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DIRECTORATE OF  
INTELLIGENCE

# Intelligence Report

*The Military Food Ration in the USSR*

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CONTENTS

	<u>Page</u>
Summary . . . . .	1
Discussion . . . . .	2
Introduction . . . . .	2
Ration . . . . .	2
Cost . . . . .	5
Evaluation . . . . .	7

Appendixes

A. Sources of the Estimates . . . . .	9
B. Statistical Tables . . . . .	11

Tables

1. USSR: Basic Per Capita Military Food Ration, Selected Years . . . . .	4
2. USSR: Total and Per Capita Costs of Military Food . . . . .	6
3. USSR: Basic Per Capita Military Food Ration . . . . .	11
4. USSR: Current Prices Paid for Components of Military Ration . . . . .	13

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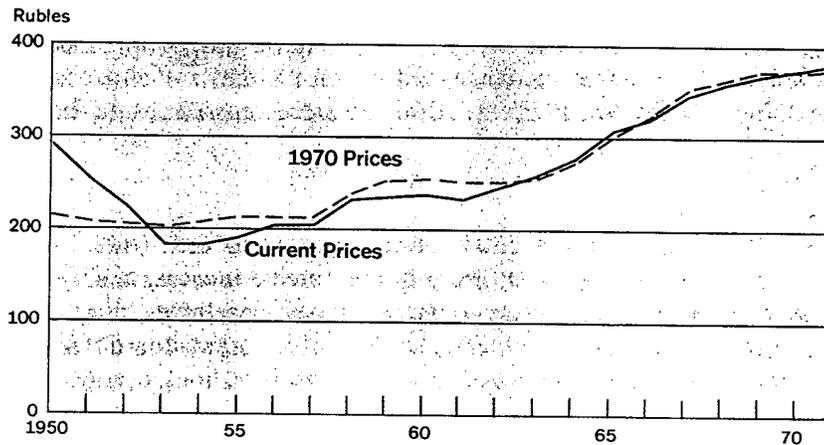
INTELLIGENCE REPORT

THE MILITARY FOOD RATION IN THE USSR

SUMMARY

1. The per capita cost of the military food ration in the USSR in current prices increased from 296 rubles in 1950 to 383 rubles in 1971.<sup>1</sup> The reasons for the rise in cost include larger rations of some foods such as meat and sugar, improved quality within product groups, and higher procurement prices. During the early 1950s, largely because of extensive reductions of food prices, the cost per man dropped nearly 40%, reaching a low of 183 rubles in 1954. Since 1954 the per capita cost of the military ration has more than doubled. Nevertheless, in current prices, total military expenditures for food fell by about 15% between 1950 and 1971.

2. The value of the military ration in constant 1970 prices increased from 217 rubles in 1950 to 376 rubles in 1971. After a 6% decline in



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1. All prices are expressed in new rubles, which reflect the 10-to-1 revaluation of the ruble on 1 January 1961.

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1951-53 because of some small cutbacks in the ration, per capita cost grew by 84% as the result of improvements in quantity and quality. Because much of the increase in the per capita cost has been offset by the reduction in military manpower, total military expenditures for food (measured in constant 1970 prices) increased by 15% between 1950 and 1971, less than one-third the percentage increase in total military expenditures in constant prices. As a consequence, expenditures for food have decreased as a share of total military expenditures (in 1970 prices) from about 9% in 1950 to 6% in 1971.

## DISCUSSION

### Introduction

3. Each December the USSR announces a single ruble value as the budget allocation for defense in the coming year. The announced defense budget is not accepted as a reliable indicator either of the amount of total Soviet spending for military-related activities or of changes in the level of effort from year to year.<sup>2</sup> Therefore, estimates of defense spending are made using the "building block" approach - that is, costs are applied to all aspects of the Soviet defense effort and are summed to provide an estimate of total outlays.

4. Estimates of outlays for food have been calculated on the basis of rather fragile evidence. The cost of the 1950 food ration has a fairly firm basis, but this ration was carried forward with little change. Since the food ration was first analyzed, a number of new pieces of evidence on the content and cost of the ration have appeared. This report incorporates all available evidence and estimates the size and cost of the military food ration in 1950-71. (Sources are discussed in Appendix A.)

### Ration

5. The basic military food ration (also called the "soldier's ration" although it applies to all the military forces) includes meat, fish, fats, bread and other grain products, sugar, potatoes, vegetables, fruit, milk, eggs, tea, coffee, salt, and condiments.<sup>3</sup> This ration is standard for all forces and ranks within the country during peacetime, although special allotments are

2. The announced defense budget excludes almost all outlays for research and development and military space activities and may also exclude, in part or in total, military aid to foreign countries and stockpiling of military equipment.

3. In calculating the ration, no allowance is made for tea, coffee, salt, and condiments, products that reportedly are and have been available in generous amounts but that do not add nutritionally to the ration. These products accounted for 1-1/2% to 2% of the ration cost in 1970.

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made for various groups of personnel. For example, certain classes of officers receive additional rations of "luxury foods" such as chocolate and additional butter. Other officers do not receive food allotments but are authorized monetary compensation according to specific regulations. In addition, there are special rations for students at military institutes, for pilots, for submariners, and for personnel in hospitals, as well as field and emergency rations. The absence of precise information on the composition of these special rations prevents a complete accounting of military food consumption. Consequently, the estimate in this report assumes that all personnel consume the same basic ration. The resulting error is at least partly offset by the fact that some officers do not receive any food ration. In all cases, the ration quantities are norms and thus represent planned consumption quantities. Information on per capita calories consumed by the military population, however, indicates that actual consumption does reflect the norms.

6. The basic military food ration has changed considerably since 1950. Quantities of meat and sugar have been increased, and butter, eggs, fruit, and milk have been added to the ration. The variety and quality of foods such as bread and meat have improved. Finally, the overall quantity of food as measured by the number of calories in the ration has increased. The composition of the basic ration is shown in Table 1.<sup>4</sup> Improvement in the ration has not been a gradual and continuous process; rather it has occurred at irregular and infrequent intervals. The ration changed little between 1950 and 1957, but substantial improvement took place in 1958. The ration then remained fairly constant between 1958 and 1963. Since 1963, however, the pace of improvement has picked up.<sup>5</sup>

7. As would be expected from the age and sex of its membership, the military population consumes more calories per day per capita than the population as a whole<sup>6</sup>:

	1950	1960	1970
Military	3,600	3,700	4,000
Civilian	2,800	3,000	3,100

4. Quantities for each year during 1950-71 are given in Table 3 in Appendix B. The sources of the estimates are given in the footnotes to that table.

5. In very general terms, better rations for the armed forces corresponded to improvements in the economy. Total food supplies in the USSR were expanding rapidly in the late 1950s, perhaps leading to the 1958 revision in the military ration.

6. The total population includes everyone from infants to elderly people, whereas the military population is a relatively select group with higher-than-average calorie requirements.

Table 1  
USSR: Basic Per Capita Military Food Ration  
Selected Years

	1950	1955	1958	1960	1963	1965	1971
<i>Calories per Day<sup>a</sup></i>							
Total	3,600	3,550	3,700	3,700	3,700	3,750	4,050
<i>Kilograms per Year</i>							
Meat	46.8	46.8	54.6	54.6	54.6	54.6	72.8
Fish	31.2	31.2	31.2	31.2	31.2	31.2	31.2
Fats							
Lard	10.9	10.9	10.9	10.9	10.9	10.9	10.9
Butter	b	b	3.6	3.6	3.6	3.6	7.3
Vegetable							
oil	7.3	7.3	7.3	7.3	7.3	7.3	7.3
Flour	7.3	7.3	7.3	7.3	7.3	7.3	7.3 <sup>c</sup>
Bread	309.4	309.4	309.4	309.4	309.4	309.4	309.4 <sup>c</sup>
Groats	52.0	27.0	27.0	27.0	16.4	16.4	16.4
Macaroni	8.7	7.3	7.3	7.3	7.3	7.3	7.3 <sup>c</sup>
Sugar	12.7	12.7	12.7	16.4	16.4	18.2	23.7
Potatoes	182.0	182.0	182.0	182.0	182.0	182.0	182.0 <sup>c</sup>
Vegetables	118.7	118.7	118.7	118.7	118.7	118.7	118.7
Milk	b	b	27.3	27.3	27.3	27.3	54.6
<i>Servings per Year</i>							
Fruit							
Kompot	b	b	52	52	104	104	156
Fresh	b	b	b	b	b	156	156
Kisel'	b	b	52	52	104	365	365
<i>Eggs per Year</i>							
Eggs	b	b	b	b	b	365	365

- a. Total calories (excluding those from fruit) rounded to the nearest 50 calories.
- b. Not included in the ration.
- c. Curiously enough, the quantities of flour, bread, macaroni, and potatoes in the ration appear to have remained constant over the entire period (see Table 3 in Appendix B and footnote n to Table 3). It might be argued that the rations of starchy foods could have been reduced as more meat and dairy products were included. Actually, quantities of starchy foods have had to remain fairly constant to achieve reported total daily calories consumed (see Table 3). In any event, a reduction in the quantities of starchy foods would have relatively little impact on per capita cost; for example, if consumption of starchy foods had been reduced 10% in 1971, thereby dropping daily calories to slightly under 3,800 (substantially below the 4,100 officially reported), cost would have been reduced by only 7.5 rubles, or less than 2% of the derived cost.

The armed forces also constitute a privileged group with respect to the quality of their diet. Even in 1970, after a long period of improvement in the civilian diet, the military forces consumed substantially more per capita of several quality foods - meat, fish, eggs, fats, and vegetables - than did the population as a whole. The general population, however, did fare better than the military forces in the consumption of sugar, milk, and fruit. In addition, the population as a whole - again partly because of its age and sex composition - gets a smaller share of its daily calories in the form of starchy foods - potatoes and grain products: in 1970, roughly 50%, compared with about 60% for the military population.

#### Cost

8. Total ration costs have been estimated on the weighted basis of average prices paid by the military for each food in each year and reflect the average quality of that year. (Prices for each type or grade of food are weighted by the share of each type and/or quality of food within a main food group.<sup>7</sup>) The military forces purchase most of their foods at Zone II (Moscow region) retail prices less the retail trade markup (a centrally determined percentage of total retail cost, which is planned to cover marketing costs) but including excise taxes (so-called "turnover taxes").<sup>8</sup> A few foods such as vegetables, fruits, potatoes, and milk are purchased at "decentralized procurement prices"<sup>9</sup> that are locally determined.<sup>10</sup> In addition, military units stationed in remote areas such as the Far East Military District are required to pay prices higher than Zone II prices (primarily to cover the differential transportation cost).

9. The cost of the ration in current prices<sup>11</sup> paid by the military increased from 296 rubles per capita in 1950 to 383 rubles in 1971 (a growth of 29%), but the trend was not uniform during the entire period (see Table 2). Because of numerous substantial price reductions on various foods during the early 1950s, the cost per man declined during 1950-54, reaching a low of 183 rubles in 1954. Since 1954 the cost per man has risen in almost every year. By 1971 the per capita cost was more than twice the 1954 level.

7. Prices paid by the military for each food in each year in 1950-71 are given in Table 4 in Appendix B. The sources for the estimates are given in the footnotes to that table.

8. Spravochnik voyskogo khozyaystvennika, Moscow, 1965, p. 82-83, 109. In the USSR, food prices, when differentiated, are usually divided into three zones. Zone II prices apply primarily to the central regions of the USSR and are those regularly observed in Moscow by US Embassy officers.

9. Procurement prices are the prices paid by the state to farms for agricultural products.

10. Principles of Soviet Military Legislation, JPRS 36420, July 1966, p. 70.

11. Changes measured in current prices reflect price, quality, and quantity changes.

Table 2

USSR: Total and Per Capita Costs  
of Military Food

	<i>Per Capita (Rubles)</i>		<i>Total (Million Rubles)</i>		<i>Armed Forces (Million Persons)</i>
	<i>Current Prices</i>	<i>Constant 1970 Prices</i>	<i>Current Prices</i>	<i>Constant 1970 Prices</i>	
1950	296	217	1,669	1,224	5.64
1953	184	204	1,141	1,265	6.20
1954	183	209	1,047	1,195	5.72
1955	193	212	1,042	1,145	5.40
1960	236	255	689	745	2.92
1964	276	273	861	852	3.12
1965	304	301	961	951	3.16
1970	370	370	1,354	1,354	3.66
1971	383	376	1,429	1,403	3.73

10. The percentage rise in the cost of the ration in constant 1970 prices<sup>12</sup> between 1950 and 1971 was 73%. From 217 rubles per capita in 1950, the cost dropped to a low of 204 rubles in 1953 because quantities of goats and macaroni in the ration were reduced in the early 1950s. From 1953 to 1971 the per capita cost increased by 84% to 376 rubles as the quantities of some foods were increased, the quality of several foods improved, and new foods were included in the ration. Again the upward trend was not continuous; there were marked increases in some years, such as 1958 (26 rubles per man) and 1967 (33 rubles per man), and no change in other years, such as 1955-57. The annual rate of improvement has been more rapid in recent years, averaging 4-1/2% per year since 1964 compared with 2-1/2% per year in 1953-64.

11. Total military expenditures on food have fluctuated markedly since 1950; in 1971 they were below the 1950 level in current prices and only 15% above that level in constant prices. The trend was strongly downward until 1961 as a result of large declines in the size of the armed forces, from a high of 6.85 million in 1952 to 2.84 million in 1961. Since 1961 the size of the armed forces has grown. This, in conjunction with growth in the cost of food rations per capita, has steadily raised the total

12. Changes measured in constant prices reflect changes in quality and quantity only; the effect of price changes is eliminated.

military food bill. Nevertheless, expenditures for food have decreased as a share of total military expenditures.<sup>13</sup>

**Evaluation**

12. Although the derived estimates use all available information, some gaps remain:

(1) Data on total quantities of food included in the military ration are lacking for some years, and accounting for supplemental rations has not been possible. A complete basic ration, published in 1949, provided an excellent starting point, but such a full description has not been published since. It has been necessary, therefore, to estimate the ration in full for some years and in part for other years on the basis of information about additions to the ration or quantity or quality changes that appears occasionally in military journals, newspapers, and textbooks. Defector reports have also helped to establish that rations for certain foods such as bread, vegetables, and potatoes (usually not mentioned in the general press) have not changed during the 22-year period and that general references to "increases in the ration" for foods such as meat are based on fact. A comparison of calories per day provided by the basic ration with announced average calories consumed by the military forces suggests that the derived ration is reasonably close to actual average military consumption. It also suggests that error arising from failure to include supplemental per capita rations is not large.

	<i>Calories per Day Derived in This Report</i>	<i>Soviet Disclosures of Calories per Day</i>
1950	3,600	3,600
1959	3,700	3,700
1963	3,700	3,700
1967	4,000	4,000-4,100
1971	4,050	4,100

13. Total military expenditures are estimated in constant prices only; the share spent on food declined from about 9% in 1950 to 6% in 1971.

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(2) Quality changes have had to be estimated for the most part on the basis of quite general statements – for example, "in the past few years the quality and assortment of meat products has improved." Only rarely have definite statements appeared, such as "the meat ration now contains 90%-95% of meat of the first category (quality)."

(3) The costs per item are probably more reliable than the ration quantities themselves. The military forces purchase foods, with only minor exceptions, at Zone II retail prices less the trade markup or at procurement price levels. Costs of those foods purchased at retail are based on observed Moscow prices in each year. A reasonably reliable annual series of trade markups for each food category, as well as procurement price series for each locally purchased food, was constructed from information in publications dealing with agriculture, pricing, and retail trade.

Despite the gaps in information and the need to rely on imprecise evidence on quality change, the final estimates of quantity, quality, and average cost of the per capita basic ration seem reasonably accurate. They are clearly an improvement over existing estimates of the military ration, which rely almost exclusively on the 1949 ration, unadjusted for quality change within product groups.

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## APPENDIX A

### SOURCES OF THE ESTIMATES

The basic military food ration used for 1950 is from GS-ID Translation No. 4418, 6 September 1949, translation of *Tsirkulyar glavnogo intendenta vooruzhennykh sil SSSR* (Circular, Quartermaster General, Armed Forces USSR), No. 13, Moscow, 1949. Changes in the ration come from (1) various military journals such as *Sovetskiy voin* and *Tyl i snabzheniye*; (2) books such as *Voyennaya gigiyena*, Moscow, 1959; *Spravochnik voyskogo khozyaystvennika*, Moscow, 1965; and *Spravochnik ofitsera*, Moscow, 1971; and (3) the chief military newspaper, *Krasnaya zvezda*. A few non-military journals such as *Zakupki sel'skokhozyaystvennykh produktov* and *Sovetskaya trgovlya* added a few bits of data. Corroboration of official data came from numerous defector and refugee reports. For example, an army cook who defected in 1972 reported that bread and potato rations (in grams per day) were the same as those in the 1949 report.

The cost of the basic ration is the sum of the prices paid by the military for each food group in the ration. For most foods – meat, fish, fats, flour, groats, sugar, and eggs – the military pays Zone II retail prices less the retail trade markup (the allowance for marketing costs) but including excise taxes. Because a distribution of the Soviet military force by price zone is not readily available, Zone II retail prices were also used for bread and macaroni, which are purchased at local retail prices less the retail trade markup. To some extent, Zone II prices for bread and macaroni are an average of lower prices in Zone I and higher prices in Zone III (usually the producing and far removed areas, respectively). The remaining foods – potatoes, vegetables, fruit, and milk – are purchased at decentralized procurement prices (prices paid by the state to farms). Because Moscow is in Zone II, the regular food price observations by US Embassy officers stationed in Moscow provide the basis for developing the retail price series. Various Soviet sources such as *Spravochnik voyskogo khozyaystvennika*, Moscow, 1965; *Tyl i snabzheniye*; *Krasnaya zvezda*; and several of the other sources mentioned above provided useful data on the assortment within various food groups such as meat and bread. Local procurement prices as well as the retail trade markup for various foods are from Soviet sources such as S.G. Stolyarov, *O tsenakh i tsenoobrazovanii v SSSR*, Moscow, 1969; G.M. Lasevich, *Torgovyie skidki na prodovol'stvennyie i promyshlennyye tovary*, Moscow, 1954; and D.F. Timoshevskiy, *Tsenoobrazovaniye i torgovyie skidki*, Moscow, 1970.

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APPENDIX B  
STATISTICAL TABLES

Table 3  
USSR: Basic Per Capita Military Food Ration

Food Item	Year																						
	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	
Derived from ration *	3,600	3,550	3,550	3,550	3,550	3,550	3,550	3,550	3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,750	3,850	4,000	4,000	4,000	4,000	4,000	4,050
Disclosed in Soviet sources	3,600								3,700	3,700	3,700	3,700	3,700	3,700	3,700	3,750	more than 1955*	4,000	4,100	4,200	4,100	4,100	4,150
Kilograms per Year																							
Calories per Day																							
Meat	46.8	46.8	46.8	46.8	46.8	46.8	46.8	46.8	54.6	54.6	54.6	54.6	54.6	54.6	54.6	54.6	63.7	72.8	72.8	72.8	72.8	72.8	72.8
Fish	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2	31.2
Fats	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9	10.9
Butter	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
Vegetable oil	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3	7.3
Flour	306.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4	309.4
Bread	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0	32.0
Grains	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7	8.7
Meat and fish	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0
Sugar	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0	182.0
Vegetables	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7	118.7
Milk									27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3	27.3
Berries per Year																							
Fruit									52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Kompot									52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Fresh									52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Kneid									52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
Eggs per Year																							
Eggs									156	156	156	156	156	156	156	156	156	156	156	156	156	156	156

\* Total calories (excluding those from fruit) rounded to nearest 50 calories.  
 \* GS-1D Translation No. 4416, 6 September 1946, translation of *Trofimovskiy zhurnal* "interdruzhnye sovetskoykh sil SSSR, No. 13, Moscow, 1946, Ration assumes 6 months of winter bread ration and six months of summer ration."  
 \* *Krasnaya zvezda*, 19 October 1968.  
 \* V. I. Lomina *Vil sovetskoy armii*, Moscow, 1968, p. 302.  
 \* *Sovetskii voyn*, No. 24, 1966.  
 \* *Ty i smekheniya*, No. 7, 1967.  
 \* *Ibid.*, No. 4, 1968.  
 \* *Zhurnal "Kosmopolitenskiy"*, No. 2, 1972.  
 1 Heymann, Hans, *Magnitude of Russia's Military Effort*, RM 746, December 1951, CONFIDENTIAL. (Heymann's source materials are no longer available.)  
 2 Data in parentheses have been interpolated.  
 3 *Spravochnik voyzovoy kharakteristika*, Moscow, 1966, p. 97.  
 4 DCS Intelligence Information Report OOR-323/26837-72, 7 August 1972, CONFIDENTIAL.  
 5 *Quatermaster Intelligence Special Study, Military Rations—Soviet Army*, January 1958, p. 7, CONFIDENTIAL. (The publication lists no sources but appears to be based on source b, above.)  
 \* Department of Defense Intelligence Information Report 2218 7447 72 (5008-01), 11 October 1972, CONFIDENTIAL.

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