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THE SOVIET PIG GAP

"In connection with the shortage of feed, the collective and state farms carried out in an organized manner at the end of the year a greater than usual culling out of their herds, preserving the breeding stock. As a result the number of pigs declined."

- From the 1963 economic report of the Central Statistical Administration USSR, Pravda, 24 January 1964

The magnitude of the losses was not revealed in the report, but their extent can be readily established as the number of pigs both before and after the big slaughter is known.

The Pig Line-up by Sectors, USSR  
(million head)

	<u>Total</u>	<u>Socialized Sector</u>	<u>Private Sector</u>
January 1963	70.0	53.9	16.1
January 1964	<u>40.7</u>	<u>27.6</u>	<u>13.1</u>
Losses	29.3	26.3	3.0

Narkhoz 1962, p. 303

Pravda, 24 January 1964

Thus the "organized" slaughter cut the pig population by an astonishing 40.2 percent in a year's time. The organized nature of the emergency operation meant, no doubt, that central party and agricultural authorities ordered the reduction in consequence of the feed crisis brought about by the harvest failure. It is meaningful here to compare this kill-off operation with the "unorganized" slaughter of pigs carried out

by the peasantry following collectivization: in the first three years (1930-1932) hog numbers were cut back 43 percent, or an average of 14 percent yearly.<sup>1</sup> At that time, Soviet officials considered the decimation as serious, and some western observers termed it catastrophic.

An equally striking conclusion from the table is the difference in performance of the two sectors of the industry. The socialized sector - the state and collective farms - was forced to slaughter 49 percent of its herd compared to only 18.6 percent for the private sector. Such a divergence begs an analysis. Pig production is largely a function of feed inputs, and whoever has the feed resources controls output. It must follow that the owners of the private pigs had a more dependable feed base to work with than the sovkhoz-kolkhoz sector. Pigs are fed mainly on potatoes and some grain in Russia, and the private plots furnish 60 percent of the national potato outturn, almost all used as human and animal food. In the socialized sector there is a greater dependence on grain and forage crops, rather than potatoes, for pig feed, and as the harvest set-back was concentrated in the grain regions the feed crisis was more acute. Then too, the incentive issue cannot be disregarded: private owners no doubt foraged for available feed stocks in fields, forestry, and roadways more diligently than kolkhoz workers. Another factor was the over-extension of the socialized sector - raising more pigs without regard to providing the additional feed resources - in response to the constant exhortations of party officials to discover new reserves in meat production. So when the feed base crumbled it produced a multiplier effect that cut back the pig population pyramid by 29.3 million head, a heavier loss than the Soviets had previously suffered in any year.

The Soviets have concentrated their main efforts to raise meat output in the pig sector of the livestock industry. Hogs reproduce more rapidly than other livestock, nominally require less feed inputs per unit of output, but are more susceptible to nutritional diseases and weight losses when feed imbalances occur. Pigs do best when fed concentrated grain feeds and animal origin supplements; however, the supplies of the feeds are wholly inadequate for 70 million head. Another factor is that the Russians prefer pork: 41 percent of the meat output during 1958-1962 consisted of pork and lard. As a result, during the Khrushchevian decade hog numbers increased by 110 percent since 1954, compared to 56 percent for cattle and a 39 percent rise in the number of sheep.<sup>2</sup> The development and output dynamics for this industry, which is the main source of the Soviet meat and fat supplies, are shown by ownership sectors.

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<sup>1</sup> Selkhoz, 1960, p. 263.

<sup>2</sup> Markhoz 1962, p. 302.

Pigs and Pork Output by Sectors: USSR

	<u>Jan. 1 Count</u> <u>Total</u>	<u>Pigs</u>		<u>Pork/Lard Output</u>	
		<u>Socialized</u> (million head)	<u>Private</u> (million head)	<u>Socialized</u> (million tons)	<u>Private</u> (million tons)
1954	33.3	18.2	15.1	0.8	1.9
1959	48.7	33.6	15.1	1.8	1.8
1960	53.4	39.6	13.8	1.8	1.5
1961	58.7	43.3	15.4	1.9	1.8
1962	66.7	49.4	17.3	2.1	1.9
1963	70.0	53.9	16.1	-	-
1964	40.7	27.6	13.1		

Narkhoz 1962, pp. 302-3, 309

Pravda, 24 January 1964

Selkhoz 1960, pp. 329-330

Several striking revelations stand out from the official data. The private sector has been unusually stable in pig numbers and pork output, while the socialized sector has been increasing its numbers but without showing a corresponding rise in meat products. It indicates, in part, that up to 1963, (1) attention was given to building up the breeding herd, and (2) the productivity of the socialized sector was extremely low. In fact, the contrast is almost incredible: pork/lard output was practically the same in both sectors, yet the kolkhoz-sovkhoz sector needed two to three times more pigs to produce the same yields. In descriptive barnyard terms, the capitalist pigs were two to three times more productive than the socialized hogs. This persistent performance must cause dismay and embarrassment to Gosplan and agricultural planning officials.

The phenomenon begs explanation, especially as the socialized sector has had the advantage of better barns, veterinary service, and improved breeding over the years. Even the maize crop used as pig feed is largely reserved for the socialized hogs. The pigsties of the private sector are primitive by comparison - located in sheds or alongside the family quarters. Yet their superior productivity is little short of unbelievable. Although the socialized sector had been building up its breeding herd, nonetheless the Kremlin did charge it with major responsibilities in contributing to a doubling of the meat output during the current plan. One causal clue lies in the meat output figures for 1963. If the enforced slaughtering of an additional 29.3 million pigs, along with a reduction in the number of cattle and sheep, affected a rise of only 7.4 percent in meat production, then it is obvious that animals marketed were underweight or in an emaciated state, and that there

had been heavy losses by death through starvation.<sup>3</sup> On-farm slaughtering (for domestic use) in both sectors likely increased as the feed shortages became visible during the summer.

In the private sector, however, the incentive principle and some laws of a marked economy are operative. The strong showing indicates that pigs born in the spring and early summer are fed out more efficiently and slaughtered before the January tax deadline. Feed resources are more rationally husbanded and allocated. Pigs are fed out to more normal weights, and the number fed is determined by the available feed supplies. The private owners are under no pressure of meeting a plan and consequently can adjust their output to the available inputs - altogether a rational and profitable undertaking. Nor should it be overlooked that the private sector in addition to its own output supplies several million feeder pigs to the socialized sector each year. This sale of surplus suckling pigs to state and collective farms is part of the annual adjustment of pigs to feed schedule, which, however, may not have occurred on the usual scale during 1963 because of the feed crisis. It clearly is a mark of the stability and rationality of the private sector that its pig population on the January 1 count remains so constant over a long period of time, good and bad years alike.

As the hog industry was to furnish almost one-half the meat supplies in Khrushchev's original ambitious program to overtake the USA in per capita production, a comparison of the two systems is in order. Studies in the dynamics of pig numbers and pork output during a year are based on the number of sows and gilts kept for breeding purposes at the beginning of a year. The data for the nearest comparable year are those of 1960. The meat/lard output during the year and the inventory of pigs at year's end are the relevant indicators.

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<sup>3</sup>The cattle population fell from 87.0 million head to 85.3 million during 1963; sheep declined from 139.7 million to 133.6 million head. These declines are moderate and reflect a basic biological difference between concentrated feed consuming animals, the carniferous pigs, against the roughage consuming livestock, the herbivorous cattle and sheep. The latter are better able to rough it on coarse feed in years of short harvest. The average weight of marketed hogs dropped from 102 kilograms in 1950 to 78 kilograms in 1961. Selkhoz 1960, p. 377.



Performance Comparison: Pig Industries

	<u>USSR</u>	<u>USA</u>
Breeding stock: sows/gilts, January 1960, million head	8.12	8.1
Pork/Lard Output million tons	3.5	6.45
Pig Inventory January 1961, million head	58.7	55.3

Agricultural Statistics 1961, pp. 326,360

Narkhoz 1962, pp. 238, 302

Selkhoz 1960, p. 307

Vestnik Statistiki, 7, 1963, p. 23.

It will be seen that with an identical number of breeding females, the USA produced almost twice as much pork and lard as the Soviet Union during 1960 and at year's end had approximately the same pig inventory. This decisive disparity reflects the US superiority in the quantity and quality of feed supplies, superior breeding stock, and the use of technological innovations. Conversely, it is a measure of the backwardness of the Soviet pig industry and the long road it faces to overtake the US. Had a comparison been made between the US model and the Soviet socialized sector the disparity would have been again as striking.

The emergency reduction of the Soviet pig population by 40 percent in one year comes as a double shock to the consumer as well as the national economy following the grain harvest failure and the 35 percent rise in the retail price of meats decreed in June 1962. The pig herd now is back at its 1957 level. From the second table (p. 3) we find that the average annual growth in pig numbers between 1957 and 1962 was 4.6 million head; the largest yearly increase occurred in 1961/1962 when an 8 million rise was achieved, the largest in Soviet history. It is apparent then that the task to rebuild the 29.3 million pig loss is a formidable one. On the surface, it would appear that the problem could be resolved by keeping several million more sows for breeding this year but the issue is more complex. Breeding sows require abundant and varied feed supplies. In Russia's harsh climate, elaborate maternity

barns are necessary for spring and fall farrowing. The availability of such capital shelters limits the number of farrowings. Thus feed and shelter shortages are the limiting factors to any rapid upsurge of the hog industry. Feed being the more crucial, it is well to note that all the Soviet grain imports following the 1963 harvest failure have been bread grains. In fact the Soviets must shift emphasis from food grains to feed grains (nominally 70 percent of the grain harvested in the USSR is food grain; in the USA, 30 percent) before a breakthrough can be achieved in emulating the US livestock industry.<sup>4</sup>

On the basis of past performances in rebuilding its pig/pork industry it would take the Soviets from five to ten years to recover the 1963 losses. However, since previous setbacks following collectivization and war devastations, the base of the Soviet pig industry is broader today and the vigor and dynamism of the private plot sector are at a peak. Nonetheless, despite the reassuring phrase in the CSA report that the breeding stock had been saved, it will likely take two good harvests, in close order, before the pig gap is closed. Meanwhile, the Soviet consumer will be on short rations for pork, сало, and sausages for some years to come.

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<sup>4</sup> During the war, a decision was reached by the US government to maximize the output of pork and lard. Compare the 1943 performance with the US in 1960, and the Soviet effort above, as a measure of the Soviet task.

The US Command Performance Model

January 1943	Sow and Gilts	13.3 million
1943	Pork/Lard Output	9.3 million tons (est.)
January 1944	Inventory of Pigs	83.0 million

Agricultural Statistics, USDA 1956,  
pp. 318, 351.