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Directorate of
Intelligence

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USSR: Grain Crop Issues

An Intelligence Assessment

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USSR: Grain Crop Issues (U)

Key Judgments

Prolonged drought in the main spring grain area east of the Volga Valley has further eroded prospects for the 1982 Soviet grain crop. As a result, we now estimate that the grain harvest will amount to only about 165 million tons. The crop could be even smaller. Another bout of hot, dry weather could lower spring grain yields, and problems at harvest could result in additional losses, perhaps pushing the harvest below even last year's unofficially reported level of 158 million tons.

Moscow's long-range plans to become less dependent on grain imports from the West have thus been thwarted again. We expect the USSR to import as much as 50 million tons of grain in the marketing year ending 30 June 1983 at a cost of \$6-6.5 billion. The capacity of the Soviet rail system—not the availability of hard currency—will keep Moscow from importing more. As a result, the grain supply will fall some 15 million tons short of needs.

Bumper harvests and record stocks expected in key exporting countries should make it easy for the USSR to line up imports. Although the USSR is likely to buy as much as a third of its grain from the United States, the entire amount probably could be obtained from non-US suppliers, at some additional cost and risk. Soviet grain buyers have been largely out of the market for the past two months. One reason may be their expectation that grain prices will decline further. We expect Soviet purchasing to resume soon, however. US grain companies agree and add that they are counting on such purchases during the next few months to pull the US grain market out of the doldrums.

*Information available as of 27 July 1982
has been used in the preparation of this report.*

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Figure 1
Major Grain Growing Regions



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USSR: Grain Crop Issues (U)

Introduction

Prospects for the 1982 Soviet grain crop have worsened considerably during the past two months. Since late May a potential grain harvest of perhaps 220 million tons has deteriorated to about 165 million tons and could drop still further. This paper examines current crop prospects, Moscow's import options, and its buying strategy in dealing with the expected grain shortfall.

Soviet Grain Crop Prospects

A period of hot, dry wind (*sukhovey*) from 13 to 21 June markedly cut the potential yields of both winter and spring grains. The *sukhovey* moved east from the Volga Valley across the main spring wheat belt in the southern Urals, northern Kazakhstan, and West Siberia. A second period of abnormally hot, dry weather during the first two weeks in July accelerated the ripening process of the grain—mostly wheat and barley—and seriously damaged the plants during the critical flowering stage when grain kernels are forming. The combination of extremely low reserves of soil moisture, lack of precipitation, and desiccating winds almost assuredly resulted in stunted plants and smaller grain heads with fewer kernels.

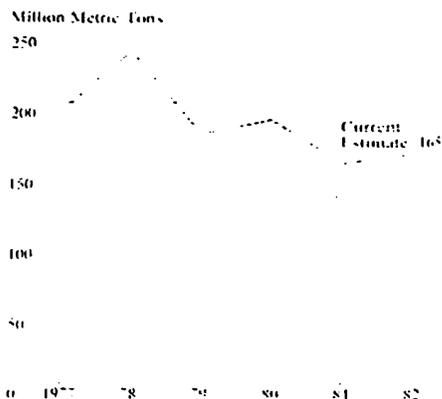
Evidence of the dry conditions: large areas of blowing dust in the southern Urals and grass fires in parts of Kazakhstan. Recent showers probably have limited the damage but came too late to permit the plants to recover.

With the exception of a few areas—Belorussia, Central Asia, and the Central Black Earth Region of the Russian Republic—almost no grain region has escaped significant crop damage this year:

- **Baltics.** Regional Soviet press accounts and weather data indicate that as much as half of the grain crop in some areas was severely damaged during the winter.
- **Moldavia and the Southern Ukraine.** Low soil moisture starting last fall led to stunted and sparse winter grain development.

Figure 2

USSR: Grain Production



- **Central and Upper Volga Regions of the Russian Republic.** A cool, wet spring that carried over into early summer ended the spring sowing campaign prematurely and generally retarded crop development. As a result the total harvested grain area will be several million hectares below normal.
- **Transcaucasus.** According to Soviet press accounts and weather data, flooding and hail caused sizable losses of winter grain and delayed corn sowing in the late spring.

Another bout of hot, dry weather in the spring grain growing areas could further erode yields. Cool, wet weather in August and September would make harvesting unusually difficult, and in some areas spring

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Table 1

Million Tons

USSR: Grain Production *

	1976-80 Average	1978	1979	1980	1981 ^b	1982 ^b
Grain production	205.0	237.4	179.2	189.1	158.0	165.0
By type						
Wheat	99.7	120.9	90.2	98.2	81.0	83.0
Coarse	95.1	103.2	81.4	80.7	68.0	73.0
Other	10.2	13.3	7.6	10.2	9.0	9.0
By republic						
RSFSR	113.9	136.5	91.8	105.1	80.0	90.0
Ukraine	43.1	50.6	34.0	38.1	36.0	39.0
Kazakhstan	27.5	27.9	34.5	27.5	24.0	18.0
Other	20.5	22.4	18.9	18.4	18.0	18.0

* Measured in bunker weight, that is, gross output from the combine, which includes excess moisture, unripe and damaged kernels, weed seeds, and other trash. For comparison with US or other country grain output, an average discount of 11 percent should be applied.
^b Preliminary forecast.

grains sown in May and early June could also be subject to early killing frosts or snows. A crop even smaller than last year's unofficially reported 158 million tons could result

A few developments might enhance prospects slightly, but the additional production would not amount to more than about 3 million tons:

- Recent rains in the European USSR should be particularly beneficial for corn in the southern Ukraine and Moldavia []
- Because the Soviets have not provided complete data on sowing, the winter grain area might be somewhat larger than we initially estimated, perhaps by as much as 1 million hectares. Winter grain yields usually are substantially higher than yields of spring grains

Grain Requirements

With a grain crop of 165 million tons, we estimate that the USSR will need about 65 million tons of grain as well as large imports of meat and vegetable oil to maintain both food supplies and the quality of the Soviet diet at current levels. Last year's grain crop was supplemented with 45 million tons of foreign grain—excluding rice—and, we believe, a substantial drawdown of domestic grain stocks. We have no information on the current level of grain stocks but believe that following three consecutive poor harvests, stocks are at minimal levels. Thus, Soviet leaders will be under great pressure to import as much grain as possible

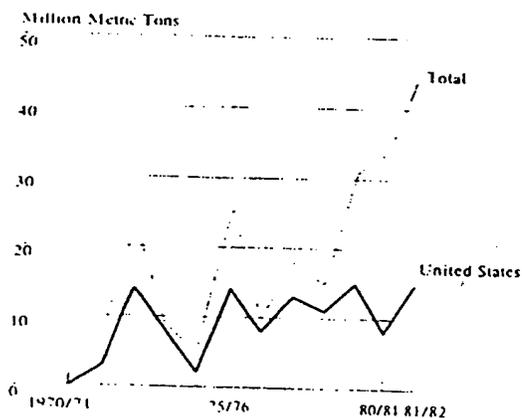
The USSR will, however, be unable to import all the grain it needs. On the basis of [] information, we calculate that the Soviet distribution system can accommodate only about 50 million tons of grain during the marketing year that ends on 30

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Figure 3

USSR: Grain Imports



Soviet Grain Purchasing Policy

Little is known in the West about Soviet decision-making on grain imports. In part this is because Moscow keeps grain import matters hidden to gain an advantage in dealing with the international market. Also, the highly centralized decisionmaking process helps to maintain secrecy and facilitates implementing policy decisions. For example, in 1972 Moscow was able to keep news of its grain buying out of the press until after the purchases were made. Soviet officials are especially secretive about the size of their own grain crop.

Who decides grain import policy and the size and timing of purchases is not known. Because grain imports are critical in meeting food requirements and are enormously expensive—currently running over \$6 billion, one-fifth of all hard currency imports—we believe the major decisions are made in the Politburo. These senior officials probably decide the magnitude of imports and leave it to the Soviet grain buying agency Eksportkhleb, headed by Viktor Pershin since 1974, to implement the policy. Eksportkhleb maintains contacts with the international grain trading companies and agricultural officials in exporting countries on the size, timing, and origin of purchases.

The timing of grain purchases is particularly difficult to predict. Because the bulk of the grain harvest occurs from late summer through early fall, Soviet officials usually cannot know their import needs with certainty until late summer. Soviet buyers—who took about 20 percent of worldwide grain imports last year—endeavor to time their purchases to avoid price runups. This year the squeeze on hard currency holdings has forced the Soviets to also consider financing when making purchases.

June 1983 (MY 1983). The failure to make up some 15 million tons of the shortfall with imports would likely result in:

- Distress slaughtering of livestock herds, especially hogs. Even so, meat production in 1982 probably will fall below last year's level of 15.2 million tons.
- Per capita availability of meat and dairy products falling about 3 percent to 49 kilograms, even with meat imports at last year's level of 1 million tons.
- Intensified food shortages and rationing—already widespread

Alternatives to US Grain

Moscow should be able to find as much grain as it is capable of importing. Grain trade sources expect the USSR will purchase substantial amounts of grain from the United States, perhaps as much as the 15.5 million tons bought last year. We think this judgment is correct. But if the Soviets decide to avoid US suppliers, they could meet nearly all of their import requirements from non-US sources. In that case, their

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Table 2

Million Tons

Potential Non-US Grain Supplies for the USSR in MY 1983

	Current Production	Total Export Supplies	Committed Exports ^a		Uncommitted Exports
			Non-USSR	USSR	
Total	332.5	82.6	40.4	17.0	25.2
Argentina	28.9	17.0	2.5	5.5	9.0
Australia	19.0	14.0	10.0	0	4.0
Canada	47.8	24.3	10.0	10.0 ^b	4.3
Eastern Europe	96.2	1.0	0	1.0	0
EC	124.6	19.0	13.0	0	6.0
South Africa	11.4	4.3	4.3	0	0
Thailand	4.6	3.0	0.6	0.5	1.9

^a The figures for non-USSR committed exports include both long-term grain agreements and likely exports to major traditional customers.

^b A minimum of 4.5 million tons is guaranteed under the current long-term agreement, and, according to grain trade sources, Canada has agreed to sell 10 million tons during this marketing year.

search for grain in this marketing year would concentrate on seven grain exporters, which account for about 40 percent of world grain trade. These sellers have an estimated export potential of roughly 83 million tons in MY 1983 (table 2). About half of this amount will be sold to non-Soviet customers if they take the same market shares as in recent years. Of the remaining 42 million tons, 17 million may already have been spoken for by Moscow. The USSR could theoretically purchase all or most of the remaining 25 million tons if it acts early in each seller's marketing year

Viewed individually, the grain export potential of US competitors varies markedly:

- **Canada** will export about 24 million tons of grain in MY 1983. Of this amount, approximately 10 million tons is committed to traditional non-Soviet customers. Of the remaining 14 million tons, Canada has agreed to sell 10 million to ~~Moscow~~ and would be able and willing to sell the remaining 4 million to the Soviets if they seek it.

- **Argentina** became a grain trade minion of the Soviet Union in the aftermath of the US partial grain embargo in January 1980. Of 17 million tons of potential exports this year, three-fourths, about 12.5 million tons, probably will go to the USSR. Of this, 5.5 million tons have already been committed. Of the remaining 4.5 million tons, only about 2.5 million are earmarked for traditional customers. This leaves about 2 million tons that could be purchased by Moscow.

- **Australia** will export roughly 14 million tons of grain in MY 1983. We believe Australian exports to the USSR could reach 4 million tons, although no commitments have yet been made. Canberra has no plans to push exports to the Soviets and is instead continuing to concentrate on traditional Middle Eastern and Asian markets.

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Soviets Expand Capacity To Import Grain

The Soviets have worked steadily during the past year to increase their grain import capacity:

- *Satellite photography shows that the number of grain berths at the major ports has been increased.*
- *Higher capacity equipment to unload grain has been installed.*

In addition, more grain is being transferred to small vessels that can be unloaded at river ports and other shallow-water harbors in the USSR.

The major Soviet ports have been operating at or near capacity in recent months:

- *Foreign shipments reportedly totaled 4.5 million tons in March, 4.8 million in April, and 5 million in May. The previous record was 4.1 million tons in September 1981.*
- *Even with such high deliveries, the time a ship spends in Soviet ports has been cut from an average of 47 days late last year to 24 days.*

The discharge capability of grain port equipment in the USSR, however, has consistently exceeded the capacity to move the grain inland, which currently is about 50 million tons annually.

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- *The EC will export about 19 million tons of grain in MY 1983, probably servicing European and African customers first with about 13 million tons. Moscow would, under normal circumstances, take about 3 million tons but could also buy the additional 3 million tons that should be available*

In addition to the grain available from major US competitors, Moscow could tap Thailand and Eastern Europe for 3.4 million tons. Thus, Moscow could capture up to 42 million tons of grain from non-US sources. Once these sources were exhausted, the USSR could probably bid away another 5 to 7 million tons of grain from traditional customers of major

exporters, albeit at premium prices, and thereby meet practically all its import needs from non-US exporters.

Risks in Relying on Non-US Suppliers

Although we believe Moscow could purchase from non-US suppliers most, and perhaps all, of the grain its ports and rail system can handle, a number of accommodations would be necessary. Even with a glutted market, an awareness among exporters and traders of Moscow's wish to avoid US purchases would force the USSR to pay a premium for its grain. In instances where the Soviets bid grain away from traditional customers, premiums could be high. During the US partial grain embargo, Moscow paid premiums for Argentine grain rather than do without imports.

If Moscow decides to seek the maximum amount of non-US grain that its logistic system can handle, it will have less flexibility in scheduling imports than it would buying US grain. Of the world's major grain exporters, only the United States has the ability to export large amounts throughout the year. The situation is different for US competitors:

- *Canadian grain shipments to all destinations taper off each year as winter closes the St. Lawrence Seaway and slows down westbound rail shipments through the Rockies. During MY 1981, only 13 percent of total Canadian grain exports to the USSR were shipped during the four months from December through March, and the figure reached only 17 percent in MY 1982.*
- *Argentina has limited storage capacity and generally moves grain out in cycle with the harvests. Wheat shipments begin with the new crop each December and are generally completed by May. Corn and sorghum are harvested beginning in March and are usually shipped by September.*
- *Port strikes by the numerous Australian unions involved in handling grain exports are a recurrent problem. Though better than Argentina's, Australia's storage capacity also limits Canberra's flexibility in scheduling exports.*

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The mix of grains is also a potential constraint on what Moscow buys. The bulk of Soviet grain import requirements is feedgrains to support the livestock program. In the past, the Soviets generally imported grain in a ratio of 60-percent coarse grains and 40-percent wheat. During the 1980 US embargo, the share of wheat increased to 46 percent. Since then the mix of coarse grains and wheat has been gradually approaching the levels that existed before the embargo. To maintain this ratio the Soviets would need US coarse grains. About the best they can expect is 19 million tons of coarse grain from non-US sources. Thus, to avoid US grain the USSR would have to substitute 7 million tons of higher priced wheat that would have to be bid away from exporters' traditional customers.

Financing Grain Imports

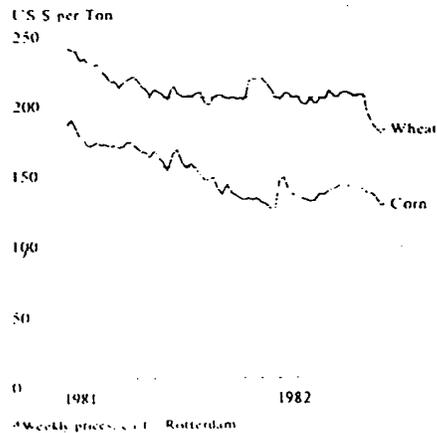
This year's grain imports will probably cost \$6-6.5 billion, nearly 20 percent of the USSR's total hard currency bill. Although Moscow's financial position has improved in recent months, it probably will continue to rely on short-term credits to help finance grain purchases. Loans obtained earlier this year are coming due, and a repayment bulge is expected in August and September. The USSR probably will not encounter many problems in obtaining the necessary credit for new grain purchases. Three major sources of credit are open to Moscow:

- International grain trading companies are able to provide financing because of their longstanding credit relations with major banks. By extending short-term credit to purchasers, a trader, using the firm's line of credit, can profit from both the sale and the credit arrangement. The companies can also help arrange direct credit between banks and grain buyers.
- Commercial banks independently will provide short-term, unsecured loans to grain-buying countries deemed creditworthy. Interest on loans is pegged to the US prime rate or the London Interbank Offered Rate (LIBOR) on most US-financed grain.
- Government financial assistance is available from some exporters to promote grain sales. Support can take a variety of forms, from providing direct credit

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Figure 4

US: Grain Export Prices*



to guaranteeing private loans. Canada and Australia both have the ability to offer government-guaranteed loans. The Canadian Wheat Board has already made \$1 billion in credit available to the Soviets for grain purchases during the year that began on 1 August.

Most Western banks still consider the USSR a good credit risk on economic grounds. Only US banks have been reluctant to lend to the Soviets, citing the current political climate as the overriding factor. Bankers will probably continue to consider the USSR a good credit risk unless the maturity structure of Soviet debt shifts sharply in favor of short-term debt, bringing into question Moscow's ability to repay its debt when due. Barring such a development, Moscow should be able to obtain the desired amount of credits for grain purchases from West European banks—although some may be reaching their lending limit to the USSR—and from Middle Eastern banks. To the extent that Moscow relies on short-term borrowing, its total grain bill will increase. For example, with an

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World Grain Supply Outlook

World grain markets during the 1983 marketing year will be marked by continued high levels of production and substantial additions to already record stocks. Among the major exporters, only the United States, with its acreage reduction program, is taking action to reduce output in the face of low prices and glutted markets. Other major exporters have announced efforts to maximize production and exports:

- The Argentine Government recently asked producers to increase the area sown to wheat by 25 percent. Despite the absence of government incentives to encourage participation, planted area for the current crop rose about 27 percent to 8 million hectares. The producers' tight financial situation and the resulting need for cash stimulated the acreage increase. Most of the increased wheat acreage came at the expense of pasture, so the area of coarse grains to be planted in October also may increase.*
- Canadian farmers have increased wheat acreage by about 3 percent. Because last year's yields were exceptionally high, however, production may not increase. Coarse grain production may decline slightly as relative prices encourage the planting of rapeseed instead of corn and barley.*
- Australian producers planted a record wheat area this year but drought will cut yields. This year's crop—which will be harvested beginning in December—may be only about 13 million tons (compared with the previous crop of 16.4 million tons), but the outcome will depend on rainfall in the next two months. Total grain production is expected to reach 19 million tons. Because last year's crop permitted some additions to stocks, this year's exports are unlikely to decline.*

- EC wheat production may set a new record as high intervention prices have encouraged a 2-percent increase in acreage and the adoption of higher yielding varieties.*

At year's end, stocks worldwide will probably be at record levels despite a 25-million-ton increase in grain consumption in MY 1983. On the basis of data from the US Department of Agriculture, we expect wheat inventories to be approximately 11 percent higher than in MY 1982, while coarse grain stocks may grow by about 8 percent. Most of the additions to stocks will be in the United States as part of the farmer-owned grain reserve.

The potential for a bumper world harvest will continue to exert a strong bearish influence on prices, prolonging the buyer's market for grain. Export prices recently reached three-year lows—about equal to prices received in the mid-1970s—but have not significantly boosted import demand because of global recession. Sales to the USSR could stimulate an otherwise glutted and moribund world market.

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annual interest rate of roughly 16.5 percent currently charged the USSR for short-term grain credits, financing for 1 million tons of grain would add about \$20 million to the total cost

Purchasing Activity

The director of the Soviet grain buying agency, *Eksporthleb*, in early July told [] that grain purchasing activity has been especially slack. Since May the USSR reportedly has bought only about 6 million tons of grain—all from Canada and Argentina. Unless orders pick up soon, imports in August and September will be under 3 million tons a month—less than three-fourths of the monthly average needed to import 50 million tons for the year.

Several factors may be contributing to the purchasing lull:

- The sudden downturn in crop prospects in the last six weeks may well have taken Moscow by surprise. The Soviet grain buying agency may have seen no reason until recently to request additional buying authority. (If this is so, increased buying activity should be evident soon.)
- Moscow may be delaying purchases in the hope of getting better terms. The outlook for bumper harvests in most major grain producing countries has brought lower prices, which may be encouraging *Eksporthleb* to delay purchases. The Soviets may also be hoping that interest rates on grain-associated borrowing will fall soon.
- Soviet planners may have been ordered to change foreign trade priorities in favor of buying more grain, but have not yet managed to reallocate available hard currency. Nonagricultural imports are already under tight control, so further cuts would be difficult.

- Political considerations may also be affecting Soviet grain buying strategy. Moscow is well aware of the debate in the United States over the US-USSR long-term grain agreement. Many traders believe that Moscow's waiting game is an effort to signal Washington its displeasure over US economic sanctions. Moreover, Soviet leaders may judge that the Soviet Union's absence from the market is creating uncertainty over US export prospects—uncertainty they hope will be translated into stepped-up domestic pressures in the United States to normalize Soviet-US trade relations.

On a more speculative note, the weakening of Brezhnev's political position in the last several months may have furthered debate within the Politburo over the USSR's increasing reliance on foreign grain. Conceivably, some in the leadership may be more willing to question the wisdom of this approach than they were and may believe that less emphasis should be placed on developing meat as a major element in the Soviet diet.

Whatever the reasons for the buying lull, the risks to the Soviets of waiting much longer are mounting. Delaying purchases is compressing delivery schedules, threatening port congestion, and limiting the amount of grain that can be imported. Moreover, the longer the Soviets defer purchases of Western grain, the greater the risk that they will overload internal transport facilities during late summer and early fall when domestic crops must be moved to storage. On balance, we judge that the Soviet leadership will decide to continue to support the Brezhnev livestock program to the hilt and thus resume grain purchasing soon. US grain companies agree and add that they are counting on Soviet purchases during the next few months to pull the US grain market out of the doldrums.

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