers 1940	Moscow RU students 1946	Moscow young workers 1946
14	151.3	152.6	147.2		41.7	42.3	39.5	
15	157.5	157.5	150.6	146.8	46.8	46.6	43.2	41.3
16		161.3	154.9	152.6		50.0	46.4	46.9
Girls								
14	152.2	152.0			43.7	43.6		
15	155.0	155.2	153.0	152.0	47.3	50.1	49.0	46.0
16		156.0	154.5	153.5		52.1	52.0	48.9

Source:

GARF-RSFSR, f. A-482, op. 47, d. 6452, l. 126ob. (Moscow, 1946), and d. 7656, l. 382-3 (Moscow school children, 1936/37); GARF, f. 9226, op. 1, d. 685, l. 219-20 (Moscow young workers, 1940).

TABLE 4
ESTIMATED DAILY CALORIE INTAKE BY REGION, 1946-1950
Average per capita intake of members of workers' & peasant families
in kilocalories per day, by half-year (excluding alcohol)

Region	1946 - I	1946 - II	1947 - I	1947 - II	1948 - I	1948 - II	1949 - I	1949 - II	1950 - I	1950 - II
Moscow City Workers	2375	2273	2135	2367	2677	2687	2655	2713	2735	2776
Moscow Oblast' Workers	2047	2131	1753	2127	2559	2560	2499	2577	2627	2708
Moscow Oblast' Peasants	2724	2759	2415	2794	3088	3127	3025	3058	3056	3013
Leningrad City Workers	2441	2446	2184	2457	2614	2604	2553	2620	n/d	n/d
Central Russia										
Gor'kii City Workers	2056	2048	1759	2069	2431	2572	2522	2469	2486	2618
Gor'kii Oblast' Workers	1906	1891	1720	1956	2185	2375	2389	2501	2616	2660
Gor'kii Oblast' Peasants	2491	2776	2473	2581	2701	2836	2901	2822	2726	2792
Ivanovo Oblast' Workers	2194	2198	1908	2399	2702	2718	2615	2679	2621	2707
Yaroslavl' Oblast' Workers	2033	2024	1794	2089	2399	2453	2415	2401	2471	2496
Volga Region										
Kuibyshev City Workers	2090	1886	1771	1927	2244	2223	2364	2308	2352	2348
Kuibyshev Oblast' Peasants	2504	2430	2256	2527	2577	2618	2592	2569	2494	2662
Tatariya Workers (Kazan' City)	1937	1946	1827	2082	3211	2465	2459	2537	2474	2581
Tatariya Peasants	2373	2615	2140	2601	2681	2727	2831	2863	2864	2897
Urals and Siberia										
Sverdlovsk City Workers	2359	2374	2184	2350	2436	2600	2571	2569	2527	2628
Sverdlovsk Oblast' Workers	2473	2337	2136	2354	2624	2717	2748	2665	2661	2769
Sverdlovsk Oblast' Peasants	2673	2696	2406	2764	2534	2901	2930	2943	2668	2871
Molotov City Workers	2046	1973	1806	1914	2316	2392	2360	2457	2454	2580
Molotov Oblast' Workers	2162	2098	1980	2113	2325	2459	2541	2574	2600	2572
Molotov Oblast' Peasants	2724	2759	2415	2794	3088	3127	3025	3058	3056	3013
Chelyabinsk City Workers	2180	1969	1796	2024	2197	2421	2450	2458	2466	2493
Chelyabinsk Oblast' Workers	2440	2112	1952	2234	2311	2489	2602	2523	2546	2648
Bashkiriya Workers	2066	1968	1627	1984	2137	2253	2248	2413	2400	2396
Bashkiriya Peasants	2524	2374	1898	2261	2141	2421	2530	2547	2332	2743
Kemerovo Oblast' Workers	2502	2288	2273	2350	2465	2659	2847	2759	2797	2688

TABLE 5
ESTIMATED DAILY PROTEIN INTAKE BY REGION, 1946-1950
Average per capita intake of members of workers' & peasant families
in grams per day, by half-year

Region	1946 -	1946 -	1947 -	1947 -	1948 -	1948 -	1949 -	1949 -	1950 -	1950 -
Moscow City Workers	72	68	63	69	75	75	75	79	81	85
Moscow Oblast' Workers	56	66	48	57	67	68	68	71	74	78
Moscow Oblast' Peasants	79	80	66	79	86	90	88	91	95	93
Leningrad City Workers	74	71	64	71	72	72	73	75	n/d	n/d
Central Industrial Region										
Ivanovo Oblast' Workers	65	63	54	66	72	72	70	73	73	76
Yaroslavl' Oblast' Workers	60	60	55	61	63	65	65	67	70	73
Volga Region										
Gor'kii City Workers	62	59	48	56	63	69	68	70	71	77
Gor'kii Oblast' Workers	56	54	47	52	57	64	64	69	74	78
Gor'kii Oblast' Peasants	67	75	63	69	74	77	76	79	77	82
Kuibyshev City Workers	64	59	52	56	60	63	66	69	67	70
Kuibyshev Oblast' Peasants	78	79	74	82	80	84	80	83	77	87
Tatariya Workers (Kazan')	53	53	51	57	88	67	67	71	70	73
Tatariya Peasants	64	72	58	72	73	75	75	80	77	82
Urals and Siberia										
Sverdlovsk City Workers	70	74	68	69	66	69	70	72	72	78
Sverdlovsk Oblast' Workers	74	70	68	71	75	75	76	76	76	80
Sverdlovsk Oblast' Peasants	81	84	73	84	77	90	88	93	83	91
Molotov City Workers	64	63	55	57	65	66	65	70	71	77
Molotov Oblast' Workers	61	61	56	59	64	66	68	71	74	75
Molotov Oblast' Peasants	76	79	69	82	88	88	83	89	83	87
Chelyabinsk City Workers	68	62	60	61	62	68	71	70	72	74
Chelyabinsk Oblast' Workers	77	69	62	66	67	72	75	75	75	78
Bashkiriya Workers	57	56	47	55	61	66	63	70	70	71
Bashkiriya Peasants	67	66	55	65	62	68	69	73	68	80
Kemerovo Oblast' Workers	74	67	66	68	71	78	82	79	78	76

TABLE 6
DAILY PER CAPITA CALORIE INTAKE OF WORKERS' FAMILIES
VS. PER CAPITA DAILY CALORIE REQUIREMENT,
ADJUSTED FOR AGE AND GENDER COMPOSITION OF FAMILIES IN THE GIVEN REGION
FIRST HALF 1947 AND SECOND HALF 1950

Region	1947 (January-June)			1950 (July-December)		
	Actual	Soviet Requirement	Modified Requirement	Actual	Soviet Requirement	Modified Requirement
Moscow City Workers	2135	3153	2539	2776	3122	2546
Moscow Oblast' Workers	1753	3131	2532	2708	3019	2500
Leningrad City Workers	2184	3167	2516	n/d	n/d	n/d
Central Russia						
Gor'kii City Workers	1759	3054	2514	2618	3038	2507
Gor'kii Oblast' Workers	1720	3085	2537	2660	3055	2508
Ivanovo Oblast' Workers	1908	3113	2497	2707	3055	2487
Yaroslavl' Oblast' Workers	1794	3162	2540	2496	3090	2514
Volga Region						
Kuibyshev City Workers	1771	3151	2536	2348	2995	2465
Tatariya Workers (Kazan')	1827	3143	2511	2581	3065	2488
Urals and Siberia						
Sverdlovsk City Workers	2184	3067	2503	2628	2985	2492
Sverdlovsk Oblast' Workers	2136	3018	2510	2769	2946	2468
Molotov City Workers	1806	3200	2540	2580	3059	2504
Molotov Oblast' Workers	1980	3023	2509	2572	2903	2446
Chelyabinsk City Workers	1796	2950	2453	2493	2894	2441
Chelyabinsk Oblast' Workers	1952	3029	2535	2648	2956	2493
Bashkiriya Workers	1627	3018	2511	2396	2958	2467
Kemerovo Oblast' Workers	2273	2916	2470	2688	2946	2480

Actual calorie intake is taken from Table 4. Soviet calorie requirements called for a daily adult intake, irrespective of gender, of: 3,200 kcal for those doing non-physical labour; 3,500 kcal for those doing machine-assisted physical labour; 4,000 kcal for workers doing heavy manual labour; and 4,500 kcal for workers performing exceptionally difficult labour, such as logging, digging, and underground miners working without machinery. We have taken the median figure of 3,500 kcal per day for all adults.

The "modified" requirements are an average of the Soviet requirements and contemporary Western recommendations. United States recommendations in 1989 were: 1,800 kcal per day for a six year-old child; 2,000 kcal for a 10 year-old; 3,000 kcal for males aged 15-18; 2,900 kcal for males aged 18 to 50; and 2,300 kcal for males over 50. The equivalent standards for women were: 2,200 kcal for women aged 11 right through to 50; and 1,900 kcal for women over 50. However, these levels are for people doing light to moderate physical activity and living in temperate climates.

In choosing the modified requirements I have used the Soviet recommendations for children up to the age of 13, which differ very little from the 1989 US requirements. For adult males I have taken the median between the Soviet standard of 3,500 kcal/day and the US recommendation of 2,900 kcal/day – that is, 3,200 kcal/day. This assumes that males of working age were doing either heavy physical labour or factory work. For women I have arrived at a figure of 2,500 kcal/day. The budget surveys show that there were roughly two to three times as many working-age females (that is, over the age of 14) per household as there were males. I have assumed that half these women were doing heavy physical labour or factory work, and for them I have taken the median between the Soviet recommendation of 3,500 kcal/day and the US recommendation of 2,200 kcal – or 2,800 kcal/day. Since, however, the activity of the other half of the adult females is unknown, for them I have assumed the Western standard of 2,200 kcal/day. Thus, for all working-age females I have used the median between these two figures, that is, 2,500 kcal/day. I have used this same standard of 2,500 kcal/day for pensioners and non-family members eating with the surveyed family, on the assumption that many pensioners were working and those who were not had to cope with poor domestic heating.

We should not automatically assume that the Soviet requirements were vastly inflated. In the Urals and Siberia, which were dominated by coal mining, iron and steel, oil extraction, and construction, it is probable that the true daily requirement was not far below the Soviet recommendation, especially if we use the lower figure of 3,500 kcal/day for all adult workers, as opposed to the 4,000 to 4,500 kcal/day recommended for miners and others doing exceptionally heavy physical labour. In regions such as Ivanovo and Yaroslavl, which had high concentrations of textile workers, almost all of whom were women, the calorie demands of women workers would have far exceeded modern-day Western standards of around 2,000 kcal/day. In these regions, while the official Soviet recommendations may have been too high, the real need was perhaps somewhere between our Soviet and “modified Western” calculations. I suspect the same would have applied to centres of the engineering industry, such as Gor’kii, Moscow, Kuibyshev, and Sverdlovsk city.

TABLE 7
BREAD & GRAIN CONSUMPTION BY REGION, 1946-1950
Average per capita consumption of members of workers' and peasants' families in grams per day, by half-year.

Region	1946 - I	1946 - II	1947 - I	1947 - II	1948 - I	1948 - II	1949 - I	1949 - II	1950 - I	1950 - II
Moscow City Workers	648	602	544	590	690	678	639	652	637	643
Moscow Oblast' Workers	572	526	478	524	679	694	638	673	650	694
Moscow Oblast' Peasants	394	331	225	327	478	461	448	459	494	491
Leningrad City Workers	761	702	615	637	644	638	594	615	n/d	n/d
Central Russia										
Gor'kii City Workers	579	516	458	513	741	766	693	706	697	727
Gor'kii Oblast' Workers	600	533	433	494	691	726	695	742	738	787
Gor'kii Oblast' Peasants	250	216	114	207	239	216	185	254	301	304
Ivanovo Oblast' Workers	747	632	533	603	795	760	684	730	688	731
Yaroslavl' Oblast' Workers	653	594	544	561	703	679	622	644	646	672
Volga Region										
Kuibyshev City Workers	601	533	510	539	657	675	655	681	653	643
Kuibyshev Oblast' Peasants	333	265	201	324	328	290	287	346	342	422
Tatariya Workers (Kazan' City)	540	498	454	496	654	703	691	710	678	706
Tatariya Peasants	247	200	105	249	283	238	185	242	212	301
Urals and Siberia										
Sverdlovsk City Workers	718	636	583	629	736	714	650	688	670	686
Sverdlovsk Oblast' Workers	665	585	535	592	841	779	714	732	720	769
Sverdlovsk Oblast' Peasants	394	355	289	354	391	452	478	499	477	510
Molotov City Workers	650	593	508	575	723	706	632	687	671	694
Molotov Oblast' Workers	661	645	530	577	717	708	683	712	704	713
Molotov Oblast' Peasants	406	373	311	455	586	487	445	484	503	509
Chelyabinsk City Workers	635	585	556	578	685	680	615	666	660	639
Chelyabinsk Oblast' Workers	644	606	546	574	641	676	667	676	679	698
Bashkiriya Workers	568	518	471	516	676	621	618	671	690	671
Bashkiriya Peasants	254	230	203	218	227	215	196	238	243	354
Kemerovo Oblast' Workers	627	564	527	542	669	678	664	693	683	684

TABLE 8
POTATO CONSUMPTION BY REGION, 1946-1950
Average per capita consumption of members of workers' and peasants' families in grams per day, by half-year

Region	1946 - I	1946 - II	1947 - I	1947 - II	1948 - I	1948 - II	1949 - I	1949 - II	1950 - I	1950 - II
Moscow City Workers	479	539	517	564	477	448	418	401	351	333
Moscow Oblast' Workers	687	732	588	781	713	634	618	562	562	491
Moscow Oblast' Peasants	1309	1523	1595	1526	1346	1325	1284	1171	1063	1002
Leningrad City Workers	218	397	358	490	483	455	454	415	n/d	n/d
Central Russia										
Gor'kii City Workers	624	803	663	815	575	613	628	537	445	421
Gor'kii Oblast' Workers	518	690	723	839	605	685	669	642	654	522
Gor'kii Oblast' Peasants	1620	1960	2070	1790	1821	1951	2177	1780	1541	1554
Ivanovo Oblast' Workers	321	649	560	809	564	599	601	570	461	429
Yaroslavl' Oblast' Workers	439	595	417	622	561	609	579	515	496	409
Volga Region										
Kuibyshev City Workers	517	492	480	490	500	428	552	422	418	349
Kuibyshev Oblast' Peasants	1174	1223	1292	1075	1251	1331	1438	1112	1150	954
Tatariya Workers (Kazan' City)	748	818	751	826	715	778	717	697	556	542
Tatariya Peasants	1546	1836	1739	1676	1724	1839	2208	1936	2134	1770
Urals and Siberia										
Sverdlovsk City Workers	544	702	591	646	424	591	584	490	383	383
Sverdlovsk Oblast' Workers	718	782	635	733	499	686	731	571	523	465
Sverdlovsk Oblast' Peasants	1179	1242	1286	1317	1055	1108	1196	1013	911	883
Molotov City Workers	432	508	508	378	308	400	452	393	315	299
Molotov Oblast' Workers	534	535	683	625	428	621	664	593	524	447
Molotov Oblast' Peasants	1143	1105	1274	847	719	932	1056	889	719	710
Chelyabinsk City Workers	486	380	216	419	270	477	493	442	361	398
Chelyabinsk Oblast' Workers	627	415	438	658	512	579	560	453	365	418
Bashkiriya Workers	732	696	464	681	472	663	652	690	562	504
Bashkiriya Peasants	1677	1505	1108	1371	1287	1584	1802	1644	1405	1391
Kemerovo Oblast' Workers	844	830	866	873	658	754	841	707	686	576

TABLE 9
MEAT & FISH CONSUMPTION BY REGION, 1946-1950: Average per capita consumption, members of workers' and peasants' families, grams per day by half-year.

Region		1946 - I	1946 - II	1947 - I	1947 - II	1948 - I	1948 - II	1949 - I	1949 - II	1950 - I	1950 - II
Moscow City Workers:	meat	52	50	42	53	37	49	56	74	87	109
	fish	27	25	35	26	29	22	29	21	27	24
Moscow Oblast' Workers:	meat	22	30	17	23	16	22	25	41	50	66
	fish	15	17	21	18	24	20	29	19	30	24
Moscow Oblast' Peasants:	meat	33	44	30	31	19	32	36	49	63	66
	fish	3	3	4	4	6	7	10	8	11	10
Leningrad City Workers:	meat	34	39	28	40	33	47	54	67	n/d	n/d
	fish	33	26	43	33	42	31	41	29	n/d	n/d
Central Russia											
Gor'kii City Workers:	meat	16	27	13	21	11	30	24	43	45	67
	fish	17	21	27	18	16	16	23	17	24	20
Gor'kii Oblast' Workers:	meat	13	18	10	14	7	14	15	31	36	55
	fish	9	13	19	14	8	10	14	12	18	16
Gor'kii Oblast' Peasants:	meat	20	26	19	17	32	19	18	30	24	43
	fish	0	1	1	1	1	2	5	5	6	5
Ivanovo Oblast' Workers:	meat	23	30	26	30	19	21	27	43	42	63
	fish	13	18	26	21	20	17	21	13	22	16
Yaroslavl' Oblast' Workers:	meat	28	32	21	23	14	23	28	44	46	64
	fish	19	20	29	22	21	16	24	12	23	18
Volga Region											
Kuibyshev City Workers:	meat	28	35	21	30	26	43	39	63	49	68
	fish	22	33	35	27	19	15	21	14	26	17
Kuibyshev Oblast' Peasants:	meat	26	48	44	33	29	50	43	44	34	44
	fish	3	2	2	1	3	2	5	3	4	3
Tatariya Workers (Kazan' City):	meat	15	25	14	24	16	29	30	43	41	53
	fish	13	14	22	20	15	13	16	13	21	14
Tatariya Peasants:	meat	20	37	35	24	23	33	31	38	36	39
	fish	0	1	1	1	1	1	2	2	4	1
Urals and Siberia											
Sverdlovsk City Workers: meat		37	44	25	30	23	37	40	57	59	72
	fish	29	22	37	30	29	17	25	15	29	20
Sverdlovsk Oblast' Workers:	meat	29	33	26	27	20	26	28	38	43	57
	fish	22	16	26	23	27	16	25	18	27	19
Sverdlovsk Oblast' Peasants:	meat	35	48	44	37	28	33	33	50	44	48
	fish	2	2	4	4	6	4	7	6	6	5
Molotov City Workers:	meat	21	29	22	22	23	30	35	48	49	64
	fish	18	20	25	26	34	25	33	24	33	22
Molotov Oblast' Workers:	meat	27	33	26	27	18	22	26	33	41	53
	fish	11	14	16	16	24	19	25	20	28	21
Molotov Oblast' Peasants:	meat	19	40	29	32	24	35	33	49	44	56
	fish	2	1	3	1	8	5	7	7	11	7
Chelyabinsk City Workers:	meat	29	40	23	28	20	45	39	54	45	60
	fish	23	23	36	20	20	14	29	18	37	18
Chelyabinsk Oblast' Workers:	meat	33	40	29	34	25	44	37	51	49	62
	fish	16	16	20	15	18	12	20	12	23	16
Bashkiriya Workers:	meat	29	29	18	30	25	45	39	66	54	65
	fish	12	13	17	12	14	9	14	11	18	11
Bashkiriya Peasants:	meat	16	27	24	30	23	33	25	52	37	39
	fish	2	1	2	1	2	1	2	2	3	1
Kemerovo Oblast' Workers	meat	35	34	32	31	22	34	33	49	50	63
	fish	12	15	18	14	24	14	25	16	25	15

TABLE 10
MILK CONSUMPTION BY REGION, 1946-1950
Average per capita consumption of members of workers' and peasants' families in grams
(ml.) per day, by half-year

Region	1946 - I	1946 - II	1947 - I	1947 - II	1948 - I	1948 - II	1949 - I	1949 - II	1950 - I	1950 - II
Moscow City Workers	43	50	53	70	111	115	153	162	171	171
Moscow Oblast' Workers	67	77	64	79	116	124	152	162	172	150
Moscow Oblast' Peasants	453	462	392	490	426	486	470	531	486	495
Leningrad City Workers	33	34	43	58	88	92	116	120	n/d	n/d
Central Russia										
Gor'kii City Workers	60	69	56	58	92	110	146	131	150	129
Gor'kii Oblast' Workers	83	83	88	97	133	140	144	139	209	177
Gor'kii Oblast' Peasants	442	528	478	507	507	584	579	573	567	561
Ivanovo Oblast' Workers	96	114	104	127	174	188	220	227	240	215
Yaroslavl' Oblast' Workers	75	91	64	97	134	173	188	208	192	183
Volga Region										
Kuibyshev City Workers	65	70	74	89	91	91	110	116	117	133
Kuibyshev Oblast' Peasants	657	694	765	795	652	704	616	681	604	674
Tatariya Workers (Kazan' City)	63	69	77	81	102	112	132	132	151	136
Tatariya Peasants	431	528	447	548	491	547	541	574	518	577
Urals and Siberia										
Sverdlovsk City Workers	78	71	80	93	131	139	164	159	149	149
Sverdlovsk Oblast' Workers	299	279	226	222	230	215	237	233	230	197
Sverdlovsk Oblast' Peasants	548	615	496	665	495	646	462	556	430	560
Molotov City Workers	80	78	58	78	116	128	120	144	135	155
Molotov Oblast' Workers	141	144	141	158	223	196	206	208	222	217
Molotov Oblast' Peasants	441	543	394	563	414	577	442	528	402	462
Chelyabinsk City Workers	76	83	97	113	160	158	188	163	176	160
Chelyabinsk Oblast' Workers	232	166	155	195	273	234	291	227	253	225
Bashkiriya Workers	100	156	132	165	189	230	147	130	137	128
Bashkiriya Peasants	464	486	473	540	519	528	601	489	530	568
Kemerovo Oblast' Workers	138	133	179	193	214	223	235	221	228	211