

~~CONFIDENTIAL~~THE SOVIET GRAIN DEFICITPrincipal Findings

Our current estimate of Soviet grain production for FY 1976 of 170 million tons falls about 58 million tons short of requirements.

The USSR has so far purchased approximately 16 million tons of foreign grain in FY 76. In addition, Moscow undoubtedly will draw down grain stocks, which we believe do not exceed 10-15 million tons and may be considerably less. These two factors, taken together narrow the difference between available supply and requirements to a minimum of 27 million tons.

The Soviets presumably will have to take a combination of unpalatable steps: (a) negotiate for further large amounts of grain from the United States -- the only large supplier in sight; (b) import additional quantities of soybeans from the United States and Brazil; (c) cut livestock feed rations to the 1972 level while maintaining livestock numbers, saving up to 13 million tons; and (d) slaughter additional livestock (a 5% reduction in herds would save about 6 million tons).

Because of the continuing high priority given to increasing meat production, the latter two options will be taken as a last resort.

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~~CONFIDENTIAL~~Production and Requirements

Soviet grain requirements this year are expected to far exceed supply. Direct grain needs are estimated to be about 196 million metric tons. In addition, due to unusually large losses this year of hay and other forage crops -- normally supplying about two-thirds of the USSR's livestock feed* -- at least 11 1/2 million more tons of grain may be required to feed livestock.** The lost forage added to the normal grain requirements brings 1975/76 total grain needs to roughly 208 million tons. (See Table)

The quantity of grain required, however, cannot be directly balanced with the estimated gross output. The USSR reports grain production on a "bunker" weight basis, that is, as the grain comes from the combine before preliminary cleaning and drying is done*** and before handling and transportation losses occur. At the same

* Important forage crops include silage (12% of total feed units in 1970, the year of most recent data), green chop (9%), potatoes and feed roots (3%), hay (10%), straw (6%), and pasture (22%).

** Since the nutritive content (or "feed-unit" value) varies by type of grain, the conversion from forage into grain equivalent depends on the type of grain available for feeding. Because corn is the most likely feed grain to be imported we have expressed the forage crop shortfall in "corn equivalent." The calculation is based on hay and silage losses only. It does not include an estimate of possible loss of pasture feed.

*** Bunker weight includes excess moisture, trash, dirt, weed seeds and grain admixtures, all of which are reduced to acceptable standards in several stages from farm to user.

-2-

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time, uses shown in the table are given on a cleaned and standardized basis. Therefore, to be comparable, gross production must be discounted to exclude waste and losses.

Although the discount varies from year to year, evidence indicates that grain production -- as measured in standard condition -- has been from 4% to 12% less than reported during 1961-70. The average exaggeration for the 10-year period has been about 8%. In addition, roughly 3% of the reported production is lost in handling and transportation.

If our current production estimate of 170 million tons is realized, and if we have correctly estimated (1) normal requirements, (2) "losses" caused by exaggerated production data and in handling, and (3) the possible grain deficit caused by forage losses, the total gap will be 58 million tons (208 million m.t. minus 150 million m.t.) as shown in the table.*

So far, during FY 76 the USSR has contracted for about 16 million tons of foreign grain. In addition,

* Another way to look at this adjustment is the following: a Soviet grain requirement of 208 million tons would be covered by a grain production, as reported by the Soviets, of 233 million tons. The resulting deficit of 63 million tons is reduced to 58 million tons when adjusted for losses. The 150 million tons of usable grain from a gross production of 170 million tons is derived by deducting 58 million tons from the total requirements of 208 million tons. Because of rounding, this total is slightly below the 151 million tons derived by deducting 11% (19 million tons) from a gross production of 170 million tons.

-3-

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USSR: Estimated Production and Requirements of Grain

Fiscal Year	Estimated Production (1)	Waste and Losses a/ (2)	Requirements				Deficit		
			Total (3)	Feed (4)	Food b/ (5)	Seed (6)		Industrial (7)	Export (8)
1975/76	170	19	208	115 c/	60	27	3	3	58 d/

a. Waste and loss rate of 11% applied to production. This includes an estimated 3% handling loss factor and an estimated 8% waste factor resulting from excess moisture and extraneous matter included in the bunker weight measurement of grain (see text). The average exaggeration for the period 1961-70 came to about 8%.

b. Our estimates of the quantity of grain required for food are based on production data for flour and groats.

c. Including an allowance of 11-1/2 million tons of corn equivalent for losses of forage crops.

d. This deficit of 58 million tons is derived by "inflating" the total requirements of 208 million tons to a total of 233 million tons, the amount of grain required to be reported in official Soviet terms (see text) -- 208 divided by .89 -- and subtracting the gross production of 170 million tons (column 1). Because of rounding, a nominal deficit of 57 million tons is obtained by subtracting the net availability of 151 million tons (gross production - column 1 - minus waste and losses - column 2) from requirement of 208 million tons (column 3).

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the Soviets undoubtedly will draw on its stocks, which we believe do not exceed 10 to 15 million tons.* This would narrow the gap between expected current supply (expected production net of losses and waste, plus current purchases of 16 million tons, plus the use of 15 million tons of stocks) and requirements to 27 million tons.

This estimate of the remaining gap between grain requirements and production is more likely to be too low than too high.

- An unofficial Soviet spokesman has admitted publicly that grain production would be "as low as in 1972," when it totalled 168 million tons. This suggests that production is expected to be no higher than 170 million tons, but could be lower.
- Our estimate of current requirements is conservative. It allows for only a moderate increase in livestock feed supplies considering the trend in livestock numbers.
- As mentioned above, we believe our allowance for drawdown of stocks to be high.

* Stocks could be substantially less. Less is known about Soviet grain stocks than any other aspect of the supply and demand situation. The quantity held in reserve is a state secret, protected by law. Estimates must be derived by balancing uses against production and imports using less-than-adequate data and requiring arbitrary assumptions for some important factors.

-5- ~~CONFIDENTIAL~~