
The 1932 Harvest and the Famine of 1933

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Western and even Soviet publications have described the 1933 famine in the Soviet Union as “man-made” or “artificial.” The Stalinist leadership is presented as having imposed harsh procurement quotas on Ukraine and regions inhabited by other groups, such as Kuban’ Cossacks and Volga Germans, in order to suppress nationalism and to overcome opposition to collectivization. Proponents of this interpretation argue, using official Soviet statistics, that the 1932 grain harvest, especially in Ukraine, was not abnormally low and would have fed the population. Robert Conquest, for example, has referred to a Soviet study of drought to show that conditions were far better in 1932 than they were in 1936, a “non-famine year.” James Mace, the main author of a U.S. Congress investigation of the Ukraine famine, cites “post-Stalinist” statistics to show that this harvest was larger than those of 1931 or 1934 and refers to later Soviet historiography describing 1931 as a worse year than 1932 because of drought. On this basis he argues that the 1932 harvest would not have produced mass starvation.¹

Survivors’ reports of the famine are also used as evidence. In hearings published with the congressional investigation, for example, a witness asserted that the yield (apparently in his kolkhoz) reached 37 centners a hectare, which is two and one-half times the average Soviet grain yield in the early 1980s. A footnote to this statement asserts that “no witness from Ukraine has ever referred to the 1932 crop as a bad harvest in the area where they [*sic*] resided.”² Earlier memoir sources, such as *The Black Deeds of the Kremlin*, made the same claims. Even Stalin declared it undeniable in January 1933 that “the gross harvest of grains in 1932 was greater than [that of] 1931.”³ Conquest, Mace, and others seek the ultimate cause of the famine in the hostility of Soviet leaders and officials to peasants and certain nationalities and an officially directed genocide against Ukrainians and other groups that was accomplished through procurement quotas.⁴

This interpretation of the famine overlooks inconsistencies between official grain harvest statistics for the early 1930s and the evidence of famine, as well as indications from other sources that these statistics are unreliable. New Soviet archival data show that the 1932 harvest

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1. The literature on the famine is large; the main works are discussed in Commission on the Ukraine Famine, *Investigation of the Ukrainian Famine 1932–1933: Report To Congress* (Washington, D.C.: Government Printing Office, 1988). For conclusions cited, see Robert Conquest, *Harvest of Sorrow* (New York: Oxford University Press, 1986), 264–265, 222, and *Investigation*, 69–70. Other works, especially by scholars of Ukrainian origin, make similar arguments: see, for example, Roman Serbyn and Bohdan Krawchenko, eds., *Famine in Ukraine 1932–1933* (Edmonton: Canadian Institute of Ukrainian Studies, University of Alberta, 1986).

2. *Investigation*, 191. In the early 1980s Soviet yields averaged 1.5 metric tons (15 centners) a hectare; *FAO Production Yearbook* (Rome: Food and Agricultural Organization of the United Nations, 1985), 39, table 15, 107ff (my calculations).

3. S. O. Pidhainy et al., eds., *The Black Deeds of the Kremlin: A White Book* (Detroit: Globe, 1955), 489, 531, 547; one editor did argue that the harvest was very low, 435. I. V. Stalin, *Sochineniia*, 13 vols. (Moscow: Gospolitizdat, 1949–1953) 13:216. A severe drought struck Siberia, the Volga basin and the Urals in 1931.

4. For examples of the genocide thesis, see Conquest, *Harvest of Sorrow*, 323–330; Pidhainy, *Black Deeds*, 29–119, 433 ff.; and *Investigation*, chap. 1. The famine is increasingly being presented as a genocide comparable to the Holocaust; see for example Mace’s article on the famine in Israel W. Charny, ed., *Toward the Understanding and Prevention of Genocide: Proceedings of the International Conference on the Holocaust and Genocide* (Boulder, Colo.: Westview, 1984), 67–83.

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was much smaller than has been assumed and call for revision of the genocide interpretation. The low 1932 harvest worsened severe food shortages already widespread in the Soviet Union at least since 1931 and, despite sharply reduced grain exports, made famine likely if not inevitable in 1933.⁵

The official 1932 figures do not unambiguously support the genocide interpretation (see table 1). The 1930–1932 grain harvest figures that the report to congress describes as “post-Stalinist” are estimates made in the 1930s; Stalin even cited them at the Seventeenth Party Congress in 1934.⁶ Most Soviet and western scholars have either accepted these figures as basically reliable or suggested minor reductions in them, because the figures ostensibly preceded the 1933 introduction of the biological yield system of determining the harvest, and grain procurements.⁷ This biological yield system exaggerated the actual harvest by 20 percent or more.⁸ Nonetheless, agricultural statistics for 1930–1932, as well as those for the 1920s, were also disputed and altered under political pressure.⁹ The 1932 harvest figure is particularly uncertain.

The 1932 grain procurement quota, and the amount of grain actually collected, were both much smaller than those of any other year in the 1930s. The Central Committee lowered the planned procurement quota in a 6 May 1932 decree, which also permitted kolkhoz and peasant trade in grain at free market prices. To encourage increased production, this decree reduced grain procurement quotas for kolkhozy and *edinolichniki* from the 1931 quota of 22.4 million tons to 18.1 million tons; in partial compensation it raised the *sovkhoz* quota from 1.7 million tons to 2.5 million tons, for a total procurement quota of 20.6 million tons. Since the preliminary plan

5. This interpretation of the famine has been questioned for uncritical use of evidence and bias: R. W. Davies, review of *Harvest of Sorrow* in *Detente* 9/10 (1987): 44–45, and Stephan Merl, “Entfachte Stalin die Hungersnot von 1932–1933 zur Auslöschung des ukrainischen Nationalismus?” *Jahrbücher für Geschichte Osteuropas* 37, 4 (1989): 569–590.

6. See Stalin, *Sochineniia* 13:320.

7. See, for example, Naum Jasny, *The Collectivized Agriculture of the Soviet Union* (Stanford, Calif.: Stanford University Press, 1949), 539; D. Gale Johnson and Arcadius Kahan, “Soviet Agriculture: Structure and Growth,” in *Comparisons of the United States and Soviet Economies*, Joint Economic Committee of the Congress of the United States, 3 pts (Washington, D.C.: Government Printing Office, 1960), part 1: 231; Iurii A. Moshkov, *Zernovaia problema v gody sploshnoi kollektivizatsii* (Moscow: Moscow University Press, 1966), 231 [table]; S. G. Wheatcroft, “A Reevaluation of Soviet Agricultural Production in the 1920s and 1930s,” *The Soviet Rural Economy*, ed. Robert C. Stuart (Totowa, N.J.: Rowman and Allenheld, 1983), 42; and Holland Hunter, “Soviet Agriculture with and without Collectivization, 1928–1940,” *Slavic Review* 47 (Summer 1988): 205. All of these scholars’ estimates range between 62 million tons and 68 million tons and diverge little from official Soviet figures. Many investigators, from Soviet scholars to Ukrainian émigrés, have accepted the Soviet figures as given: Pidhainy, *Black Deeds*, 63–64; Moshe Lewin, “Taking Grain: Soviet Policies of Agricultural Procurements Before the War,” in *The Making of the Soviet System* (New York: Pantheon, 1985), 166; *Istoriia Krest’ianstva SSSR: Istoriia Sovetskogo Krest’ianstva*, 5 vols. (Moscow: Nauka, 1986) 2:260; Conquest, *Harvest of Sorrow*, 222; *Investigation*, 70.

8. The biological yield system was introduced by a 17 December 1932 decree of the Council of People’s Commissars (SNK) that established a network of interraion commissions, subordinate to regional commissions and a central state commission (TsGK) under SNK, to estimate the yield. The interraion commissions would harvest selected square meters in a sampling of kolkhozy and on the basis of these data project local yields, which would serve as the basis for regional and all-union yield estimates and procurement quotas. Deductions for losses of up to 10 percent were allowed until 1939. Since grain losses averaged at least 25 percent of the biological crop, this method overestimated the harvest at least 15 percent. Nikita Khrushchev abolished the system. See M. A. Vytsan, *Ukreplenie material’no-tekhnicheskoi bazy kolkhoznogo stroia vo vtoroi piatiletke (1933–1937)* (Moscow: Akademiia Nauk, 1959), 119–122, and idem, “Metody ischisleniia proizvodstva zerna v 1933–1940 gg.,” *Ezhegodnik po agrarnoi istorii vostochnoi Evropy 1965* (Moscow, 1970), 478–481; I. E. Zelenin, “Osnovnye pokazateli sel’skokhoziaistvennogo proizvodstva v 1928–1935 gg.,” in *Ezhegodnik po agrarnoi*, 465–466.

9. See R. W. Davies, *The Socialist Offensive*, vol. 1, *The Collectivization of Soviet Agriculture, 1929–1930* (Cambridge: Harvard University Press, 1980), 65–68; Wheatcroft, “Reevaluation,” 37–38. See also the article by V. V. Osinskii, head of the Central State Commission, on the need for accurate statistics, *Izvestiia*, 9 March 1932, 3.

Table 1. Official Statistics for Grain Production and Procurements, Soviet Union and Ukraine (1930–1934)

Soviet Union											
Year	Sown area*	Harvest [†]		Yields [‡]							Pro- cure- ments [†]
		‘bio- logical’	‘barn’	‘bio- logical’		‘barn’					
				aver- age	kol- khoz	sov- khoz	aver- age	kol- khoz	sov- khoz		
1930	101.8		83.5/77					8.5		9.3	22.1
1931	104.4		69.5					6.7			22.8
1932	99.7		69.9					7.0	6.8	7.2	18.5
1933	101.6	89.8	68.5	8.8	8.5			6.7			22.9
1934	104.7	89.4	67.7	8.5		8.4		6.5			22.7
Ukraine											
1930	22.3		22.7		10.2					14.6	7.7
1931	21.2		18.3		8.3						7.0
1932	18.1		14.6		7.2			8.1	8.0	9.2	4.7
1933	19.9	22.2	16.9	11.2							5.0
1934	20.2	12.3	10.2	6.1	6.0	6.3	[5]				[<5]

* million hectares.
† million metric tons.
‡ centners & hectare.

Sources: *Sel'skoe khoziaistvo SSSR. Ezhegodnik 1935* (Moscow, 1936), 215, 243–249, 269; I. E. Zelenin, “Osnovnye pokazateli sel'skokhoziaistvennogo proizvodstva v 1928–1935 gg,” *Ezhegodnik po agrarnoi istorii vostochnoi Evropy 1965 g.* (Moscow, 1970), 473; S. V. Kul'chyts'kyy, “Do otsinky stanovishcha v sil's'komu hospodarstvi USRR,” *Ukrainskyi istorichnyi zhurnal* 1988 #3, 24, 26; Vsevolod Holybnychy, “The Causes of the Famine of 1932–1933,” *Meta* 2 (1979): 22–25.

composed by the trade commissariat in December 1931 had set grain procurements at 29.5 million tons, the 6 May law actually reduced the procurement plan 30 percent. Subsequent decrees also reduced procurement quotas for most other agricultural products.¹⁰

These decisions were a major policy shift from the preceding years' attempt to eliminate market forces from the Soviet economy. After the May 1932 decree, Soviet leaders were optimistic that trade by kolkhozy and individual peasants would become as important for urban food supplies as procurements. Local officials and outside observers even saw the decree as a new NEP.¹¹ Proponents of the genocide argument, however, have minimized or even mis-

10. The 6 May decree is in *KPSS v rezoliutsiakh i resheniiakh s'ezdov, konferentsii i plenumov TsK*, 15 vols. (Moscow: Izd-vo politicheskoi literatury, 1983–1987) 5:366–369; kolkhoz and peasant trade at cooperative prices had been legalized in October 1931. On the preliminary plan, see Moshkov, *Zernovaia problema*, 201. Subsequent decrees are covered in S. M. Gorelik, A. I. Malkis, *Sovetskaia Torgovlia: Ocherki teorii i praktiki torgovii v SSSR* (Moscow and Leningrad: Gosudarstvennoe sotsial'no-ekonomicheskoe izd-vo, 1933), 125, and John T. Whitman, “The Kolkhoz Market,” *Soviet Studies* 7 (April 1956): 387.

11. See Moshkov, *Zernovaia problema*, 195–197; R. W. Davies, “Models of the Economic System in Soviet Practice, 1926–1936,” *L'Industrialisation de l'URSS dans les années trente*, ed. Charles Bettelheim (Paris: Éditions de l'École des hautes études en sciences sociales, 1982), 17–30, and R. W. Davies, “The Socialist Market: A Debate in Soviet Industry,” *Slavic Review* 43 (Summer 1984): 202. Soon after the May decree Valerian Kuibyshev essentially equated procurements and kolkhoz trade as sources of supply, see quotation in Moshkov, *Zernovaia problema*, 200. In October, Lazar Kaganovich stated that “the central

construed this decree. Mace, for example, describes it as “largely bogus” and ignores not only the extent to which it lowered the procurement quotas but also the fact that even the lowered plan was not fulfilled. Conquest does not mention the decree’s reduction of procurement quotas and asserts that Ukrainian officials’ appeals led to the reduction of the Ukrainian grain procurement quota at the Third All-Ukraine Party Conference in July 1932. In fact that conference confirmed the quota set in the 6 May decree.¹²

In the 1932 procurement campaign both socialized and individual sectors accounted for 18.5 million tons of grain, approximately 10 percent below the plan. Even if we include decentralized procurements and free market sales, estimated at between 920,000 tons and 1.46 million tons, total grain marketing was still below the level set by the procurements plan.¹³ When it became clear that most of the shortfall was localized in the primary grain regions, especially Ukraine and the northern Caucasus, their quotas were again reduced. In November 1932 an extraordinary commission dispatched to the northern Caucasus reduced the region’s grain procurement quota from 136 million puds to 97 million puds. A similar commission sent to Khar’kov at the same time lowered Ukraine’s procurement quota; according to one Soviet Ukrainian scholar, the total reduction (apparently including that of the 6 May decree) was 2.26 million tons, a figure that would imply that the extraordinary commission reduced the quota by a larger amount than did the 6 May decree.¹⁴ Previously procured grain and other agricultural products were returned to the villages in planned marketings of food products and seed, forage, and provision loans. In 1932, some 5.76 million tons of procured grain were returned to the rural sector, more than had been in 1930 or 1931.¹⁵

The reduction of the procurement quota for 1932 and the return of procured grain to the villages are inconsistent with widespread food shortages and famine. Considerably more grain should have been left for the peasants after procurements from the 1932 harvest than was left from those of 1931, 1933, or 1934 (see table 2). Yet scholars who espouse the genocide argument agree that no famine occurred in 1933 or 1934; Mace even called 1933 a bumper year. Disaggregated official harvest data for Ukraine show a similar inconsistency. Procurement of 4.7 million tons from the 1932 harvest of 14.6 million tons would have left nearly 10 million tons for the peasants, or almost as much as they retained from the 1931 harvest after procurements. If

task is to organize and expand soviet kolkhoz trade as the most important lever in improving workers’ supply and further consolidating the link between village and town”; G. Ia. Neiman, *Puti razvitiia Sovetskoi torgovli* (Moscow: Sotsekgiz, 1934), 83. For local officials’ views, see, for example, the July speech by agriculture commissar Ia. A. Iakovlev in *Voprosy organizatsii sotsialisticheskogo sel'skogo khoziaistva* (Moscow: Sel'khozgiz, 1936), 389–390. For foreign views, see “Neo-NEP?” *Osteuropa*, July 1932, 567ff.

12. Mace’s quotation is in *Investigation*, 72; for Conquest, see *Harvest of Sorrow*, 175, 222. The decree legalized only free market prices, since kolkhoz trade had been legalized previously. For the Ukrainian Party Conference resolution accepting the May quota, see *Istoriia kolektivizatsii sil'skogo hospodarstva Ukrainiskoi RSR*, 3 vols. (Kiev: Naukova Dumka, 1971) 2:611.

13. *Proekt vtorogo piatiletnego plana*, 2 vols. (Moscow: Partizdat, 1934) 1:370; A. A. Barsov, *Balans stoimostnykh obmenov mezhdru gorodom i derevnei* (Moscow: Nauka, 1969), table facing 112.

14. The commission’s quota reduction was published in the local press; see *Kolkhoznaia pravda* [Rostov-on-Don], 7 November 1932, 2. For the Khar’kov commission, see N. I. Tkach, “Borot’ba partiinykh orhanizatsiy Ukrainy za pidnesennia kolhospnoho vyrobnytstva v period mizh XVII i XVIII z’izdany VKP (b) (1934–1938 rr.),” *Z istorii sotsialistychnoho i komunistychnoho budivnytstva na Ukraini (1934–1961)* (Kiev: Vyd-vo Akademii Nauk Ukr. RSR, 1963), 5, which stated that the quota for Ukraine was lowered three times, in all by 138 million puds. On the special commissions, see S. V. Kul’chys’kyy, “Do otsinky stanovishcha v sil's'komu hospodarstvi USSR,” *Ukrainskyi istorichnyi zhurnal*, 1988, no. 3: 23–24, and Vyltsan et al., *Kollektivizatsiia sel'skogo khoziaistva SSSR: Puty, Formy, Dostizheniia* (Moscow: Kolos, 1981), 274. A commission was also sent to Saratov in the Lower Volga, but I found no quota reduction published in two newspapers from that region (*Sovetskaia derevnia* for 1932, *Povolzh'skaia pravda* for 1933).

15. See A. A. Barsov, *Balans*, 99–105, and idem, “Sel'skoe khoziaistvo i istochniki sotsialisticheskogo nakopleniia v gody pervoi piatiletki (1928–1932),” *Istoriia SSSR* 1968 (no. 3): 71.

Table 2. Grain Marketings and Rural Remainder
(million tons)

Year	Harvest	Gross marketings*	Returns to agriculture	Net marketings	Rural remainder
1931	69.5	23.7	4.9	18.8	50.7
1932	69.6	19.4	5.7	13.7	55.9
1933	68.5	25.6	1.27	24.3	44.2
1934	67.7	27.1	1.13	26.0	41.6

*Gross marketings includes decentralized procurements and kolkhoz and individual peasant market sales.

Source: Data on grain returned to agriculture in 1931–1932 from Barsov, *Balans stoimostnykh obmenov mezhdur gorodom i derevnei* (Moscow: Nauka, 1969), 103. Estimates of gross marketings calculated from John T. Whitman, “The Kolkhoz Market,” *Soviet Studies* 7 (April, 1956), 390 (table 2). Returns to agriculture for 1933 from Moshkov, *Zernovaia problema*, 131, for 1934 from 26 December 1934 Central Committee decree “On Seed Aid to Kolkhozy,” *Spravochnik Partinogo Rabotnika* 9:212. Both of these latter figures include only state seed and provision aid and hence are underestimates; net marketings should consequently be less, and reserves more, than these approximations.

these figures were correct, Ukraine’s rural population of approximately 22 million in 1931–1932 would have retained between 450 kilograms and 500 kilograms of grain for each person after procurements. This amount should have been more than enough to ward off starvation in most areas, even if it had been poorly distributed.¹⁶ Yet the famine was indisputably widespread.

Two questions thus arise: Why were the lowered procurement quotas not fulfilled in 1932? Second, why did the catastrophic famine occur after the 1932 procurement campaign but not after those of 1931, 1933, or 1934? The famine did decrease the population, but even if it caused the loss of eight million to ten million lives—and such high estimates now appear unwarranted—the rural population decline would have matched the drop in the remainder left after the 1933–1934 procurements. About as much grain would have been available for each person in 1933 and 1934 as had been in 1932, by official figures.¹⁷

These calculations suggest that the official figures for the 1932 harvest are not correct. Others have remarked on these discrepancies. Naum Jasny believed that the official crop figures for both 1931 and 1932 represented a moderate decline “inconsistent with the catastrophic food situation” and decrease in livestock. He proposed that the official figures should be reduced by 5

16. On 1933, see *Investigation*, xviii; on 1934, Bohdan Krawchenko, “The Man-Made Famine of 1932–1933 and Collectivization in Soviet Ukraine,” in Serbyn and Krawchenko, *Famine in Ukraine*, 21. Ukrainian rural population decreased from 23.67 million in 1926 to 19.76 million in 1939, and peak migration to cities, more than 8 million people, took place during 1931–1932; see Frank Lorimer, *The Population of the Soviet Union* (Geneva: League of Nations, 1946), 150, 158. According to Roman Serbyn, “The Famine of 1921–1923: A Model for 1932–1933?,” in *Famine in Ukraine*, ed. Serbyn and Krawchenko, 152, the average Ukrainian consumed 17.6 puds of grain annually (288 kg); 12 puds (196 kg) was considered a survival ration.

17. On famine deaths, see V. P. Danilov, “Diskussiiia v zapadnoi presse o golode 1932–1933 gg. i ‘demograficheskoi katastrofe’ 30–40-kh v SSSR,” *Voprosy Istorii* 1988 (no. 3): 116–121, and R. W. Davies, review of *Harvest of Sorrow*, 44–45. Recently published Soviet census data show famine deaths to have been considerably below the high figures cited: V. V. Tsaplin, “Statistika zhertv Stalinizma v 30-e gody,” *Voprosy Istorii* 1989 (no. 4): 178; Stephen Wheatcroft, “More Light on the Scale of Repression and Excess Mortality in the Soviet Union in the 1930s,” *Soviet Studies* 42 (April 1990): 355–367; Alec Nove, “How Many Victims in the 1930s?” *Soviet Studies* 42 (April 1990): 369–373. Grain released in December 1934 as food, fodder, and seed loans—69 million puds (1.14 million tons)—would not alter this conclusion; *Spravochnik Partinogo Rabotnika* 9 (Moscow, 1935), 212.

percent to 10 percent. At the same time, however, he estimated that only a small portion of the crop was lost. Recently Daniel Brower has pointed out that, according to the official figures, the 1932 crop was larger and the 1932 procurements lower than they had been in 1931, so “there should have been more bread available in the countryside that winter. Yet empirical evidence makes absolutely clear the terrible food shortage of those months; the real causes of the famine have yet to be elucidated.” Mark Tol’ts has questioned the official figures for the 1932 harvest in light of the severe harvest failure and famine that struck the southern Soviet Union in 1932. The official estimate makes no sense, he wrote, because it is higher than the harvests of both 1931 and 1934, and the latter was the harvest that served as the basis for the abolition of bread rationing in the cities. Similar considerations led S. G. Wheatcroft, R. W. Davies, and J. M. Cooper to conclude provisionally that “the decline in grain production in 1931 and 1932, and the recovery in 1933 and 1934, were both far more substantial than indicated by other estimates, whether western or Soviet.” They estimated the 1932 crop at between 55.7 million tons and 61.1 million tons.¹⁸

Available information on the way harvest estimates were prepared before 1933 suggests that the official statistics may have been preharvest estimates, perhaps even estimates of biological yields. Employment of such estimates dates back to the period of war communism: As early as 1918, committees of poor peasants, organized to procure grain for the towns, would estimate the size of the new crop in the fields before the harvest and on that basis determine requisition quotas. Crop estimates during the 1920s were based on reports from rural correspondents in fall, verified in part by “control reapings and threshings”; in 1930 this system was replaced by one using data from local agricultural officials and *kolkhoz* and *sovkhoz* reports, supplemented by statistical plenipotentiaries and verified by “local commissions of experts using data from large scale [control] samples of reaping and threshing.” These control samples sound suspiciously like the later biological yield estimates. Indeed, according to Arcadius Kahan, the verifications of local officials’ yield estimates involved use of the *metrovka* (employed from 1933 on for determining biological yields) experimentally from 1930 and regularly in 1932. Kahan did not cite any specific decree or directive, but a February 1932 Kolkhozsentr decree appears to confirm the point: It ordered kolkhoz boards to conduct “test threshings” of grain and test harvests of other crops to establish the “production output” a hectare, according to the *metrovka* method.¹⁹

Some Soviet sources suggest that before 1933 yield data did take losses into account. I. E. Zelenin wrote that the harvest figures for the First Five-Year Plan “were calculated based on data from the sown (and sometimes the harvested) area and the yield (barn) per hectare” but did not identify the sources of these “barn yields.” Information published at that time and since, how-

18. Jasny, *Collectivized Agriculture*, 539–540, 551–556. Daniel Brower, “Collectivized Agriculture in Smolensk: The Party, the Peasantry, and the Crisis of 1932,” *Russian Review* 32 (April 1977), 162n21. Brower mistakenly describes the official figures as Moshe Lewin’s estimates. Mark Tol’ts, “Skol’ko zhe nas togda bylo?” *Ogonek* 1987 (no. 51). In a later issue, however, Sergei Diachenko used the official figure to claim again that the crop did not cause the famine, “Strashnyi Mesiats,” *Ogonek*, August 1989, 24. S. G. Wheatcroft, R. W. Davies, J. M. Cooper, “Soviet Industrialization Reconsidered: Some Preliminary Conclusions about Economic Development between 1926 and 1941,” *Economic History Review* (2nd ser.) 39, 2 (1986): 282–283.

19. Dorothy Atkinson, *The End of the Russian Land Commune, 1905–1930* (Stanford, Calif.: Stanford University Press, 1983), 193. Osinskii, the head of the Central State Commission for Harvest Yields and responsible for implementing the biological yield system, had been associated with plans made at the end of war communism to institute extensive state control of agricultural production; see Silvana Malle, *The Economic Organization of War Communism, 1918–1921* (Cambridge: Cambridge University Press, 1985), 446–448. On the changes in the system, see *Materials for a Balance of the Soviet National Economy 1928–1930*, ed. S. G. Wheatcroft and R. W. Davies (Cambridge: Cambridge University Press, 1985), 294. Arcadius Kahan, “Soviet Statistics of Agricultural Output,” *Soviet Agricultural and Peasant Affairs*, ed. Roy D. Laird (Lawrence: University of Kansas Press, 1963), 141. The threshing data were to be used to evaluate the productivity of kolkhozniki and thereby the value of their remuneration in workdays; see *Izvestiia*, 11 February 1932, 3.

ever, casts doubt on this claim. The official figure for the 1930 Soviet grain crop remains the one given by Stalin in 1934, 83.5 million tons. Moshkov cited this figure in his study of the grain crisis but a few pages later gave a Gosplan figure for grain production in 1930 of 77.17 million tons. The same table listed, under *losses*, 0.4 million tons but did not specify which losses this total included. The loss figure seems far too low (0.5 percent) given the size of the kolkhoz sector in 1930 (30 percent of sown land) and its enormous organizational and motivational difficulties. According to an article in the central agricultural newspaper in 1931, however, losses from the 1930 grain crop during harvesting alone “reached, as is known, 167 million centners. The country failed to receive a billion puds of grain.” If 16.7 million tons is correct, and, given its source, it might even be an underestimate, acceptance of the above figures as barn harvests would imply a crop of between 94 million and 100 million tons, which seem highly unlikely given the great disruptions of collectivization. If the figures of 77 million tons and 83.5 million tons were biological yield estimates, however, they would imply a barn harvest of between 60 million and 67 million tons, figures that are more consistent with the growing food shortages of 1930–1931.²⁰

Other western and Soviet specialists have indicated that the biological yield or some other preharvest projections were being applied in 1930–1932. Otto Schiller, the German agricultural attaché in Moscow in the 1930s, had direct contact with government statisticians and said that Soviet statistics were compiled in three sets: one for publication, one for managers, and another for high officials. Investigations by Soviet officials, he wrote, confirmed his observations that harvest figures from individual kolkhozy were routinely exaggerated by approximately 10 percent at both raion and oblast levels. On this basis, he estimated the 1932 harvest at 50 million tons to 55 million tons, that of 1933 at 60 to 65, and 1934 at 65 to 70. Schiller described these figures as “a numerical explanation for the partially catastrophic food supply difficulties of the rural population in the years 1931–1934.”²¹ Post-Stalinist barn yield figures for 1933 and 1934 show that Schiller’s estimate was correct for 1934 and even rather low for 1933; his estimate for 1932, however, is so far below the official figure as to suggest that the latter may also be a biological yield or preharvest estimate.²²

The Soviet Ukrainian scholar I. I. Slyn’ko published an archival estimate of the 1931 gross grain harvest in Ukraine as 14 million tons, well below the official 18.3 million; summer weather conditions, he added, reduced the actual harvest an additional 30 percent to 40 percent.²³ In a 1958 article on the famine, the Ukrainian émigré scholar Vsevolod Holubnychy stated that, according to official figures, almost 30 percent of the 1931 grain harvest in Ukraine, and “up to 40

20. Zelenin, “Osnovnye pokazateli,” 464; see also Wheatcroft and Davies, eds., *Materials*, 294. Moshkov, *Zernovaia problema*, 226, table following 230. On these two divergent estimates, see also Davies, *Collectivization of Soviet Agriculture*, 348–350. On these organizational and motivational difficulties see Davies, *The Soviet Collective Farm* (Cambridge: Harvard University Press, 1980), 139–140, and I. I. Slyn’ko, *Sotsialistichna perebudova i tekhnichna rekonstruktsiia sel's'kogo hospodarstva Ukrainy (1927–1932 rr.)* (Kiev: Vyd-vo Akademii Nauk Ukr. RSR, 1961), 260. *Sotsialisticheskoe zemledelie*, 27 August 1931, 1; 167 million centners is slightly more than one billion puds. No Soviet or western study that I have seen mentions this article or the data it contains. On the steady decline in urban food supplies, see John Barber, “The Standard of Living of Soviet Industrial Workers, 1928–1941,” *L’Industrialisation de l’URSS*, ed. Bettelheim, 110–113, and below.

21. Schiller’s description of categories of statistics is in *The Foreign Office and the Famine: British Documents on Ukraine and the Great Famine of 1932–1933* (Kingston, Ontario, and Vestal, New York: Limestone, 1988), 71. The quotation is from Otto Schiller, *Die Landwirtschaftspolitik der Sowjets und ihre Ergebnisse* (Berlin: Reichsnaehstandsverlag, 1943), 118–119.

22. The head of the agriculture department of the statistical administration, with whom Schiller spoke in summer 1932, predicted a slightly larger harvest in 1932 than in 1931, with lower harvests in Ukraine and the northern Caucasus and larger ones in the Volga, Central Blackearth region, and Urals. This prediction’s close correspondence to the official published figures could be seen as further evidence that the latter were based on preharvest estimates (*Foreign Office and the Famine*, 167).

23. Slyn’ko, *Sotsialistichna perebudova*, 287; the estimate is 845.4 million puds, made by Ukrainian Zernotrest and Traktorotsentr.

percent” of the 1932 harvest, were lost during harvesting.²⁴ Holubnychy, however, used the ambiguous wording “up to” and did not cite any sources for these estimates. Despite certain statistical inconsistencies, his article provides further reason to believe that the 1932 figures did not reflect reality.²⁵

Soviet scholars recently have provided further evidence that the 1930–1932 harvest figures are biological yields. V. P. Danilov, for example, stated that “in 1932 the gross harvest was 699 million centners, but *part of it was left on the root*.” The statisticians Grigorii Khanin and Vasilii Seliunin wrote that the biological yield was introduced in the First Five-Year Plan. The Ukrainian scholar S. V. Kul’chyts’kyy explicitly stated that the extraordinary commissions dispatched in November 1932 to Khar’kov, Rostov-na-Donu, and Saratov at the peak of the 1932 procurements crisis “employed data from so-called biological (on the root) yields of grains.”²⁶ His 1932 yield estimate of 7.2 centners is actually below the official figure of 8.1 centners. This difference indicates that the authorities lowered their harvest estimates, as well as their procurement quotas, in response to the low harvest and that the official figure is much too high.

This evidence suggests that the official 1932 grain production statistics, and possibly those for 1930–1931, are preharvest estimates, perhaps based on biological yields and exaggerate the actual harvests as biological yield estimates did afterwards. Previously secret archival data on kolkhoz agricultural production in 1932 provide conclusive evidence that actual harvests were much lower than official statistics indicate. These data are based on the composite annual reports of the collective farms.²⁷ Since the data in these reports contrast sharply with published official statistics, their origins and limitations must be clarified.

The kolkhoz model statute of 1 March 1930 required each kolkhoz to prepare an annual report, but only a minority did so. In 1930 33 percent of the approximately 80,000 kolkhozy turned in annual reports, in 1931 only 26.5 percent of approximately 230,000, and in 1932 only 40 percent of about the same number. A partial regional breakdown for 1932 shows that the kolkhozy included in these statistics tended to be those served by the machine-tractor stations (MTS), which had to verify and summarize reports from kolkhozy in their zones of operation (raion land departments handled reports from kolkhozy outside the MTS system).

The predominance of MTS kolkhozy among those who completed annual reports indicates that despite their disorganization and inefficiency the stations had some positive influence.²⁸ That influence, however, was limited by the scarcity and low skill levels of kolkhoz and MTS personnel, who, according to V. I. Zvavich, a Soviet specialist on the reports, in many cases “com-

24. Vsevolod Holubnychy, “Prychyny holodu 1932–33 roku,” *Vpered* (Munich) 1958 (no. 10): 6–7; English translation in *Meta*, 2 (1979): 22–25, from which citation is taken.

25. Holubnychy argued that after the 1932–1933 grain procurement campaign, only 83 kilograms of grain remained for each person in the rural population of Ukraine. If we accept Holubnychy’s estimates of 4.5 million peasant households in Ukraine at the beginning of 1933 and of a 40 percent reduction in the harvest from 14 million tons to 8.4 million tons, of which 4.7 million were procured, then 3.7 million tons would have remained, and the average household would have had 813 kilograms, or 162 for each person in the average household size of 5.

26. V. P. Danilov, “Kollektivizatsiia: kak eto bylo,” *Stranitsy istorii KPSS: Fakty, Problemy, Uroki*, ed. V. I. Kuptsov (Moscow: Vysshiaia shkola, 1988), 341; originally in *Pravda*, 16 September 1988. Emphasis in quotation is mine. Grigorii Khanin, Vasilii Seliunin, “Lukavaia tsifra,” *Novyi mir* 1987, no. 2: 189. Kul’chyts’kyy, “Do otsinky,” 24, citing Ukrainian state archives.

27. See A. I. Ezhov, “Gosudarstvennaia statistika, ee razvitie i organizatsiia,” in *Istoriia Sovetskoi Gosudarstvennoi Statistiki: Sbornik statei*, ed. A. I. Ezhov et al. (Moscow: Gos. statisticheskoe izd-vo, 1960), 62.

28. For the 1930 model statute, see *Kollektivizatsiia sel'skogo khoziaistva: Vazhneishie postanovleniia Komunisticheskoi partii i Sovetskogo pravitel'stva, 1927–1935* (Moscow: Akademia nauk, 1957), 282–287. V. I. Zvavich, “Materialy razrabotki godovykh otchetov kolkhozov za 1932–1937 gg. kak istochnik po istorii sovetskogo krest'ianstva” (Kand. diss., Moscow State University, 1978), 32, 37–38. On problems in the MTS, see Robert F. Miller, *One Hundred Thousand Tractors* (Cambridge: Harvard University Press, 1970), and Daniel Thorniley, *The Rise and Fall of the Soviet Rural Communist Party, 1927–1939* (London: Macmillan, 1988).

Table 3. Kolkhozy in summations of annual reports

Place	Served by MTS			Not served by MTS			Total		
	number	per- centage	1,000 house- holds	number	per- centage	1,000 house- holds	number	per- centage	1,000 house- holds
USSR*	33,194	50.9	3,528	39,685	31.3	2,455	77,209	40.0	6,765
RSFSR*	16,803	39.0	1,612	31,084	27.7	1,811	52,217	33.6	4,204
Ukraine	9,176	73.4	1,421	2,794	21.8	386	11,970	47.3	1,808
Northern Caucasus							4,330	86.6	781
Lower Volga	1,029	78.0	228	342	17.5	61	1,434	42.8	289
Middle Volga	1,913	86.9	322	1,879	62.6	245	3,729	72.9	567
Central Blackearth oblast	3,235	39.5	371	1,800	25.4	155	5,035	32.9	527
Moscow oblast		21.6			22.4			22.2	
West Siberia krai		66.1			48.3			52.0	

*Excludes northern Caucasus.

Source: TsGANKh SSSR f. 7486 o. 3 d. 4456: Tablitsy dannykh o sostoianii kolkhozov v 1932 g., sostavlennye po materialam godovykh otchetov.

Table 4. Kolkhozy Covered by Dynamic Studies

Place	Number of kolkhozy	Percentage of area kolkhozy
RSFSR*	9,362	7.0
Azovo-Chernomorskii krai	808	23.1
Stalingrad oblast	347	24.8
Central Blackearth oblast	1,518	9.7
Ukrainian SSR	2,864	12.1
Belorussian SSR	481	5.0

*total for twelve oblasti.

Source: TsGANKh SSSR f. 1562 o. 77 d. 70: Dinamika khoziaistvennogo sostoianii kolkhozov za 1932 i 1933 gg. dannye vyborochnoi sviaznoi razrabotki godovykh otchetov kolkhozov. Vyp. 1 Oblastnye itogi. Ne podlezhit oglasheniiu. TsUNKhU Gosplan SSSR sektor ucheta sel'skogo khoziaistva. sektsiia kolkhozov.

mitted crude errors" in preparing them. Incorrect data were often passed on to higher levels, where they were the subject of official criticism. The vice-chief of TsUNKhU Gosplan A. S. Popov wrote in 1935 that the annual reports were of such poor quality that it was still too early to employ them for an analysis of kolkhoz production. Consequently, TsUNKhU conducted a series of "dynamic studies" based upon a more detailed examination of annual reports and other materials from 12,707 kolkhozy during 1932–1935 (see table 4). Nonetheless, Zvavich con-

Table 5. Distribution of Gross Grain Production

Place	Average harvest yield*			Official yield	State turnovers†			Workday payments in kind†		
	MTS	Non-MTS	Total		MTS	Non-MTS	Total	MTS	Non-MTS	Total
USSR	5.3	6.3	5.4	6.8	40.7	30.7	33.4	20.8	29.6	22.6
RSFSR	5.5	6.5	6.0	6.5	42.4	29.5	36.0	23.0	30.6	26.8
North										
Caucasus			3.9	6.1			60.7			10.0
Lower Volga	3.6	4.0	3.7	4.2	58.3	58.4	58.3	11.5	10.4	11.3
Middle Volga	6.7	3.9	5.0	5.4	34.8	43.9	39.3	28.8	20.8	24.9
Moscow oblast	8.6	8.5	8.5	9.0	14.0	14.8	14.6	39.2	42.9	41.8
Western oblast	6.8	7.4	7.2	8.0	8.9	7.3	7.7	42.1	42.4	42.3
West Siberia krai	7.8	7.7	7.7	6.7	36.6	29.5	32.6	27.7	34.1	31.3
Ukraine	5.1	5.0	5.1	8.0	37.3	43.8	38.6	13.6	13.8	13.7
Kiev oblast	4.6	4.9	4.7		30.6	22.8	28.6	19.2	19.2	19.2
Vinnitsa oblast	6.8	6.7	6.8		36.4	37.8	36.5	21.7	20.4	21.6
Khar'kov oblast	5.3	5.1	5.2		50.4	49.6	50.1	11.5	13.0	12.0
Dnepropetrovsk oblast	4.6	5.1	4.7		58.8	59.7	58.9	9.8	11.1	10.0
Odessa oblast	5.3	6.3	5.3		—	—	—	9.2	8.9	9.1
Donetsk oblast	4.4	4.3	4.4		55.4	55.2	55.4	10.9	12.1	11.2

* centners per hectare

† percentage of kolkhoz production devoted to particular end use.

Source: See table 3. Official figures from *Sel'skoe khoziaistvo SSSR* (1936), 269.

cluded that, despite their inadequacies, the annual reports could be considered representative and basically reliable sources on the kolkhozy.²⁹

According to data of the agricultural commissariat (NKZ) the average kolkhoz yields were 5.4 centners a hectare in the Soviet Union, 6.0 in the Russian republic, and 5.1 in Ukraine, considerably below the official figures of 6.8, 6.5, and 8.0 (see table 5). The TsUNKhU data are

29. See Zvavich, "Materialy razrabotki," 40–41, and idem, "Godovye otchety kolkhozov i ikh znachenie kak massovogo istoricheskogo istochnika," *Massovye istochniki po sotsial'no-ekonomicheskoi istorii sovetskogo obshchestva*, ed. I. D. Koval'chenko et al. (Moscow: Moscow University Press, 1979), 325, 342. Summary tables of the 1932 kolkhoz annual reports can be found in an Agriculture Commissariat (NKZ) archive file: Tablitsy dannykh o sostoianii kolkhozov v 1932 g., sostavlennye po materialam godovykh otchetov, TsGANKh SSSR fond 7483, opis 3, delo 4456. The dynamic studies are in a statistical

Table 6. Comparison of Grain Sown Area to Harvested Area and Yields

Place	Grain sowings a kolkhoz (hectares)		Harvested area as percentage of sown area		Barn yields (centners a hectare)	
	1932	1933	1932	1933	1932	1933
RSFSR*	508	546	92.5	97.3	5.20	6.03
Azovo-Chernomorskii krai	1,603	1,378	88.4	100.0	3.58	6.19
Stalingrad oblast	2,328	2,365	89.3	96.8	3.47	3.38
Central Black-earth oblast	416	479	97.5	98.7	6.20	6.49
Tatar ASSR	600	700	97.7	100.0	7.00	7.95
Moscow oblast	122	155	98.4	99.3	7.74	8.41
West Siberia krai	511	607	97.3	97.8	7.67	7.96
Belorussian SSR	128	147	95.2	98.6	4.66	6.69
Ukrainian SSR	604	677	93.8	96.8	4.98	8.07
Kiev oblast	463	530	92.6	96.5	4.49	7.91
Chernigov oblast	345	437	92.7	98.8	4.57	6.26
Vinnitsa oblast	361	472	97.3	97.1	6.70	9.61
Khar'kov oblast	643	691	89.9	97.3	4.77	7.95
Dnepropetrovsk oblast	884	977	95.0	96.0	4.85	8.48
Odessa oblast	713	770	96.0	95.0	5.49	8.43
Donetsk oblast	826	890	91.0	97.4	4.12	6.32

*Total for twelve oblasti.

Source: see table 4.

even lower, with average yields for the Russian republic and Ukraine of 5.20 and 4.98 centners a hectare (see table 6). While these lower yields might reflect sampling error, they were based on a more detailed examination and verification of kolkhoz data than were the NKZ figures. The

handbook in the Central Statistical Administration archive: *Dinamika khoziaistvennogo sostoiianiia kolkhozov za 1932 i 1933 g.*, TsGANKh SSSR fond 1562, opis 77, delo 70. This handbook, an internal publication stamped with the phrase *ne podlezhit' oglasneniiu*, may be one of the high-level statistical sources to which Schiller referred. Data from the dynamic studies were published in a disguised manner during the 1930s. On this source see I. E. Zelenin, "Dinamicheskie obsledovaniia kolkhozov za 1933–1934," *Istochnikovedenie istorii sovetskogo obshchestva*, ed. D. A. Chugaev et al., 4 vols. (Moscow: Nauka, 1968) 2:339–341.

Another TsUNKhU internal handbook, *Kolkhozy v 1932 g.*, employed annual report data (see Zelenin, "Dinamicheskie obsledovaniia"). Danilov cited kolkhoz grain yields from this source in his contribution to *Istoriia Sovetskogo krest'ianstva*, 2:256. These data are inconsistent when those for the Soviet Union and the Russian republic and those for specific regions are compared: Its aggregate figures for the Soviet Union and the Russian republic correspond to the high official aggregate figures, while regional figures correspond to the lower NKZ archival data (see table 9). To test the relation between aggregate and regional figures from this source, a weighted average yield for the Soviet Union can be calculated from its regional yields and official figures for kolkhoz grain sown areas. Data for regions not included in the published TsUNKhU materials were filled in with the official figures; the weighted average should thus be above what it might have been if the (ordinarily lower) annual report figures from those areas were available. By this calculation, the regional yields from *Kolkhozy v 1932 g.* imply an average kolkhoz grain yield for the Soviet Union of 5.65

Table 7. Percentage Changes in Gross Harvests, Sown Area, and Yields, 1932 to 1933

Place	Total	Changes in sown area	Changes in yield
RSFSR *	+26.3	+ 8.9	+17.4
Azovo-Chernomorskii krai	+49.1	– 6.3	+55.4
Stalingrad oblast	– 0.7	+ 1.9	– 2.6
Central Blackearth oblast	+24.0	+18.4	+ 5.6
Middle Volga	+ 7.1	+10.9	– 3.8
Tatar ASSR	+37.6	+20.9	+16.7
Belorussian SSR	+68.9	+18.3	+50.6
Ukrainian SSR	+85.3	+14.4	+70.9
Kiev oblast	+106.1	+17.3	+88.8
Chernigov oblast	+83.2	+34.5	+48.7
Vinnitsa oblast	+97.3	+37.5	+59.8
Khar'kov oblast	+83.9	+11.0	+72.9
Dnepropetrovsk oblast	+93.2	+10.5	+82.7
Odessa oblast	+67.0	+ 8.9	+58.1
Donetsk oblast	+65.9	+ 7.6	+58.3

*Total for twelve oblasti.

Source: see table 4.

TsUNKhU data also show a great increase in 1933 yields: in Ukraine from 4.98 to 8.07 centners or 60 percent, in the Russian republic from 5.2 to 6.03 centners, almost 20 percent. According to official figures, however, yields in 1933 were lower than those in 1932. This improvement derived from increases more in yields than in sowings (see table 7). The TsUNKhU data also include figures on the area actually harvested in the kolkhozy studied, for which no aggregate statistics have been published before. Soviet grain production statistics from this period are based exclusively on the sown area, even though Soviet farmers have never harvested the entire sown area.³⁰ These data suggest that these yields are also based on harvested area.

While the yields in the annual reports and the dynamic studies are well below the official statistics for most areas, in such regions as western Siberia they actually exceed published figures and make it even more likely that the latter are preharvest estimates.³¹ Archival evidence of low yields and the gaps between archival and official data lead to the conclusion that the authorities lowered crop estimates and moderated procurement demands in response to the low harvest.³²

Data from the dynamic studies were published in two tables in *Sel'skoe khoziaistvo ot VI k VII s'ezdu Sovetov* in 1935. The first, based upon the TsUNKhU study, shows that 1933 barn yields in the kolkhozy studied exceeded those of 1932 by 63 percent in Ukraine, 43.5 percent in Belorussia, and 16 percent in the Russian republic. The second published table shows increases

centners, well below the aggregate figure of 6.8 centners published with them, but in the same range as the NKZ data (see table 10). The difference between the 5.65 average and the NKZ archival average of 5.4 in part reflects the upward bias of official harvest figures used for regions not included in the published data.

30. On underharvesting in contemporary Soviet agriculture, see Zhores Medvedev, *Soviet Agriculture* (New York: Norton, 1987), 291–292. Even in the United States, sowings were often abandoned during the 1930s; see United States Department of Agriculture, *Yearbook of Agriculture, 1935* (Washington, D.C.: Government Printing Office, 1935), 351–352.

31. The four regions for which data were underestimated, according to available data, were the Tatar ASSR, Uzbekistan, and western Siberia and the Northern kraia.

32. The claim that the authorities made no concessions is a standard theme of the argument; see for example *Investigation*, passim.; and Pidhainy et al., eds., *Black Deeds*, 2, pt. 3.

Table 8. Change in Gross Kolkhoz Grain Harvests, 1932–1933
(In centners)

Region	Year	Each kolkhoz	Each worker
Ukraine	1932	3,010	9.9
	1933	5,406	17.7
BSSR	1932	596	6.0
	1933	991	8.7
RSFSR	1932	2,640	12.6
	1933	3,262	15.5
USSR	1932	2,645	11.7
	1933	3,655	16.0

Source: *Sel'skoe khoziaistvo ot VI k VII s'ezd Sovetov* (Moscow: Narkomzem, 1935), 35.

in the average gross grain harvest of each kolkhoz and worker (see table 8). According to this second 1935 table, the increases in 1933 approximated 80 percent in Ukraine and 40 percent for the Soviet Union. Even assuming a major population decline from the famine, these increases are large and reflect the small size of the 1932 harvest.³³

These archival data show that the 1932 harvest in these kolkhozy was considerably lower than official estimates of the harvest; other published sources have intimated this. Moshkov, for example, cited archival evidence of extremely low yields, in some cases below 3 centners a hectare, in many Ukrainian and northern Caucasus kolkhozy. Tol'ts wrote that grain yields were below 4 centners in the northern Caucasus and Lower Volga and little higher in Ukraine. Even in 1933 Sul'kovskii, head of the Ukrainian Central State Commission on Harvest Yields, estimated that 210 million to 220 million puds of grain were lost during harvesting and threshing in Ukraine in 1932.³⁴ The TsUNKhU tables suggest that even this large estimate is too low.

The kolkhozy that did not submit annual reports may have been less stringently controlled and thus may have had better harvests. For the official figures to be correct, however, kolkhozy not included in the annual reports must have had dramatically better harvests than did the kolkhozy that were. In Ukraine, for example, since the kolkhozy that turned in reports had average yields of 5 centners, yields in the remaining kolkhozy would have had to average more than 11 centners to produce the official figure of 8 centners as a combined average for all kolkhozy. Such high production appears unlikely given the conditions of the time. Collectivization in the Soviet Union as a whole, especially in grain-producing areas, declined noticeably in 1932 as peasants fled their villages. Limited information available from more remote regions does not suggest that agricultural production was particularly greater in them than it was elsewhere. The Western oblast was a secondary region economically and had a low level of collectivization in the early 1930s but was not spared the procurement crisis and 1932 food shortage. A memoir of a remote village in the Orel' region described 1930–1934 as “years of famine” during which people died of hunger because of excessive procurements. Even a Ukrainian émigré source states that remote villages suffered more from the famine than villages closer to towns.³⁵ Production in

33. *Sel'skoe khoziaistvo ot VI k VII s'ezd Sovetov* (Moscow: NKZ, 1935), 33. This handbook presented biological yield harvest estimates for 1933, which could lead one to think that these tables reflect the difference between the biological figure for 1933 and the alleged barn yield for 1932. The handbook, however, consistently distinguishes between gross and barn yields and employs the former to refer to biological yield estimates; see, for example, 22.

34. Moshkov, *Zernovaia problema*, 211–212; *Ogonek* 1987 (no. 51); for Sul'kovskii's article, *Pravda* 22 August 1933, 2.

35. On peasant migration see Kul'chits'kii, 15, and *Istoriia Sovetskogo krest'ianstva* 2: 196–198. On the food crisis, see Merle Fainsod, *Smolensk under Soviet Rule* (New York: Random, 1963), 259–264. This

Table 9. Comparison of Kolkhoz Grain Harvest Yield Statistics
(Annual averages in centners a hectare)

Place	NKZ	TsUNKhU	Official
USSR	5.4	6.8	6.8
RSFSR	6.0	6.5	6.5
Northern krai	9.8	9.8	9.2
Leningrad oblast	7.7	7.7	8.8
Western oblast	7.2	7.2	8.0
Moscow oblast	8.5	8.5	9.0
Ivanov oblast	9.0	9.0	9.1
Urals oblast	4.6	4.6	5.6
Tatar ASSR	8.7	8.7	7.6
Middle Volga	5.0	5.0	5.4
Central Blackearth oblast	6.4	6.4	8.8
Lower Volga	3.7	3.7	4.2
North Caucasus	3.9	3.9	6.1
Crimean ASSR	5.3	5.3	7.5
West Siberia krai	7.7	7.7	6.7
Ukrainian SSR	5.1	5.1	8.0
Belorussian SSR	4.9	4.9	6.5
Transcaucasia	7.0	7.0	6.9
Uzbekistan	4.3	7.5	5.6

Sources: NKZ is from TsGANKh SSSR f.7486 o.3 d.4456, l. 71; Stephen Wheatcroft and R. W. Davies provided additional data from this file. TsUNKhU is from f.1562 o.76 d.160 (*Kolkhozy v 1932 g.*), cited in *Istoriia sovetskogo krest'ianstva*, 5 vols. (Moscow: Nauka, 1986–1988) 2:256. Official figures are from *Sel'skoe khoziaistvo SSSR*, 269.

kolkhozy not in the annual reports thus was probably lower than production in those included. If the annual reports came from the better kolkhozy, they may bias average production figures upward.

According to the official figures, kolkhozy in 1932 gathered 66.9 percent of the total grain harvest; the remainder was gathered by *sovkhozy* (9.5 percent) and individual peasant farms (23.6 percent). Scattered evidence suggests that *sovkhoz* and *edinolichnik* yields were no better than those of kolkhozy. Yields in *sovkhozy* in the northern Caucasus, which were responsible for 25 percent of the total *sovkhoz* grain procurement quota for the Soviet Union, fell from 16 centners in 1930 to 8.4 in 1931 and 2.9 in 1932; their marketed grain decreased from 372,400 tons in 1931 to 213,500 tons in 1932 and they could not fulfill their procurement quota. Ukrainian *sovkhozy*, responsible for an additional 20 percent of the total *sovkhoz* procurements quota, fulfilled only 60 percent of their quota, 475,000 tons, according to the 6 May decree; yet production—officially—was 1.56 million tons. This large gap between quota fulfillment and harvest is

region is often cited as an example of the weakness of Soviet authority in the countryside: see J. Arch Getty, *Origins of the Great Purges* (Cambridge: Cambridge University Press, 1983), and Roberta Manning, "Government in the Soviet Countryside in the Stalinist Thirties: The Case of Belyi Raion," *Carl Beck Papers in Russian and East European Studies* no. 301 (Pittsburgh, Penn.: University of Pittsburgh Center for Russian and East European Studies, 1983). T. K. Chugunov, *Derevnia na Golgofe* (Munich: izdanie avtora, 1968), 118–125. Pidhainy et al., eds., *Black Deeds* 2:665–666.

difficult to explain unless the harvest figure, like that for the kolkhozy, is a preharvest estimate and overstates real output.³⁶

According to official figures, in 1932 *edinolichniki* accounted for 21.4 percent of grain sowings but 23.6 percent of gross production and, therefore, were slightly more productive than kolkhozy and *sovkhozy*. At the same time, *edinolichniki* appear to have fulfilled procurement quotas, which were lowered at the same time as those of the kolkhozy, even less than did the socialist sector. In Ukraine they met only 39.5 percent of their quota.³⁷ If procurement fulfillment is any indication of production, then *sovkhozy* and *edinolichniki* must have had much lower grain harvests than official figures indicate. The statistics from the annual reports show that the official figures for kolkhoz production were based on biological yields or other preharvest estimates. Other sources suggest that these estimation methods were applied in 1932 to *edinolichniki* and, in all probability, to *sovkhozy*.³⁸ Consequently, their harvests, and therefore the entire 1932 grain harvest, must also have been overestimated.

The degree of overestimation can be approximated by extrapolating from the archival data for kolkhozy. Official figures for Soviet and Ukrainian kolkhoz yields (6.8 centners and 8.0 centners) are close to average yields for all sectors (7.0 centners and 8.1 centners). The archival figures for kolkhoz yields (6.4 centners and 5 centners) can be reasonably assumed to be close to the genuine average yields for all sectors and, therefore, kolkhoz production data in the annual reports can serve as a basis for estimating total grain production in 1932. Thus, for Ukraine, the official sown area (18.1 million hectares) reduced by the share of sown area actually harvested (93.8 percent) to a harvested area of 17 million hectares and multiplied by the average yield (approximately 5 centners) gives a total harvest of 8.5 million tons, or a little less than 60 percent of the official 14.6 million tons. This result appears to support Holubnychy's statement that 40 percent of the crop was lost in 1932. A similar calculation of the sown area in the Soviet Union (99.7 million hectares), reduced by 7 percent (based on the TsUNKhU data) to 92.72 and multiplied by the NKZ average yield of 5.4 centners, gives a total Soviet harvest of 50.06 million tons, almost 30 percent below the official figure of 69.87—within the range that Schiller predicted.

If the kolkhozy that did not complete annual reports had lower harvests than those that did and if *sovkhoz* and *edinolichnik* harvests were as low as their 1932 procurements implied, the harvest may have been well below 50 million tons.³⁹

The decreased 1932 harvest resulted from a series of economic, organizational, and political factors. Along with the statistical data, these cast considerable doubt on accounts asserting that the harvest was good and that the famine was therefore artificial.⁴⁰ If the harvest was as low, the famine would have been primarily the result of a genuine shortage. Evidence on the geo-

36. I. E. Zelenin, "Zernovye sovkhozy Dona i Severnogo Kavkaza v gody vtoroi piatiletki (1933–1937)," *Istoriia SSSR* 1958 (no. 2): 51. Slyn'ko, *Sotsialistychna perebudova*, 298; for *sovkhoz* production and distribution of total production among branches, see *Sel'skoe khoziaistvo SSSR: Ezhegodnik 1935* (Moscow: Selkhozgiz, 1936), 270–272.

37. *Sel'skoe khoziaistvo ot VI k VII s'ezd Sovetov*, 65. Slyn'ko, *Sotsialistychna perebudova*, 298.

38. *Sovkhoz* harvests were calculated on the basis of grain balances, but it is not clear how, and when, such balances would have been calculated; Wheatcroft and Davies, eds., *Materials*, 294. It seems likely that a system that would have increased procurement quotas, such as the preharvest estimate, would have been used in *sovkhozy*.

39. The chaotic and politically charged conditions of 1932 may have prevented collection of grain production data for all sectors. The biological yield system may have been introduced in 1933 to provide central authorities with more complete and reliable production information. Wheatcroft has suggested a similar interpretation: "Reevaluation of Soviet Agricultural Production," 38.

40. These claims are questionable not only because of the considerable evidence that the crop was poor, but also because they imply that the peasants worked conscientiously on the harvest. I am preparing a monograph that will address these issues, among others.

Table 10. Calculation of Weighted-Average Grain Yield Based on Published Statistics from *Kolkhozy v 1932 g.* and Official Figures

Region	Average yield (centners a hectare)	Kolkhoz grain sown area (hectares)	Harvest (yield x sown area)
USSR	6.8	69,119.7	470,013.9
RSFSR	6.5	53,065.1	344,923.1
Regional figures:			
Northern krai	9.8	498.7	4,887.2
Leningrad oblast	7.7	535.0	4,119.5
Western oblast	7.2	1,411.3	10,161.3
Moscow oblast	8.5	2,056.5	17,480.2
Ivanov oblast	9.0	667.0	6,003.0
Urals oblast	4.6	4,873.2	22,416.7
Tatar ASSR	8.7	1,935.7	16,840.5
Middle Volga	5.0	6,233.0	31,165.0
Central Blackearth oblast	6.4	5,305.8	33,957.1
Lower Volga	3.7	6,745.6	24,958.7
North Caucasus	3.9	7,112.2	27,737.5
Crimean ASSR	5.3	628.6	3,331.5
West Siberia krai	7.7	4,438.4	34,175.6
Ukrainian SSR	5.1	13,005.0	66,325.5
Belorussian SSR	4.9	1,146.9	5,619.8
Transcaucasia	7.0	836.8	5,857.6
Uzbekistan	4.3	615.9	2,648.3
Turkmeniia	7.5	96.2	721.5
<i>Note:</i> Weighted average yield (column 1) is calculated from total sown areas and harvests for above regions (columns 2 and 3):			
	5.5	58,141.8	318,406.5
Official grain sowings and harvests for omitted regions, total *		10,977.9	72,143.2
Weighted average USSR yield, including omitted regions:	5.65	69,119.7	390,549.7
* Official kolkhoz harvests for regions omitted from published figures from <i>Kolkhozy v 1932 g.</i> (<i>Sel'skoe khoziaistvo SSSR</i> , 271): Karelian ASSR, 225.2; Bashkir ASSR, 11,782.1; Kazakh ASSR, 20,361.6; Karakalpak ASSR, 99.1; Kirgiz ASSR, 3,455.6; Iakut ASSR, 275.9; Nizhegorod krai, 19,686.2; East Siberia krai, 10,461.9; Far East krai, 3,442.5; Tadzhik SSR, 2,353.1 (total, 72,143.2).			
<i>Sources:</i> For average yields see <i>Kolkhozy v 1932 g.</i> , table 9. Figures for sown areas are from <i>Sel'skoe khoziaistvo SSSR</i> , 252–259.			

graphical extent of rural and urban food shortages and famine in 1932–1933 strongly supports this interpretation.

Fragmentary data indicate that serious food shortages prevailed in many rural areas. Famine and deaths from starvation, as noted above, occurred in Smolensk and in the Orel' region; an archival report from the Central Blackearth oblast refers to great food supply difficulties in the kolkhozy and "mass cases of swelling from hunger and of death."⁴¹ A former Belorussian

41. I. E. Zelenin, "Politotdely MTS (1933–1934 gg.)," *Istoricheskie zapiski* 76 (1965): 47.

kolkhoznik has stated that Belorussia was also struck by famine. A Soviet specialist on the Volga region wrote of “significant provisioning difficulties” during 1931–1933; a Soviet author who lived in a village near Saratov in the early 1930s writes of mass starvation deaths there. The British Embassy received reports of massive resistance to grain procurements in Novosibirsk. A Canadian agricultural specialist, Andrew Cairns, who toured most of the primary grain regions in summer 1932, was accosted in the Siberian town of Slavgorod by crowds of people who told him that villages were empty and people were starving to death every day in the countryside.⁴²

Famine was not confined to rural areas. Collectivization did not alleviate supply problems in 1930–1933. Instead, urban food supplies sharply declined during these years and reached a nadir by 1932–1933.⁴³ Rapid urban population growth during the First Five-Year Plan brought more than 10 million people from villages to industrial sites and cities and increased the number receiving food rations from 26 million in 1930 to 40 million people in 1932.⁴⁴ Food production declined and, despite increased procurements, urban food supplies fell disastrously, and reserves did not keep pace with ration requirements. In 1931 the government reduced rations for many categories of people and excluded whole groups of workers and entire towns from the rationing system; further restrictions were imposed in 1932. A British Embassy dispatch of 4 May 1932 noted that, while some supplies had been reduced in Moscow, conditions were much worse in the provinces. Rations had been reduced for workers and none were issued for workers’ families, who had to spend all their money on the private food market. A mid-July dispatch stated that “the primary difficulty facing the country is the shortage of food.” Cairns’s reports contain data on the restricted rations (which often were not even distributed in full), “fantastically” high food prices, and limited availability of food at bazaars in both large and small towns. Ukrainian émigré sources also refer to a “dire shortage of food” in Ukrainian cities.⁴⁵

During 1932 worsening shortages physically weakened workers and induced many to leave their jobs in search of food. In many branches of industry, labor turnover exceeded 100 percent every few months, while industrial production declined to 1928 levels. A recent study of Dneprostroi notes that while the 1932–1933 famine affected the countryside more than the towns, nonetheless “even there it was devastating to the health of the population.” Bread rations steadily declined and were not given out in full, workers had to leave work to stand in long bread lines, and typhus, tuberculosis, and smallpox became widespread. Reports from several Soviet cities in the émigré Menshevik press indicated that food prices increased far beyond workers’ salaries during 1932. Blue-collar and white-collar workers were selling everything they owned to buy bread, theft was rampant, and no one saw any prospects for improvement. Desertion of factories combined with peasants’ flight from kolkhozy so that millions of people moved around

42. Harvard University, Russian Research Center, *Project on the Soviet Social System*, “A” schedules: personal life history documents (Cambridge, Mass.: Harvard University Press, 1951), case no. 379, 20–21. F. A. Karevskii, *Sotsial’noe preobrazovanie sel’skogo khoziaistva Srednego Povolzh’ia* (Kuibyshev: Kuibyshev State University, 1975), 145–146; Mikhail Alekseev, “Seiatel’ i khranitel’,” *Nash Sovremennik*, 1972 (no. 9): 96, and his autobiographical novel, *Drachuny* (Moscow, 1982), set in a Volga village during the famine. United Kingdom Public Record Office, Foreign Office (hereafter PRO FO) 371 N 746 113/38, 31 January 1933; *Foreign Office and the Famine*, 42. Cairns was sent by the British Empire Marketing Board to evaluate Soviet grain production prospects; his long reports, recently published in *Foreign Office and the Famine*, are extremely valuable sources on agriculture and rural conditions in the early 1930s.

43. See, for example, commentary in PRO FO 371/16335 N3060/1179/38, which notes that although more grain was taken from the peasants in 1931 than in 1930, “the provisioning of the towns (though not in Moscow) seems to have deteriorated.” Other sources, however, show Moscow was not immune to shortages; see below.

44. Lorimer, *Population of the Soviet Union*, 150. Moshkov, *Zernovaia problema*, 126, 129, 134; G. Ia. Neiman, *Vnutrennaia torgovlia SSSR* (Moscow: Sotsekgiz, 1935), 176.

45. Moshkov, *Zernovaia problema*, 127–134; Davies, *Collectivization of Soviet Agriculture* 1:361. PRO FO 371 16322 N3057/38/38 4 May 1932, notes from Cairns; N4398/38/38 18 July 1932, dispatch by Ambassador Esmond Ovey. *Foreign Office and the Famine*, 31–32, 39–40, 52, 105–112, 122, Pidhainy et al., eds., *Black Deeds* 2:332.

the country seeking better conditions. In response the regime revived the tsarist institution of internal passports at the end of 1932.⁴⁶

These conditions worsened in the first half of 1933. A study of the Menshevik press argues that during this period “the attention of the population in [Moscow] . . . was completely absorbed by the famine,” and, therefore, it must have been “the overriding concern in all other areas where the famine was much more acute.” By May townspeople had not seen “edible bread” for six months and the cities overflowed with famished children. According to Maurice Hindus, the Second Five-Year Plan began (in 1933) with a food crisis more severe than the 1921 famine and with rations lower than they had been for ten years and declining. In fall 1932 Kievan workers’ bread rations were cut from 2 pounds to 1.5 and rations for white-collar workers from one pound to one-half pound. As late as mid-July 1933 a British Embassy dispatch reported extreme food shortages and deaths from starvation and related diseases in provincial towns and even in Moscow. Similar reports of widespread worker discontent over declining food supplies, strikes, and desertion of factories appeared in several foreign publications.⁴⁷

Market prices for grain and other food products indicate the severity and duration of the 1932–1933 shortages. Prices, especially for grain products, more than doubled in the first months of 1932 and continued to rise well into 1933; grain and flour prices peaked in June 1933. As the 1933 harvest came in, however, prices rapidly declined; grain prices had dropped more than 60 percent by December. The price decline was largely the result of a government policy that forced cooperatives to sell a portion of procured grain at prices slightly below those in the peasant markets. The ineffectuality of this policy before late 1933 indicates the limitations of supplies before that time.⁴⁸

Soviet regional mortality figures for the early 1930s, compiled by TsUNKhU and recently published by Wheatcroft, show that while the famine was more severe in certain Ukrainian oblasti than elsewhere, it was by no means limited to Ukraine. Both urban and rural mortality rates in 1933 considerably increased over those of 1932 in most regions, and in the Volga basin, Urals, Siberia, and central agricultural regions, they approached or equalled Ukrainian levels. These data confirm M. Maksudov’s findings, based on 1959 census data, and recent assertions by the Soviet Ukrainian authors Kul’chyts’kyy and Diachenko that the famine struck not only Ukraine and the northern Caucasus but also the Volga basin (from Gor’kii to Astrakhan, according to the Ukrainian scholars), the Central Blackearth oblast, portions of the Urals and Kazakhstan, and, as one Ukrainian scholar noted, even such regions as Vologda and Arkhangel’sk.⁴⁹

46. Many Gordon, *Workers before and after Lenin* (New York: Dutton, 1941), 151–152; Donald Filtzer, *Soviet Workers and Stalinist Industrialization* (Armonk, N.Y.: Sharpe, 1986), chap. 2. Anne Rassweiler, *The Generation of Power* (New York: Oxford University Press, 1988), 152–153. Soviet estimates of population movement are given in PRO FO 371 19454 N4110/45/38. Andre Liebich, “Russian Mensheviks and the Famine,” in *Famine in Ukraine*, 101–102; Liebich argues that the 1933 famine was urban as well as rural; the collection was designed to show that the famine was focused on Ukrainian peasants. The internal passport system was imposed in a series of decrees issued in December 1932 and early 1933.

47. Maurice Hindus, *The Great Offensive* (New York: Smith and Haas, 1933), 23–24; Liebich, “Russian Mensheviks,” 101–102; see Pidhainy et al., eds., *Black Deeds* 2:332, on shortages in Kiev. The British dispatch is in *Foreign Office and the Famine*, 255–257. For additional reports from the opposition and foreign press see Hiroaki Kuromiya, *Stalin’s Industrial Revolution: Politics and Workers* (Cambridge: Cambridge University Press, 1988), 304.

48. Neiman, *Vnutrennaia torgovlia SSSR*, 258; A. N. Malafeev, *Istoriia tsenoobrazovaniia v SSSR (1917–1963)* (Moscow: Mysl’, 1964), 172, 193–195. On the attempt to lower prices by market competition, see Kuromiya, *Stalin’s Industrial Revolution*, 304–305, and Malafeev, *Istoriia tsenoobrazovaniia*, 195.

49. M. Maksudov, “Geografiia goloda 1933 goda,” *SSSR: Vnutrennie protivorechiia*, 1983 (no. 7): 5–17; idem, “Ukraine’s Demographic Losses 1927–1938,” in *Famine in Ukraine*, 27–43. See also the map based on Maksudov’s study in *Foreign Office and the Famine*, facing lxiv. Diachenko, “Strashnyi Mesiats,” 24; and Kul’chyts’kyy, “Do otsinky,” 15, give substantially identical lists of regions affected by famine.

The food shortages and their effects heightened party opposition to the Stalinist leadership. According to Boris Nicolaevsky, by 1932 spreading famine and consequent declining labor productivity led to the emergence of an “anti-Stalin majority” in the Politburo that produced the Riutin platform and other opposition programs. Party members and government officials were disaffected by the shortages and the 1932 procurement campaign. To suppress this, the regime initiated a harsh purge in the northern Caucasus and Ukraine in late 1932 and extended it to the rest of the country the following year.⁵⁰

The harvest decline also decreased the regime’s reserves of grain for export. This drop in reserves began with the drought-reduced 1931 harvest and subsequent procurements, which brought famine to the Volga region, Siberia, and other areas. Soviet leaders were forced to return procured grain to those areas in 1932. The low 1931 harvest and reallocations of grain to famine areas forced the regime to curtail grain exports from 5.2 million tons in 1931 to 1.73 million in 1932; they declined to 1.68 million in 1933. Grain exported in 1932 and 1933 could have fed many people and reduced the famine: The 354,000 tons exported during the first half of 1933, for example, could have provided nearly 2 million people with daily rations of 1 kilogram for six months. Yet these exports were less than half of the 750,000 tons exported in the first half of 1932.⁵¹ How Soviet leaders calculated the relative costs of lower exports and lower domestic food supplies remains uncertain, but available evidence indicates that further reductions or cessation of Soviet exports could have had serious consequences. Grain prices fell in world markets and turned the terms of trade against the Soviet Union in the early 1930s, its indebtedness rose and its potential ability to pay declined, causing western bankers and officials to consider seizure of Soviet property abroad and denial of future credits in case of Soviet default. Failure to export thus would have threatened the fulfillment of its industrialization plans and, according to some observers, the stability of the regime.⁵²

While the leadership did not stop exports, they did try to alleviate the famine. A 25 February 1933 Central Committee decree allotted seed loans of 320,000 tons to Ukraine and 240,000 tons to the northern Caucasus. Seed loans were also made to the Lower Volga and may have been made to other regions as well. Kul’chyts’kyy cites Ukrainian party archives showing that total aid to Ukraine by April 1933 actually exceeded 560,000 tons, including more than 80,000 tons of food. Aid to Ukraine alone was 60 percent greater than the amount exported during the same period. Total aid to famine regions was more than double exports for the first half of 1933. It

50. Boris Nicolaevsky, *Power and the Soviet Elite* (New York: Praeger, 1965), 28; Nobuo Shimoto-mai, “A Note on The Kuban Affair (1932–1933),” *Acta Slavica Iaponica* 1 (1983): 39–56.

51. On the curtailment of exports, see Michael Dohan, “The Economic Origins of Soviet Autarky 1927/28–1934,” *Slavic Review* 35 (December 1976): 625–626; V. I. Kasianenko, *Kak byla zavoievana tekhniko-ekonomicheskaiia samostoiatel’nost’ SSSR* (Moscow: Mysl’, 1964), 180. Kul’chyts’kyy, “Do ot-sinky,” 23, writes that exports ceased in the second half of 1932; the source he cites for this, *Vneshnaia Torgovlia SSSR za 1918–1940: Statisticheskii Obzor* (Moscow, 1961), 144, consists exclusively of statistical tables and provides no support for this claim. It is possible that he meant exports from Ukraine. Export statistics for 1930–1933 are in *Vneshnaia Torgovlia*, 144; R. W. Davies kindly provided me with semi-annual export totals from the monthly *Vneshnaia torgovlia Soiuzu SSR*.

52. According to the commercial counselor of the British Embassy in Moscow, writing in late 1931, “failure [by the Soviet government] to meet its obligations would certainly bring disaster in its train. Not only would further credits cease, but all future exports, all Soviet shipping entering foreign ports, all Soviet property already in foreign countries would be liable to seizure to cover sums due. Admission of insolvency would endanger the achievement of all aspirations based on the five-year plan and might indeed imperil the existence of the government itself” (PRO FO 371 15607 N7648/167/38, 6–7). German Chancellor Bruening told a British diplomat in Berlin in early 1932 that if the Soviets “did not meet their bills in some form or other, their credit would be destroyed for good and all” (PRO FO 371 16327 N456/158/38). Dohan notes that the country’s major creditors began to reduce their credit offerings to the Soviet Union in 1931–1932, despite Soviet efforts to pay, “Origins of Economic Autarky,” 630. On the western response to the famine, see Marco Carynnyk, “Blind Eye to Murder: Britain, the United States and the Ukrainian Famine of 1933,” *Famine in Ukraine*, ed. Serbyn and Krawchenko, 109–138, and the introduction to *Foreign Office and the Famine*, xvii–lxii.

appears to have been another consequence of the low 1932 harvest that more aid was not provided: After the low 1931, 1934, and 1936 harvests procured grain was transferred back to peasants at the expense of exports.⁵³

The low 1932 harvest meant that the regime did not have sufficient grain for urban and rural food supplies, seed, and exports. The authorities curtailed all of these, but ultimately rural food supplies had last priority. The harsh 1932–1933 procurements only displaced the famine from urban areas, which would have suffered a similar scale of mortality without the grain the procurements provided (though, as noted above, urban mortality rates also rose in 1933). The severity and geographical extent of the famine, the sharp decline in exports in 1932–1933, seed requirements, and the chaos in the Soviet Union in these years, all lead to the conclusion that even a complete cessation of exports would not have been enough to prevent famine.⁵⁴ This situation makes it difficult to accept the interpretation of the famine as the result of the 1932 grain procurements and as a conscious act of genocide. The harvest of 1932 essentially made a famine inevitable.

Although the low 1932 harvest may have been a mitigating circumstance, the regime was still responsible for the deprivation and suffering of the Soviet population in the early 1930s. The data presented here provide a more precise measure of the consequences of collectivization and forced industrialization than has previously been available; if anything, these data show that the effects of those policies were worse than has been assumed. They also, however, indicate that the famine was real, the result of a failure of economic policy, of the “revolution from above,” rather than of a “successful” nationality policy against Ukrainians or other ethnic groups. The data presented here should contribute to a reevaluation not only of the famine, but also of the Soviet economy in the First Five-Year Plan and afterward.

53. See *Pravda*, 25 February 1933, 1, for the seed loan decree; Kul'chyts'kyy, “Do otsinky,” 24–25 for the additional relief provided in Ukraine, and *Povolzhskaia pravda*, 21 March 1933, on seed aid to the Lower Volga territory. Both Conquest and Mace acknowledge that some measures were taken (*Harvest of Sorrow*, 262; *Investigation*, 65). Conquest (*Harvest of Sorrow*, 241) claims that this aid was not made available until later, after the famine had taken its toll, but Kul'chyts'kyy shows (“Do otsinky,” 24), citing Ukrainian archives, that the food aid was actually released by telegraphed order before the decree authorizing it was issued. For the 1931 and 1934 transference of grain, see the Central Committee decrees in *Izvestiia*, 17 February 1932, and the 26 December 1934 decree in *Spravochnik partiinogo rabotnika* 9:212, and also Moshkov, *Zernovaia problema*, 188, and Slyn'ko, *Sotsialistychna perebudova*, 293. On the crop failure of 1936, see Manning, “Government in the Soviet Countryside,” 4: the regime curbed food and fodder exports at the beginning of 1937.

54. Conquest minimizes the effect of exports on the famine, *Harvest of Sorrow*, 265.