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An Economic Appraisal

by

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Occasional Paper No. 4

Department of Political Science
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Despite more than 50 years of Soviet power, agriculture continues to be the weakest sector of the economy of the U.S.S.R. It has persistently failed to meet the growth rates planned for it. In the Seven Year Plan ended 1965, for instance, only one fifth of the expected increase in gross agricultural output was actually realised.¹ Industrial plans, by comparison, have often been fulfilled and since the Great Patriotic War (1941-45) Soviet industry has grown at three to four times the annual rate of agriculture and has attained a labour productivity that is at least twice as high. Notwithstanding its lagging performance, agriculture is still a very important part of the total Soviet economy -- although its relative position is diminishing as the industrial sector expands. Agriculture employs over one-third of the work-force (32 million including private plot workers), provides about one-fifth of the national income and accounts for some 15% of all export earnings.² Its share in total investments in the economy is more than 20%. from industrial sector D

Part of the secular problem of agriculture lies in the severe Russian climate with its very long winters, short summers and, especially in the eastern provinces, high incidence of droughts; in half the country the growing season for crops is 100 days or less and the stall-feed period for livestock exceeds 6 months. Under these conditions planning is uncertain especially if the targets assume, as they inevitably have, good weather. Another reason for failure has been the reluctance of the leadership, in particular before 1953, but also between 1959 and 1964, to provide the necessary volume of capital inputs for agriculture and an effective level of financial incentives for the peasants. This O

* I am indebted to Professor H.W. Arndt, Dr. T.H. Rigby and Dr. G. Hodnett, of the Australian National University, to Dr. S.F. Harris, Director of the Bureau of Agricultural Economics, Canberra and to Mr. J. Wilczynski of the Royal Military College, Duntroon, for their helpful comments. The responsibility for the final version of this paper remains, of course, my own. Thanks are also due to Mr. V.D. Ogareff, Australian National University, for his valuable assistance with Russian language translations.

policy reflected the low priority accorded to agriculture in the allocation of resources, notably under Stalin, but later under Khrushchev after he had defeated the "Anti-Party Group" in 1957 and then taken over the Premiership from Bulganin in 1958.

Under Khrushchev there were many unwise policy decisions which involved the misuse of resources and over-centralised directives. Grain cultivation, for example, was expanded dramatically -- but into climatically marginal areas and at the expense of the need for higher yields. He practised an overbearing and detailed scrutiny from Moscow over an industry which, by its varied nature and large number of production units, lends itself least of all to centralisation but whose inherent weakness invited domination from a strong leader who specifically identified himself with the success of agriculture. The political attractions in such a role for Khrushchev are not so surprising when it is realised that even today 106 million Russians, or 45% of the population, are classified as rural.³ Thus agricultural policy must always be a basic issue in Soviet politics. Under Khrushchev however it became a pre-occupation to a fault and was probably a major factor in his downfall.

There was a pronounced slowing down in agriculture under Khrushchev's leadership after 1958; this was the cumulative effect of his personalised and grandiose land policies combined with inadequate attention to capital outlays and financial incentives. A crisis situation arose following on the severe drought of 1963.⁴ In Khrushchev's last year in office bread and flour rationing was introduced in the main urban centres and wheat stocks were so low that the unprecedented step was taken (and how humiliating it must have been for the world's largest wheat producer) of ordering over 11 million tons of wheat from the West;⁵ and then there was a cutback in meat and egg supplies.⁶ Eventually, imports of wheat and flour from the West reached the staggering total of 26 million tons worth over \$1,578 million. It is noteworthy that after Khrushchev's ouster, in October 1964, it was reported that one of the primary charges laid against his domestic policy was that of provoking a crisis in Soviet agriculture.⁷

The new leadership very quickly introduced, in March 1965, an important new program for agricultural development which, at that time, seemed to present a realistic assessment of the problems to be faced.⁸ It contained economic reforms aimed at providing a dramatic increase in the volume of capital investment, much higher

procurement prices and stable compulsory delivery quotas for the next five years. It also promised to reduce the degree of State interference in the direct management of agricultural affairs -- an oblique reference to Khrushchev's activities in that direction.

Four years have passed since the new development program for agriculture was announced by Brezhnev. It is the purpose of this paper to assess the economic progress that has been made since 1965 in relation to the previous performance of agriculture under Khrushchev. The Khrushchevian agricultural period comprised two distinct phases, the one relatively successful and the other unsuccessful, and as these are to be taken as the measuring rods for the Brezhnev-Kosygin period it is necessary to know more about them.

1. Khrushchev Phase I (1953-58)

The agricultural situation inherited from Stalin in 1953 was critical. Little progress had been made since the Revolution apart from the years of the New Economic Policy (1921-28) when the market system was restored, compulsory requisitions ended and the redistribution of land suspended. After 1928, collectivisation, the invasion by Germany and Stalin's short-sighted policy of low procurement prices and high taxes all combined to produce an economic situation in agriculture that was little better than that under the Tsars. Between 1928 and 1953 the annual rate of growth in agricultural output was considerably less than 1%.⁹ Most significantly, the grain harvest in 1950, a rather favourable year, was 4.8 million tons less than in 1913 for a population which was greater by over 19 million; moreover, the country was producing slightly less meat, eggs and wool than before the Revolution.¹⁰ The livestock position was particularly bad and it was not until 1958 that pre-collectivisation cattle numbers were regained; in 1953 for example there were 10.2 million fewer cattle than in 1928.¹¹ Throughout the Stalin era the U.S.S.R. pursued a conscious policy of autarky wherever possible and any shortfalls in agricultural production had to be accommodated by the Soviet consumer through a process of belt-tightening. Thus the 1932 season was one of near-famine because of the failure of the cereal harvest and although some wheat was imported (including small quantities from Australia),¹² the amounts were not very significant. Even before collectivisation, in 1926-27, the Soviet urban population had already experienced a 15% cut in per capita grain availability compared with 1909-13.¹³

The private plots of the kolkhozniki (collective farmers) under Stalin were subject to high compulsory delivery quotas at the low prices applicable to collective farm deliveries -- irrespective of whether the peasant produced the commodity or not; moreover a sliding scale agricultural tax, ranging up to 48%, was applied to the notional income derived from the plot.¹⁴ These measures were designed to make private farming relatively less profitable and they certainly led to a net fall in production and to a rapid reduction in private livestock numbers. Nevertheless, in 1950 Soviet agriculture still depended on the private sector to provide 67% of its meat supplies, 75% of its milk production, 73% of the potato crop and 89% of all eggs produced.

When Stalin died in March 1953 Soviet agriculture was in a very weak position. In September 1953 a plenary meeting of the Central Committee of the C.P.S.U. outlined a number of important measures designed to increase farm production.¹⁵ The most important decision was to raise government procurement prices substantially; the price of meat delivered compulsorily to the Government was raised as much as five and a half fold -- a direct commentary on the conditions which existed on collective farms under Stalin. The situation in state farms was so bad that they had been receiving large subsidies for many years; in 1953 their total subsidy amounted to 4.6 milliard roubles or 48% of the cost of produce delivered by them to the State.¹⁶ The 1953 measures were designed to reduce this high level of dependency. In the private sector of agriculture the compulsory delivery quotas were reduced appreciably and the agricultural tax was halved. The quantity of agricultural machinery delivered to farms was also to be increased rapidly, the powers of the M.T.S. (Machine Tractor Stations) were enhanced and there was a degree of decentralisation, so that daily agricultural management was placed in the hands of local party cadres.

These measures were master-minded by Khrushchev who from this time onwards identified himself increasingly with the success (or failure) of agriculture.¹⁷ During Stalin's last years it was Malenkov who held principal Politburo responsibility for agriculture; but Khrushchev's exposure of the mismanagement and inefficiencies in agriculture in January 1954 caused serious loss of face to Malenkov.¹⁸ It was not by accident, of course, that Khrushchev sought at an early date to dominate the weakest sector of the economy; in some ways this was precisely the area that was most susceptible to Party control and interference and yet it was the most difficult to handle because of its great size and varied nature. First of all he criticized the detailed planning of

farming by the Moscow ministries and suggested that 50,000 Party members should be sent from the cities to work in the country.¹⁹ But the real test came in 1954 when he pushed through the Virgin Lands scheme against strong opposition in the Presidium and later, in 1955, was responsible for introducing the maize planting program; both these interlinked land schemes involved concomitant increases in investment in agriculture. Between 1954 and 1958 over 93 million acres of virgin and fallow lands were ploughed up, primarily for spring wheat cultivation, in Kazakhstan and Siberia; the eventual investment has been put at about one-third of all State investments in agriculture at that time and the influx of workers at 200,000.²⁰ The area sown to maize, both for grain and for silage and green fodder, over the same period rose by 38.5 million acres -- mainly in the Ukraine, Moldavia and the Kuban in areas freed from winter wheat cultivation by the Virgin Lands scheme.²¹ Following on this, in 1957, Khrushchev launched an ambitious program (which failed) to catch up with American meat production by 1961; maize fodder was an integral part of the plan.²²

These huge land schemes had an initial burst of success and accompanying political rewards for Khrushchev. The Virgin Lands in particular, despite real yields of less than 10 bushels per acre, produced on average an additional 21 million tons of wheat a year between 1956 and 1958 compared with 1953-55. But Khrushchev had set a target of over 30 million tons more wheat annually and in this sense the scheme was a failure. It seems likely that the opportunity costs of the Virgin Lands investment were very high in relation to the responses that could have been obtained from a similar volume of outlays in the established winter wheat belt with its more reliable rainfall and its marked reaction to fertilizer application.²³ The maize crop also grew rapidly from under 4 million tons in 1954 to over 162 million tons in 1958; but most of this increase was in maize for silage and green fodder which has a dry matter content as low as 15%, and only about 10 million tons of fully ripe grain was harvested in 1958.²⁴

Overall, the average yearly growth rate in agriculture for 1953-58, at 8.3%, was over three times as great as that for the preceding six years. The faster rate of progress in Soviet agriculture in these years, compared with the Khrushchev Phase II period after 1958, is shown in the accompanying graph, and in more detail in Table I. (In the graph the provisional figure for gross agricultural output in 1968 is 205).

Between 1953 and 1958 grain production increased by over 70% (three-fifths of which was wheat), sugar beet output more than doubled, milk supplies expanded by 60% and meat production rose by one third; in the previous five years, on the other hand, the production of these commodities had grown so slowly that there were periodic interruptions in supplying them to the urban population.²⁵ Average annual output of grain and meat in 1953-58 compared with 1947-52 was respectively 39% and 68% better; most other products recorded gains of 40% or even more.

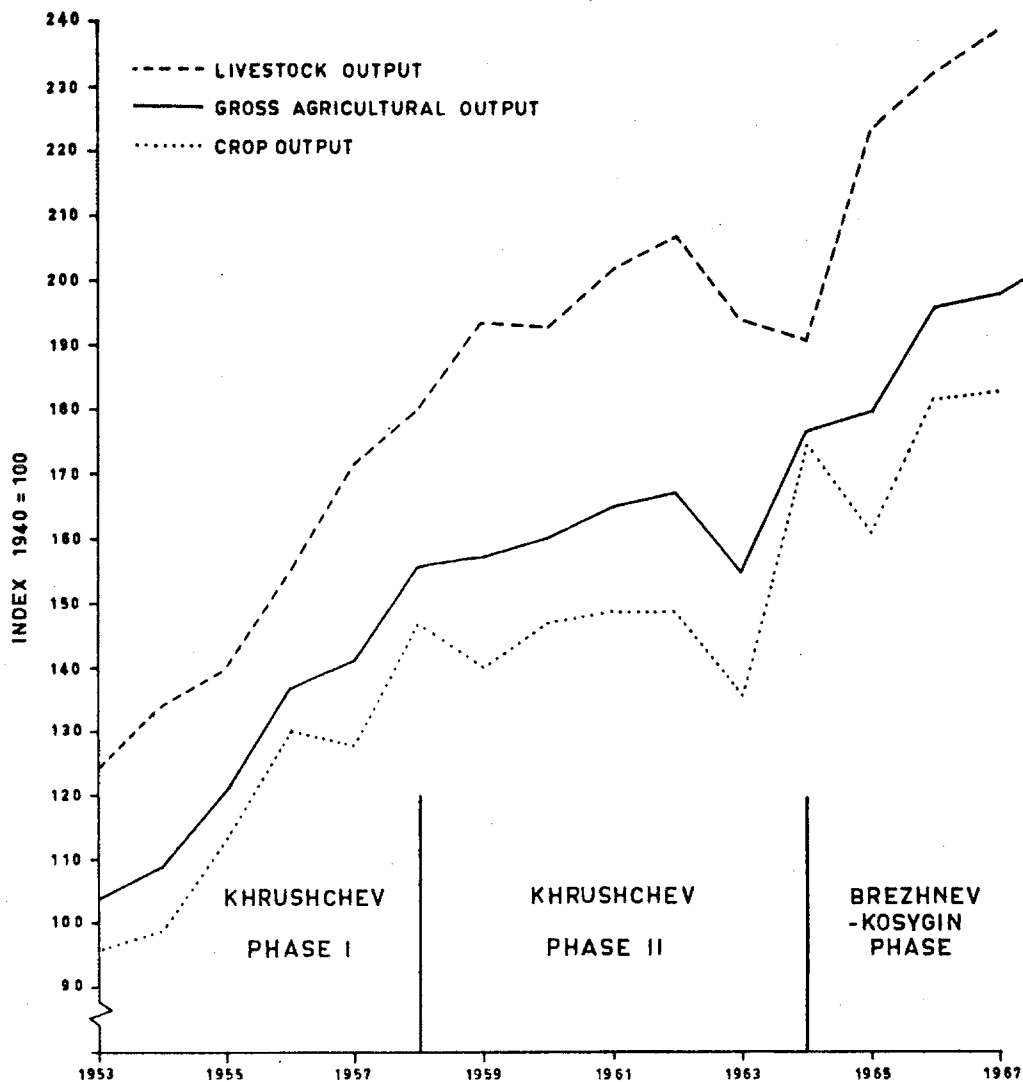
Total productive investments (excludes expenses for establishment of herds and for capital repair) in agriculture in Phase I more than doubled from 1,910 million roubles in 1953 to over 4,740 million roubles in 1958; the cumulative total for Phase I was 21,444 million roubles with the State's share being a little over half. In these years agriculture accounted for almost one-fifth of all Soviet capital investment activity compared with earlier shares of around one-eighth. As a result, inputs of fertilizer increased by almost three-fifths, tractor deliveries more than doubled and the sown area rose by a quarter. (See Table II). In the collective farm sector, the money incomes of the kolkhozniki increased by 166% because of a near doubling in state procurement prices; and collective farm investments reached almost 2,500 million roubles in 1958 compared with only 1,029 million in 1953. Output per man day increased by a third.²⁶

In general then, the years 1953-58 were marked by a re-orientation of priorities in favour of agriculture. The end result was a fairly rapid rate of growth compared with the previous six years but with a high degree of dependence upon the continuing success of the Virgin Lands scheme and, to a lesser extent, of the maize program -- both of which were demanding huge amounts of capital investment and other outlays. There was thus a concentration of efforts and resources in this period on relatively limited agricultural areas.

2. Khrushchev Phase II (1959-64)

After 1958 the pace of agricultural development slowed down considerably (see graph). The average yearly growth rate in gross agricultural output fell dramatically to 2.1% or to little better than one quarter of the pace attained in Phase I. The situation was particularly bad in the grains sector with a succession of mediocre harvests, and an accompanying run-down in carryover stocks, being followed by the 1963 drought which produced the worst wheat harvest since 1955. The 1963 crop was 27 million

USSR: RATE OF GROWTH IN GROSS AGRICULTURAL
OUTPUT 1953-1967



Sources: Narodnoe Khozaistvo SSSR v 1965 g., p.259;
Narodnoe Khozaistvo SSSR v 1967 g., p.328

TABLE I: RELATIVE OUTPUT OF SOVIET AGRICULTURE 1928-32, 1947-52,
1953-58 AND 1959-64^(a)

Commodity	Average Annual Output (Million tons)				% Increase	
	(i)	(ii)	(iii)	(iv)		
	1928-32	1947-52	1953-58	1959-64	(ii-i)	(iii-iv)
All Grains	73.6	75.9	105.7	129.3 ^(c)	39.3	22.3
- Wheat	21.7	34.5 ^(b)	55.5	65.8	60.9	18.6
- spring	n.a.	n.a.	33.7	40.5	--	20.2
- winter	n.a.	n.a.	21.8	25.3	--	16.1
- Maize (fully ripe)	neg.	5.3 ^(b)	7.3	12.2	37.7	67.1
- Rye	n.a.	17.1 ^(b)	15.2	15.4	-11.1	1.3
- Barley	n.a.	7.1 ^(b)	10.1	17.9	42.3	77.2
- Oats	n.a.	11.6 ^(b)	12.0	8.3	3.5	-30.8
- Millet and Buckwheat	n.a.	3.0 ^(b)	3.9	3.3	30.0	-15.4
Sugar Beet	9.8	18.2	33.4	54.2 ^(d)	83.5	62.3
Sunflower Seed	1.8	1.8	3.3	4.5	83.3	36.4
Cotton	1.0	2.9	4.1	4.7 ^(e)	41.4	14.6
Potatoes	45.9	79.3	81.6	81.7 ^(f)	2.9	0.1
Vegetables	n.a.	11.1	13.6	16.4 ^(h)	22.5	20.6
Maize for Silage & Green Fodder	neg.	small	54.1	197.2	--	264.5
All Meat	4.3	4.0	6.7	9.1 ⁽ⁱ⁾	67.5	35.8
- Beef and Veal	n.a.	1.9	2.3	3.3	21.1	43.5
- Pigmeat	1.1	1.2	2.8	3.6	133.3	28.6
- Mutton and Goat	n.a.	0.6	0.8	1.1	33.3	37.5
- Poultry	n.a.	0.25	0.5	0.8	100.0	60.0
Milk	26.3	34.3	46.7	62.4 ^(j)	36.2	33.6
Butter ('000 tons)	n.a. ^(g)	448.3	630.2	839.8	40.6	41.8
Eggs (Milliard)	8.0	10.0	19.4	27.9 ^(k)	94.0	43.8
Wool ('000 tons)	135.0	170.8	265.5	360.7 ^(l)	55.4	35.9

(a) Sources: Narodnoe Khozyaistvo SSSR for 1965, 1964, 1963, 1960, 1958 and Sel'skoe Khozyaistvo SSSR, 1960.

(g) factory production was 71.2 compared with 318.8 for 1947-52.

(b) data for 1949-53

(h) 1965 Plan 30-31

(c) 1965 Plan 164-180

(i) 1965 Plan 16.0

(d) 1965 Plan 76-84

(j) 1965 Plan 100-105

(e) 1965 Plan 5.7 - 6.1

(k) 1965 Plan 37.0

(f) 1965 Plan 147

(l) 1965 Plan 550

tons below the 1958 record and average yields in the virgin lands of Western Siberia fell to 5 bushels an acre for an area of 22.5 million acres.²⁷ (In general, average spring wheat yields had been falling steadily since 1958 from about 14 to less than 9 bushels per acre). The livestock sector had also slowed down significantly and meat output showed no substantial increase until 1963 when there was a rise due to drought induced slaughtering because of the critical absence of fodder. Milk supplies did not increase and although egg production grew through to 1962, it fell thereafter. Table I shows that the average annual output of most products in Phase II increased relatively slowly compared with Phase I performance.

Thus the second Khrushchevian phase in agriculture was marked by virtual stagnation. A major cause was undoubtedly Khrushchev's decision (although it is not certain it was his decision alone) to cut back the proportion of state agricultural investments to total investments in the Seven Year Plan by more than one-third compared with the previous five years.²⁸ It seems likely that this was done in the light of the undoubted successes in agriculture in Phase I (particularly in 1958) and also to balance the demands being made from the defence, space and consumer goods sectors. Total productive investment in agriculture in Phase II only rose by 62% whereas in Phase I the increase was 148% -- and yet Khrushchev had set agriculture the difficult task in the Seven Year Plan of sustaining an annual growth rate of 10%. In absolute terms, the investment situation in Soviet agriculture in this period can be highlighted by citing the 258 million rouble decrease between 1958 and 1959 in the state investment sector and the 329 million rouble fall between 1959 and 1960 in the collective farm sector.²⁹ The sensitive indicator of collective farm investment increased by only 12% in Phase II (compared with 139% for Phase I) in keeping with the small growth in collective farm income of only 31%; this trend can be directly related to a slowing down in incentives (State procurement prices) which had increased only slightly over the 1958 level whereas in Phase I they had almost doubled.³⁰ Some procurement prices (e.g., for grain) were actually reduced.

Other capital outlays were restricted relative to Phase I performance (see Table II). Fertilizer production lagged badly and the actual increase attained in the five years to 1963 was only 7 million tons or less than 30% of the planned increase for the Seven Year Plan. After the failure of the 1963 wheat harvest Khrushchev emphasized the need for a rapid increase in fertilizer output and its application for obtaining more grain.³¹ By 1964,

27% of all fertilizer output was scheduled for allotment to the grain lands -- double the amount so used in 1963. But although this move on Khrushchev's part was quite realistic, it was too late to save his agricultural reputation.

Deliveries of farm machinery also slowed down considerably. In Phase II tractor and grain combine deliveries to agriculture rose by 53% and 48% respectively; in Phase I the increases had been 107% and 58%. Some absolute falls were recorded and between 1957 and 1959 grain combine deliveries actually fell by over 80,000 units. Trucks delivered for agricultural purposes also slumped markedly so that by 1964 they were about two thirds of their relatively high 1958 level. Another input, land, was levelled off with the fulfillment of the Virgin Lands ploughing program; the total sown area in Phase II increased by 8% or 41 million acres compared with 24% or 95 million acres in Phase I. In the absence of new acreage inputs, and with a falling trend in average yields, wheat harvests also fell. This result was not surprising in view of the vast expansion that had taken place since 1953 into climatically marginal areas, especially in Kazakhstan, where fallowing practices were deliberately ignored.

After the record cereal harvest of 1958 and a satisfactory performance from the livestock sector in that year, it seems probable that Khrushchev considered agriculture could continue to do well in the Seven Year Plan even if the rate of increase in capital investments and other outlays was tapered off. The sixth Five Year Plan, which had been in trouble almost since its inception, was abandoned late in 1957 when it became obvious that many of the unrealistic targets set for 1960 would not be reached, despite large capital investments; in formulating the Seven Year Plan in 1958, Khrushchev may have been influenced by this to adopt a more restrictive attitude to agriculture in terms of allocating scarce resources. Certainly, the attitude he took in the late 1950's was more concerned with reorganizing rural administration and intervening personally in agriculture than with providing economic incentives for the peasants. Thus between September 1953 and November 1962, Khrushchev introduced no fewer than five separate reconstructions of rural administration;³² in March 1962 for instance the administration of farms at the lowest territorial level was altered to increase the amount of outside control over farm production -- and in the exercise of this control it was the Party officials who were meant to predominate.³³ This was followed in November 1962 by an announcement at a plenary meeting of the Central Committee that the Party apparatus was to be split in two at the regional level with one half supervising agriculture and the other industry.

TABLE II
SOVIET AGRICULTURE 1953-1964, TRENDS IN INPUTS AND INCENTIVES (a)

INPUT OR INCENTIVE	<u>1953 = 100</u>		<u>1959 = 100</u>			
	1958	1960	1961	1962	1963	1964
Land (Sown Area)	124	103	104	110	111	108
Fertilizer (Chemical)	159	102	105	120	139	196
Machinery (Deliveries)						
- Tractors	207	109	128	142	165	153
- Grain Combines	158	107	132	140	150	148
- Trucks (farm use)	148	87	91	108	89	83
Productive Investment (b)						
- State farms	259	121	149	167	192	237
- Collective farms	239	90	90	96	101	112
Procurement Prices (c)	192	100	102	111	115 (d)	n.a. (e)
Money Income of Collective farms	266	97	99	111	116	131
Output per Man-day	135	107	111	113	109	128
Employment in Man-days	112	96	96	94	91	n.a.

(a) Derived from H. Walters and R. Judy, Soviet Agricultural Output by 1970, University of California, August 1965, p.21, and Narodnoe Khozyaistvo SSSR v 1965 godu.

(b) Annual additions to plant, equipment and buildings.

(c) Prices paid by the State for compulsory purchases of produce from the farm sector.

(d) Estimated

(e) The 1965 price increases were only about 25% above 1959 levels overall.

Less local initiative and reassertion of firm direction from above was the result.

Even the decision in 1958 to sell machinery, formerly owned by the Machine Tractor Stations, to the collective farms placed a consequential burden on the rural sector. The collectives were directed to increase the proportion of farm income for the capital investment fund from 15-20% to 25-30%; this statutory increase in the proportion of income to be devoted to non-distributable assets strengthened the State's control of the collectives' financial activities and so took away from them some measure of their former independence.³⁴ The working capital resources of many collectives were strained by the enforced takeover of MTS equipment; and higher operating costs were incurred through the compulsory transfer burdens of MTS personnel. Moreover, the collectives were still faced with heavy charges for repairs and replacements from the new Repair and Servicing Stations which charged high mark-ups on spares. In some areas the liquidation of the MTS actually reduced the amount of machinery available to the collectives because of the priority diversion of equipment to State wheat farms in the Virgin Lands.

Important decisions were taken by Khrushchev which led to a slowing down in the private sector in Phase II. Between 1953 and 1958 this sector had revived following the relaxation of Stalin's policies of heavy taxation and high compulsory delivery quotas (the latter were abolished altogether on 1 January 1958). But as early as March 1956 there was a warning sign in a decree which limited livestock ownership and gave kolkhozy (collective farms) the right to diminish the private holdings of members who did not work as required for the kolkhoz.³⁵ A move to "encourage" kolkhozniki to sell privately owned cows to the collective farms began in 1957 and widespread reports came early in 1958 that some local officials were forcing the wholesale transfer of private cows to the collective sector; then in December 1958, at a C.C. Plenum, Khrushchev announced measures to limit livestock ownership in urban areas and to compulsorily dispose of cows owned by sovkhozniki (state farm workers).³⁶ By 1959-60 pressure to reduce private plots and to sell livestock to the kolkhoz gradually began to be effective; so that in 1961 private livestock numbers had fallen by almost 5.8 million (20%) despite frequent reports of illegal holdings above the prescribed level.³⁷ By 1964 the situation was such that private sector meat output had decreased by 17% (0.7 million tons) compared with 1958 whereas production of milk and eggs had declined by 11% (3.3 million tons) and 7% (1.5 milliard units) respectively.³⁸

Ideologically, the private plots were seen by Khrushchev only as a temporary expedient which had been forced onto the Soviet

system as a result of peasant resistance to collectivization in 1930-32. In January 1951 he had already announced his interest in drastically reducing the area of private plots, largely on ideological grounds.³⁹ By the late 1950's, however, the problem was much more immediate because the greater freedom allowed to the private sector was causing a crisis in the organization of kolkhoz farm labor on a regular and full time basis.

All these factors taken together combined to slow down the rate of agricultural growth to a snail's pace compared with Phase I. The collective sector in particular suffered from high cost burdens and a lack of incentive to produce. Brezhnev pointed out in 1965 that "In a number of zones, the price for the purchased grain does not cover the cost of its production. These practices are detrimental to the State, undermine the economy of the collective and state farms, and provide no incentive to the farmers".⁴⁰ In addition to the generally unsettling effect of such conditions on the rural sector was the fact that in mid-1962 Khrushchev had been forced to increase the urban retail price of meat by 30% and of butter by 25% in order to raise additional investment monies for the State. Moreover a situation arose in 1964 whereby livestock output was only 6% above the 1958 level for a population which had increased by 10% alone. The total effect of all this on the Soviet population and on the Party can be readily appreciated, especially in view of Khrushchev's continuing pronouncements about so-called successes in agriculture.

3. Brezhnev and Kosygin (1965-68)

Within five months of coming into power, the new leadership announced a radical economic program for agricultural development. On 24 March 1965 L.I. Brezhnev addressed a plenary meeting of the C.C. of the C.P.S.U. in a speech entitled "Urgent Measures for the Further Development of Soviet Agriculture".⁴¹ In that speech he outlined a number of important reforms concerning state procurement prices, compulsory delivery quotas and several more general incentives for agriculture. Some of these measures were put into effect immediately whereas others were incorporated in the eighth Five Year Economic Development Plan (1966-70), which was approved by the Supreme Soviet in December 1965.⁴² This Plan contains targets for the agricultural sector which are considerably milder than those set in previous planning periods. It calls for a stable growth rate, higher yields and improved quality of production; for the first time in agriculture, no extravagant demands are made.

(a) The 1965 Measures:

The main feature of Brezhnev's speech was its moderation (apart from the scarcely veiled attacks on Khrushchev) and its detailed approach with a significant lack of unrealistic promises for the future. In effect, Brezhnev admitted the seriousness of the agricultural situation then prevailing and said that it would be some time before any lasting improvement could be achieved. An awareness of the stagnation in Soviet agriculture was displayed and the speech addressed itself to the stagnation problem at several levels. One line of approach was to remove financial disincentives and to reduce the degree of State interference in the direct management of agricultural affairs. At another level he tackled the issue frontally by increasing planned investments in agriculture on a scale unprecedented in the Soviet era.

Essentially, the 1965 measures promised a more realistic program to cure the deep-seated problems in Soviet agriculture than any steps taken previously by a Soviet Government. Several Western commentators assessed the program favourably and suggested that the restrained nature of the goals envisaged and the volume of inputs and types of incentives introduced could well raise the level of agricultural output substantially, if they were followed through.⁴³ The new régime appeared willing to pay the price necessary for success and this was not surprising in view of the seriousness of the situation it had inherited. In many respects the policies announced in 1965 were quite similar to those that most Western observers had suggested would be necessary if Soviet agriculture was to overcome its basic difficulties.

What exactly were these radical new measures then? Firstly, the unstable and excessive state procurement quotas for farm produce were changed by fixing, for five years, permanent procurement figures at about the same level as in 1958. For grains, this meant a 15% reduction in compulsory deliveries over previously planned commitments.⁴⁴ Secondly, the prices to be paid for such compulsory deliveries of basic food grains (and some feed grains as well) were increased substantially; for wheat deliveries from kolkhozy, for example, the price rise was about 12% as a minimum and up to 50% in some (climatically difficult) regions. Most importantly, a 50% premium was introduced for deliveries of wheat and rye above planned procurements (i.e. after the farm plan has been fulfilled). Procurement prices for livestock products were also raised because "...livestock production on many collective and state farms is unprofitable."⁴⁵ Beef prices, for instance, were raised between 22% and 55% according to the type of farm

(state or collective) and its location in the U.S.S.R. (higher prices for marginal regions). For livestock products as a whole, as for grains, the increased price levels seem to cover the cost of production for the average farm, except in very high cost areas (such as the Far East).⁴⁶

These pricing reforms appear to correct some of the more obvious disparities in the farm price structure, although, of course, not all commodities benefited. The new Government has perhaps grasped the requirement Khrushchev failed to grasp -- that there must be a degree of positive correlation between the produce for which profitable prices are paid and the level of output of those commodities.⁴⁷

Capital investment in agriculture is planned to be a huge 71,000 million roubles during 1966-70.⁴⁸ This compares with actual productive investments in the Seven Year Plan (S.Y.P.) of 46,402 million roubles and with investments in agriculture in the fifteen years 1951-65 of 71,640 million roubles. The State will contribute 58% of total farm investment and the collective sector is expected to provide the balance of some 30,000 million roubles. The collective farm's contribution must remain uncertain because their investment depends directly upon net income accrued; in fact the 1966-70 investment plan calls for a volume of collective farm investment equivalent to almost half as much again as was invested by that sector in the S.Y.P. Unless the collectives set aside more than the usual 25% of gross income in the capital fund for investment purposes (and so forgo an additional part of disposable farm income) it does not seem likely that this high target will be reached -- even given the significantly higher procurement prices now applying to many commodities. In 1959-65 actual collective farm investment fell short of plan requirements by as much as 37%. There is then some reasonable doubt that the ambitious investment program for collective farms can be entirely fulfilled. State farm investment depends more directly on the competing pulls of other state budgetary sectors and here again there is scope for considerable shortfalls in investment allocations.

The list of outlays for agriculture is impressive. Tractor and truck deliveries are to be increased by 70% and 200% respectively compared with the previous five years; deliveries of grain combines should be up by 40% and of "other farm machinery" by 70%; spare parts are to be made available in quantities about half as big again and also at lower prices.⁴⁹ Fertilizer deliveries to agriculture by 1970 are planned to rise to 55 million tons from 27 million tons in 1965 and 11 million tons in 1960; thus fertilizer

inputs should double between 1965 and 1970. Although this appears to be a somewhat ambitious increase it is noteworthy that the S.Y.P. called for an increase in fertilizer production of 22.6 million tons and in fact a rise of 18.9 million tons was attained -- mainly through large increases of 5.7 million tons in each of the last two years of the Plan.⁵⁰

There are other improvements on the input side. About 7.5 million acres of land are to be developed for irrigation by 1970 and 15 million acres of waterlogged land are to be drained. This compares with 5.8 million acres and 7.5 million acres respectively in the preceding 20 years. Other measures announced by Brezhnev in 1965 included the writing off of much of the debts which burdened the weaker collective farms: debts of over 2,000 million roubles owed to the State Bank were cancelled; this included outstanding indebtedness to the State from the transfers of the MTS in 1958.⁵¹ Changes were also made in the system of taxing the collectives from a gross to a net income basis; in practice it is claimed that the new taxation system will mean a halving of income taxes and, in addition, all farms showing a profit of less than 15% will be totally exempted. The provision of guaranteed monthly wages to the kolkhozniki, claimed to be comparable with wage levels for sovkhozniki, was also introduced at a later date.⁵²

For the state farms, a promise was made to leave profits substantially at their disposal for capital investments and for monetary and other (indirect) incentives; to this end, the sovkhozy (state farms) "should all be completely self-supporting during the next few years".⁵³ The sovkhozy will still have to pass on over 35% of their profits to the State budget and then receive back their investment means assigned for particular approved purposes. But the degree of profitability will now be taken as the basis for appraising a farm's economic performance whereas in the past many sovkhozy, because of their high production costs and low prices received, made substantial losses.

The amalgamation of farms is to be halted; Brezhnev admitted that some collective farms had become too big and unmanageable whereas many state farms were proving to be unwieldy and hard to administer.⁵⁴ At the same time he back-pedalled by saying that it would be just as rash to take hasty decisions on the question of splitting up already merged farms.

In the private sector, limitations on keeping cattle in the households of collective farmers, factory workers and other

employees had already been lifted by the C.C. in November 1964 in an effort to alleviate the problem of lagging animal products output, and compulsory deliveries from individual peasants were abolished in January 1965. Five year credits were extended for the purchase of private cattle.

The Ministry of Agriculture has resumed from Gosplan some of the more important federal functions which it lost under Khrushchev. It has been re-established as the central government organ directing Soviet agriculture instead of being relegated to a research and extension role. At the local level, the re-unification of industrial and rural Party organisations may mean less interference in day to day farm affairs.

Geographically, the 1965 program switches the agricultural emphasis from the Virgin Lands to the Non-Black Earth Zone in European Russia where the weather is more consistent and favourable to crops and where there is a marked response to fertilizer application.⁵⁵

Overall, though, the most interesting aspect of Brezhnev's speech was the changed approach to agriculture: the prime emphasis was on what had to be put into agriculture with an apparent realisation that what could be taken out of it would have to await results over a significant period. This contrasts with Khrushchev's impulsive actions in seeking quick agricultural gains without weighing the long term implications properly. It remains to be seen, however, whether the new framework is adhered to through to 1970; in the past, promises for improvements in the agricultural sector have been broken frequently. Given that there is certainly no intention of changing significantly the system of socialized agriculture in the U.S.S.R., the 1965 measures do mean that much more will be put into agriculture in the form of capital investments, machinery, fertilizer and other inputs, together with higher prices received by farmers, while less will be demanded in the way of compulsory procurements. All this suggests a different approach to agricultural management on the part of the new régime.

The setting in which the 1965 measures were announced is most important. When Khrushchev introduced the S.Y.P., the trend in agricultural output was up steeply and it is clear that he considered this trend would continue upwards even with reduced input increments. The new government should be well aware of the consequences of a reduction in efforts to lift agricultural output

in view of the serious situation they took over in 1964. In this context, then, there is every reason to assume that the 1965 measures will be followed through at least until some lasting improvements are achieved.⁵⁶

(b) The 1966-70 Plan Goals:

The most significant aspect of the 1966-70 Plan is that it does not contain target figures for the terminal year as has been the practice previously. Instead, it employs the much more sensible method for agriculture, which is subject to extreme annual fluctuations, of an average annual output target for the entire five year period compared with an average for the previous five years. In this instance, the preceding five year average (for 1961-65) is relatively low because of the two poor years in 1963 and 1965 and the mediocre performance of 1962. Indeed the average yearly value of gross agricultural output (at constant 1958 prices) in 1961-65 was only 12% higher than for the preceding five years; the new plan goal of an average rise of 25% over 1961-65 is, in this regard, not particularly high and is only equivalent to a 40% increase over a decade.

In his report on the directives for agriculture in the Five Year Plan (FYP), Kosygin said that the production of cereals was planned to increase at a priority rate.⁵⁷ The average annual grain output is to go up by 30%, an increase of 37 million tons. If we take the average annual performance in 1961-65 over 1956-60 as a comparison, the rate of increase for grains was 7% or 9 million tons. Thus the growth now planned for 1966-70 in the vital grains sector is some 45 million tons a year (37%) above output in 1956-60. The other important target announced by Kosygin was that for meat. Here the increase for 1966-70 over 1961-65 is to be 1.7 million tons or 18% -- a modest enough target when it is realised that it represents an increase over 1956-60 of 3.1 million tons or around 39%. In the first year of the new FYP (1966) the target for grain production was actually exceeded by over 4 million tons and that for meat was almost reached.⁵⁸ It is true that 1966 was an excellent year for Soviet farming but even then the attainment of plan figures in agriculture is quite unusual in any year and this gives some measure of the relatively realistic nature of the 1966-70 goals.

Table III shows that the average yearly output of other staple farm produce is planned to reach levels in the FYP that are about 20% above 1961-65 attainments -- with the exception of an ambitious 36% increase for sugar beet.

TABLE IIIAverage Yearly Output (million tons)^(a)

<u>Product</u>	1956-60	1961-65	1966-70 Plan	Increase 1966-70 as % 1961-65
Sugar Beet	46	59	80	36
Raw Cotton	4.4	5.0	6.0	20
Sunflower Seed	3.7	5.1	6.0	18
Potatoes	88	81	100	23
Milk	57	65	78	20
Eggs (milliard)	24	29	34	17
Meat	7.9	9.3	11	18
Grains ^(b)	121.5	130.2	167	28
Wool ('000 tons)	317	361	n.a. ^(c)	n.a.

(a) Source: 23rd. Congress of the C.P.S.U., op.cit. pp. 211-212; Itogi i Perspektivy, Moscow 1967, p. 33.

(b) includes pulses and feed grains.

(c) actual output 1966-68 was 393; the 1966-70 target was probably 415-430.

If we take 1966 again as being indicative of what a good year can produce for Soviet agriculture, it can be said that in that year the above targets for cotton, sunflower seed, milk and eggs were fulfilled or almost fulfilled, as well as those for meat and cereals previously mentioned. But one year taken in isolation is certainly not indicative of what Soviet agriculture can attain over a sustained five year period. Even in 1966, the plans for potatoes and sugar beet were underfulfilled by 12% and 8% respectively.⁵⁹

Perhaps the most significant and realistic comment in Kosygin's report on the 1966-70 directives for agriculture was that higher yields are now considered to be "the most important

means of increasing the production of grain".⁶⁰ This statement recognises implicitly that the scope for increasing Soviet grain output by expanding acreage is limited compared with earlier periods. The acreage under wheat now, of about 170 million acres, is probably about the maximum sustainable consistent with good husbandry techniques. But a rise in average yields of only 2 bushels per acre would produce an additional $9\frac{1}{4}$ million tons of wheat and this seems to be attainable. Some Soviet commentators have gone as far as saying that under the Virgin Lands scheme there were areas where soils of a light structure were ploughed up and it would be expedient for these lands to be re-converted to grass-land.⁶¹ Already there are indications that fallowing and rotational techniques are, at least partly, back in favour; and there is a swing back from maize to winter wheat in the Ukraine. H. Jacoby has concluded that the increased quantity of fertilizer to be made available in the 1966-70 Plan alone should be sufficient to allow an average cereal yield which would correspond to the planned 30% increase or even more with seed and soil improvements.⁶² The attainment of the planned performance for meat and other livestock products is, of course, closely bound up with the success of the all-important grains sector.

Finally, it was announced in the FYP that farm wages were to increase by 35-40%, with a guaranteed monthly remuneration to be introduced for kolkhozniki together with an improved pensions scheme.⁶³ It was stated that this rise would be ensured by the new higher procurement prices, lower prices for producer goods supplied to farms and the halving of kolkhozy income taxes. This seems to be a realistic comment except for the fact that kolkhoz income may well be affected by the syphoning off of greatly increased amounts of monies earmarked for capital investments.

In essence, the FYP for 1966-70 recognises two fundamental points: (a) the prime importance to be attached to the development of agriculture,⁶⁴ and (b) the fact that the C.P.S.U. is "fully aware that it is no simple matter" to achieve an upsurge in agricultural production.⁶⁵ The change in approach from Khrushchev's extravaganza is marked.

(c) Actual Performance 1965-68:

The average annual value of gross agricultural output (at constant 1965 prices) in 1965-68 was 76.6 milliard roubles or 17.5% above the average for the preceding four Khrushchevian years -- but it must be recalled that the latter included the exceedingly poor year of 1963 when the value of agricultural output

fell for the first time since 1951.⁶⁶ In terms of the FYP attainments, the performance of gross agricultural output in the three years to 1968 was almost 18.4% better than in 1961-65; but the FYP target is for an annual average which is 25% above 1961-65. In this sense it is clear that, unless 1969 and 1970 turn out to be unusually favourable years for agriculture, the planned growth rate will be underfulfilled by as much as one quarter. Nevertheless, if we compare the average annual value of gross agricultural output between 1956-60 and 1961-65 the growth rate was only 12%. It seems likely that that for 1966-70 will be at least half as high again and this is an indication of the improved situation in Soviet agriculture under Brezhnev and Kosygin. The planned level of gross agricultural output for 1969 is 85 milliard roubles or 5.6% better than in 1968. If this is attained then the average annual value of gross agricultural output for 1966-69 will be 20.9% better than that in 1961-65. This is unlikely unless 1969 is a very good year. (By March 1969 there were already reports in the Soviet Press of extensive winter-kill of grains in the Ukraine and Kuban).

At the time of writing, detailed agricultural production data are available only up to 1967.⁶⁷ Some preliminary figures for 1968 were mentioned in Pravda in December 1968 by N.K. Baibakov, Chairman of Gosplan, and then fuller statistics were announced by the Ts.S.U. (Central Statistical Office) in Pravda late in January 1969.⁶⁸ From these it can be ascertained that cereal production for 1966-68 was 162.8 million tons on average; the annual target for 1966-70 is 167 million tons. It should be recalled that 1966 and 1968 were the two most favourable seasons on record for grains, although the weather in 1967 was not so good. The likelihood of drought in the virgin lands in either 1969 or 1970 is fairly high on past experience. A shortfall of at least 4-5 million tons in the 1966-70 target seems probable then.

For meat the situation looks more favourable because the 1966-68 performance of 11.3 million tons is 0.3 million tons above the 1966-70 control figures. The output of meat in each of the last three years has been fairly constant between 10.5 and 11.5 million tons and this trend may be expected to continue through to 1970 as long as adequate fodder supplies are maintained.⁶⁹ The new prices for meat are probably returning a profit for many kolkhozy and sovkhozy although production costs remain high in many regions. With the lifting of restrictions on private livestock, the private sector is now accounting for almost 30% of the increase in meat output but some shortages of fodder are occurring.

The outlook for milk production is also good. For 1966-68 the output attained was 79.3 million tons whereas the 1966-70 target was set at 78 million tons. Since 1965 milk production has been rising quite strongly at the rate of about 3-4 million tons a year; it may prove difficult to sustain this rate of growth and in 1968 it had slowed down perceptibly. Again, the private sector has provided some 28% of the increase in output of this commodity. Mechanization on dairy farms remains at a low level and on many state farms losses are still being incurred. Between 1965 and 1967 Soviet consumption and exports of butter did not increase substantially and by 1968 butter stocks exceeded half a million tons. At present the retail price of butter is relatively high. About 80% of government milk procurements are processed.

The relevant production data for the Brezhnev-Kosygin period 1965-68 are set out in Table IV and compared with output in the last four years of Khrushchev's régime. This does not exactly preserve the FYP approach followed above but it was considered desirable to compare four rather than three year periods where ever possible in view of the large annual fluctuations in agricultural output and the disturbing effect this can have on simple averages; the FYP will be returned to in a moment. It will be seen that for the three products just discussed, the increases for 1965-68 over 1961-64 were 15% for grains, 20% for meat and 24% for milk; these may be compared with the increases between the two Khrushchev phases (vide Table I) of 22%, 36% and 34% respectively. In this relative sense, the Brezhnev-Kosygin performance for these commodities has not been so impressive but, of course, they started from a higher base level of output in the first instance.

Some remarkable growth rates have been achieved in 1965-68 by sugar beet (46%), cotton and sunflower seed (23% and 24%) although no significant production of these commodities comes from the private sector. [Sunflower is the main edible vegetable oil culture in the U.S.S.R.] For sugar beet and cotton the increase can be almost wholly accounted for by higher yields which have risen by 38% and 21% over 1961-64. But for sunflower seed about half the increase was derived from expanded acreage.⁷⁰ Sugar beet has been especially favoured by higher fertilizer deliveries since 1964. Sunflower seed prices for sovkhozy (which account for about one-fifth of output) were increased by Brezhnev in 1965; early in 1963 prices for cotton had already been raised by 20% for kolkhozy and 12% for sovkhozy; in 1963 also the

TABLE IV
USSR - ANNUAL OUTPUT OF AGRICULTURAL COMMODITIES 1961-68 (a)

ANNUAL OUTPUT (MILLION TONS)

Product	1961	1962	1963	1964	Average 1961-64	1965	1966	1967	1968	Average 1965-68	% Increase 1965-68 over 1961-64
Grain	130.8	140.2	107.5	152.1	132.7	121.1	171.2	147.9	169.2	152.4	14.9
- Wheat	66.5	70.8	49.7	74.4	65.4	59.7	100.5	77.3	n.a.	79.2 (b)	21.1 (c)
- Barley	13.3	19.5	19.8	28.6	20.3	20.3	27.9	24.6	n.a.	24.3 (b)	19.7 (c)
Sugar Beet	50.9	47.4	44.1	81.2	55.9	72.3	74.0	87.1	93.6	81.8	46.3
Potatoes	84.3	69.7	71.8	93.6	79.9	88.7	87.9	95.5	101.6	93.4	16.9
Vegetables	16.2	16.0	15.2	19.5	16.7	17.6	17.9	20.5	18.5	18.6	11.4
Sunflower Seed	4.8	4.8	4.3	6.1	5.0	5.5	6.2	6.6	6.6	6.2	24.0
Cotton	4.5	4.3	5.2	5.3	4.8	5.7	6.0	6.0	6.0	5.9	22.9
Meat	8.7	9.5	10.2	8.3	9.2	10.0	10.7	11.5	11.6	11.0	19.6
- Beef and Veal	2.9	3.3	3.7	3.6	3.4	3.9	4.4	5.0	n.a.	4.4 (b)	29.4 (c)
- Pigmeat	3.7	4.0	4.3	2.8	3.7	4.1	4.5	4.5	n.a.	4.4 (b)	18.9 (c)
Milk	62.6	63.9	61.2	63.3	62.8	72.6	76.0	79.9	82.1	77.7	23.7
Eggs (Milliard)	29.3	30.1	28.5	26.7	28.7	29.1	31.7	33.9	35.5	32.6	13.6
Butter ('000 tons)	894	940	884	952	918	1184	1157	1177	n.a.	1173 (b)	27.8 (c)
Wool ('000 tons)	366	371	373	341	363	357	371	395	413	384	5.8
Gross Agricultural Output (d) (Milliard roubles)	64.7	65.7	60.7	69.5	65.2	70.9	77.0	78.1	80.5	76.6	17.5

(a) Sources: Narodnoe Khozaystvo SSSR v 1964g, v 1965g; SSSR v Tsifrah v 1966g, v 1967g; Pravda 25 Jan. 1968, 10 Dec. 1968, 26 Jan. 1969; Strana Sovetov za 50 let, op.cit.

(b) for 1965-67 only

(c) % increase 1965-67 over 1961-64

(d) At constant 1965 prices

Note: The wheat crop for 1968 is estimated at 85 million tons and the barley crop at 30 million tons; butter production in 1968 is estimated at 1200 thousand tons, beef and veal at 5.2 million tons and pigmeat at 4.4 million tons.

purchasing price for sugar beet was lifted by 26% and sugar content bonuses restored (such stimuli having been abolished in 1958). In each instance, there was a marked yields response in the following year and this was maintained thereafter. In 1958 a sliding scale price system had been introduced for grain, sunflower seed, sugar beet and potatoes. The idea was to generate lower prices in the years of good harvests and higher prices in the years of poor harvests. But in practice between 1959 and 1962, although most crops were not good, purchasing prices for grains, sunflower seed and sugar beet were reduced by 5-13%. In March 1965 this sliding scale system was abolished in favour of flat rate prices (with regional incentives for some commodities).

By far the poorest performance (an increase of 6% for 1965-68 over 1961-64) came from the wool growing industry; this was partly because sheep numbers in the two periods under review actually fell by over 14 million in the two bad droughts of 1963 and 1965; and partly because the clip per sheep has only risen by 5% since 1965. Previously, in 1953-58, the average annual increase in wool production was 6.2% but in 1959-64 this fell to a mere 0.8%; it rose to 3.9% in 1965-68 but was still well behind Phase I performance.

The two products most dominated by the private sector, potatoes and eggs, are also lagging badly with an increase of only 17% and 14% respectively over 1961-64. Neither of these products received any encouragement in the 1965 reforms (see below). The situation with potatoes is particularly poor: annual output in Phase I averaged 81.6 million tons, in Phase II it was unchanged at 81.7 million tons and in 1965-68 rose to 93.4 million tons -- hardly an impressive record for a 16 year period. The 1968 potato crop of almost 102 million tons was a record.

In terms of the FYP, it seems from the available data that for 1966-68 the sugar beet growing industry is operating at about 5 million tons above the required level for an average annual output of 80 million tons. Another drought like that of 1965 could set it back by 9 million tons or so; but, as mentioned above, the general level of yields attained in recent years has steadily increased and, barring severe droughts, they should be maintained. Available refining capacity is likely to create a problem soon however. The cotton growing industry too is operating exactly to planned target figures; and here the job of controlling output is much easier because the entire crop is irrigated.⁷¹ Sunflower seeds are being produced at 8% (470,000 tons) above plan but output has levelled off in the

last two years. Egg production, however, is falling slightly behind plan and on current performance a shortfall of 300 million units seems probable. About three-fifths of Soviet egg production comes from the private sector, and, although the private share is declining quite rapidly, no price increases were announced in the 1965 reforms for this product so it cannot be expected that collective and state farms will react by producing substantially more. State procurements of eggs for 1966-68 were 5.7 milliard units (17%) above plan; this in itself must be placing quite a strain on the egg industry to the detriment of the peasant household.⁷² Another weak sector, already mentioned, is the potato crop; the FYP envisages an increase of almost 25% but performance to date indicates a short fall of at least 5 million tons -- in which case the attained growth will be only 17%. Again, over three-fifths of this commodity is produced by the private sector, and its share has not changed much since 1960; moreover, no price increases were announced in 1965 for either state or collective farms. [In 1963 some seasonal price incentives for deliveries in the winter were introduced, but these do not appear to have had any overall effect.] Vegetable production is also falling well behind plan and annual output in 1966-68 was only 9% above the previous three years. The wool clip is 5-8% behind estimated plan figures.

In sum, the situation to date, in the first three years of the FYP, generally seems to verify Nimitz's findings (quoted earlier) that a positive correlation exists between the products for which profitable (i.e. higher) prices are paid and the level of output of those products.⁷³ Livestock output, for instance, is still increasing slowly, production costs remain high and private livestock holdings, especially of pigs, are tending to fall because of inadequate rewards; in the short term this implies better feeding rates for the remaining animals.

On the input side too there are shortcomings which have had consequential effects on output performance. It will be recalled that one of the key aims of the FYP was to inject almost as much capital investment into agriculture as in the previous 15 years. In the state sector investments were set at 41,000 million roubles with the target for 1966-68 being 21,200 million. In fact, the sum actually used by 1968 was only 17,300 million -- a shortfall of almost 4,000 million roubles or 18%.⁷⁴ A cut back in state productive investments had been hinted at by N.K. Baibakov, Chairman of Gosplan, in his report to the October 1967 Session of the Supreme Soviet on the plans for 1968-70. Data for capital investment by collective farms, for 1966-68, indicate

that they also are falling behind plan fulfilment by about 10%.⁷⁵ Nevertheless, the price increases of 1965 and the record harvest of 1966 have enabled collective investments to increase at a faster rate than those for state farms. The net effect of this apparent failure in the agricultural sector to sustain the ambitious volume of capital investment expected of it was a cut back in supplies of tractors, trucks, agricultural machinery and fertilizers. The FYP called for a doubling in deliveries of fertilizer to agriculture to a volume of 55 million tons, from 27 million tons in 1965. In the first three years deliveries reached 30.5 million tons (1966), 33.7 million tons (1967) and 35.8 million tons (1968); the plan for 1969 has been set at 38.5 million tons.⁷⁶ At this rate of growth, it is probable that there will be a shortfall in deliveries by 1970 of at least 13 million tons or 24%. This is serious. The implications for the crops sector are grave because of the emphasis now on raising yields and the importance to this aim of increased fertilizer application. For grains the target is to lift average yields by as much as one-third and performance to date is only slightly below this; but it will not be easy to maintain if there is a shortage of fertilizer. [At present average fertilizer utilization per hectare of cultivated land is 35 kilos or one-third of Poland's rate of application].

A resolution passed by the C.C. of the C.P.S.U. and the Council of Ministers on 30-31 October 1968 stated that "The Party is going to take under its strict control the construction and timely commission of new facilities for fertilizer production."⁷⁷ The resolution calls for the commissioning of fertilizer plants in 1969 and 1970 with a combined capacity of 25.5 million tons (of which 13 million tons for 1969 but the plan for the first quarter of the year was only 75% fulfilled); this compares with new production capacity in 1966-68 of only 11-12 million tons. Gosplan, the Ministry of Agriculture, the Ministry of Chemicals, the Lenin All-Union Academy of Agricultural Sciences and the U.S.S.R. Academy of Sciences are to submit to the Politburo and the Government a long term plan for the chemicalization of agriculture.⁷⁸ This resolution also envisages an increase in the gross output of mineral fertilizers during 1969-72 of 48 million tons to a level of 95 million tons -- i.e. again a doubling. The move now to a 1969-72 basis for fertilizer production goals indicates an abandonment of the earlier targets for 1970.

Machinery deliveries to agriculture have also fallen behind schedule in the three years to 1968. Average annual deliveries of tractors were planned to reach 356,000 units in

the FYP, so far they have averaged 285,000 or 20% down. For grain combines the shortfall is 16,000 machines a year or 15%; their manufacture in 1968 was only 0.1% above that for 1967. With trucks there is a deficiency below plan of more than 83,000 a year (38% down), and there is no hope of making this good by 1970; deliveries in 1968 were the same as those in 1967. In each instance deliveries have been substantially better than in 1961-65 but nowhere near their planned levels for 1966-70. Supplies of equipment for livestock breeding farms were almost twice as much in 1968 as in 1965 but there were problems reported (Pravda 12 May 1969) of obtaining sufficient electric power to operate them. New farm machinery factories are being built in many parts of the U.S.S.R., and output is planned to rise by 9% in 1969, (c.f. 6% in 1968); but Brezhnev has admitted they are insufficient to realise the goals envisaged for agriculture.⁷⁹ Gosplan is working out new figures to be scheduled for the next FYP (1971-75). In the meantime the Soyuzsel'khoztekhnika (State suppliers of agricultural machinery) are endeavouring to introduce 150 HP crawler tractors (at present the basic unit is supposed to be 75 HP although the average HP of tractors in use is only 30 HP), in an effort to raise productivity. Soviet economists have recognized that their agriculture, in terms of HP per 100 acres of ploughed land, is only one-fourth as mechanized as that of the U.S.A.; and the HP available per worker is one-fifth of America's.⁸⁰ In 1964 the mechanical power resources of U.S.S.R. agriculture were 205 million HP whereas according to Soviet estimates for the fulfilment of work in optimal time it is necessary to have over 520 million HP available.

There is still a severe shortage of spare parts for agricultural machinery and in 1968 about one-third of the plant manufacturing spare parts for tractors did not fulfil their plans.⁸¹ Often repairs at the sel'khoztekhnika workshops cost more than if they were done in the farm's own workshop but the lack of spares frequently prohibits the latter from doing the work.⁸² At harvest time a great strain is thrown onto agricultural machinery resources and transportation facilities; every year some 400-500,000 trucks are borrowed from other branches of the economy for the harvest and even so there are consistent delays because of breakdowns.⁸³ The manufacture of spare parts for agricultural machinery only rose by 2% in 1968.

The October 1968 report by Brezhnev to the Plenum of the C.C. of the C.P.S.U. was the first important agricultural policy statement since the 23rd Congress of the C.P.S.U. in

April 1966. In it he made two very critical remarks about the planning system as it affected agriculture.⁸⁴ He said that the responsibility for farm machinery manufacture was too widely spread over many different ministries and offices; with equipment for livestock farms there are 150 manufacturing enterprises, only 30 of which come under the direction of the Ministry of Tractors and Agricultural Machinery Construction; the rest are responsible to 13 other offices and ministries. As a result, small orders are placed and unit costs of manufacture are high. Another criticism was levelled at the way in which investment funds earmarked for agriculture are being used by planning authorities for other purposes; similarly, some equipment assigned to agriculture (presumably trucks) is being used elsewhere. This may reflect a continuation of the "industry first" Stalinist philosophy which gained strength in Khrushchev's Phase II and probably still has many strong adherents at the Party level, especially in view of the relative success of agriculture in the last three years. Brezhnev's report seemed to be aimed at preventing a feeling of over confidence in Party members about the agricultural situation.

Average annual collective farm incomes have improved by about 38% in the first three years of the FYP, compared with 1961-65. This appears to be on plan (which aimed at a 35-40% increase compared with 20% for factory and office workers) and about double the growth for non-farm workers. But about half the increase in collective incomes occurred in 1966, a record year for agriculture. Brezhnev criticized some collectives for not caring much about increasing production and for cutting back assignments to indivisible funds -- which includes capital outlays -- and spending too much on administration and on excessive remuneration to the kolkhozniki;⁸⁵ this no doubt partly accounts for the shortfall in the collective farm investment program noted earlier. In the state farm sector, it is claimed that "most" sovkhosy in 1966-68 worked without incurring losses whereas previously they had considerable losses. In 1968 more than 800 sovkhosy worked on a khozraschot basis.⁸⁶ These represent less than 7% of all state farms but they include many of the larger or more profitable ones. The Party is considering a gradual extension of this profit indicator system to all sovkhosy and in 1969 an additional 2,900 state farms will be transferred to financial autonomy bringing the total to 30%. Despite the promises of the March 1965 Plenum, there is still some tendency for state farms to increase at the expense of the collectives.⁸⁷ It is likely that there remains a strong belief in Moscow that sovkhosy are more easily controlled and directly accountable.

The October 1968 Plenum resolution concluded its review of agricultural performance since 1965 by calling upon the rural raikoms, local Party organs and communists working in kolkhozy and sovkhozy to play a major part in mobilizing workers to develop agriculture as quickly as possible. The army of rural Communist Party members, said by Brezhnev to number over 5 million, is supposed to be the spearhead in striving for higher production.⁸⁸ This is not the first time that such a demand has been made. And there is no reason to believe that this time there will be any marked or sustained response at the farm level either. Indeed, Baibakov, the Chairman of Gosplan, has admitted that not all farms are working to their full capacities and he has said that cases are often encountered of attempts to conceal stocks to fall back on and of deliberately under-estimated rates of production growth for planning purposes.⁸⁹

A conference of the C.C. of the C.P.S.U. was held in December 1968 to discuss the measures to be taken for the fulfilment of the October 1968 resolutions of the Plenum of the C.C. in regard to agriculture, specifically the fertilizer problem.⁹⁰ Participating in this conference were secretaries of the C.C.'s of Union Republics, kraikoms and obkoms, a Secretary of the C.C. of the C.P.S.U. (D.F. Ustinov), and the Minister for Chemicals (L.A. Kostandov). The conference emphasized that in order to fulfil the fertilizer and pesticide⁹¹ program this matter should be kept constantly in the focus of the Party, administrative and economic organs. Clearly, there is concern at the shortcomings in agriculture but concern alone will not overcome the problems until capital inputs are increased firmly and until attitudes are altered.

On the subject of attitudes it is significant when a man like Shelest, First Secretary of the C.C. of the Ukrainian Communist Party, has to complain that, for no sound reason, the sale of fodder for private livestock breeding has been restricted and in some oblasts a reduction in remuneration-in-kind of kolkhozniki has occurred.⁹² Such actions have taken place despite Gosplan's comment that, at the current level of livestock output, private livestock keeping is economically sound and needs developing further;⁹³ this was presumably why limitations on the keeping of private cattle were removed within the first month of the new régime coming into power.⁹⁴ We have seen that the private sector is still of fundamental importance to Soviet livestock production, but clearly there are officials who try to discourage it. There is considerable irritation, no doubt, with the fact that the private sector accounts for about 15% of all marketable agricultural products

(or almost two-fifths of what the sovkhozy market), as well as providing basic foodstuffs for the majority of peasant households. In all, about 31% of the gross value of agricultural output comes from private plots.

4. Some Problems Considered

The C.P.S.U. has attached prime importance to attaining a high and stable growth rate for agriculture in 1966-70 and it has admitted that one of the main causes of the lag in 1959-64 was the lack of interest among farm workers in increasing output.⁹⁵ They were not being sufficiently well rewarded. State farm bonuses and incentive remuneration on collectives were insignificant in relation to total wages and remuneration funds, making up only 3-4%.⁹⁶ Thus the basic wage of the sovkhoznik or the income of the kolkhoznik was not directly dependent on the final results of the profitability or loss of the farm as an economic unit.

The move now to a khozaschot autonomous accounting system may improve rewards on the state farms in the long run; but so far khozaschot has only been introduced on to a relatively small number of highly profitable farms which are allowed to retain 15% of their profits. It will be interesting to see how workers are rewarded on the many state farms which are still making a loss despite the 1965 price reforms.⁹⁷ The great disparity in the relative profitability of the various commodities the farm must produce particularly affects the more highly specialised state farms. For the collectives, the 1965 prices went a great deal of the way towards higher incomes; but this has been partly at the expense of the capital investment fund and long term growth prospects. By the end of 1967 most collectives were reported to be on the system of regular monthly payments first introduced in July 1966 but there were problems of securing credit from the banks (see footnote 111).

There is still the problem for collective farm workers also of the relative profitability of devoting labour time to their private plots. The great importance to the kolkhoznik's welfare of this source of cash income causes him to exploit its possibilities to the full.⁹⁸ This problem is associated with the anomalies which exist in the relative incentives obtaining for different farm workers. Kolkhoz labour-day pay is only about 80% of that on a sovkhoz. Work on his private plot usually compensates the relatively low paid kolkhoznik. But labour-day pay on a collective varies greatly so that a machine operator can earn more than twice as much as a field worker and even two-thirds more

than a skilled livestock breeder. Yet the latter has much less time to spare for working on his private plot as compensation. Owing to this situation, obtaining labour for livestock farms, for instance, is quite difficult and this affects the farm's operating efficiency. Many kolkhozniki still prefer to be ordinary field labourers which gives them the maximum amount of spare time to farm their highly profitable private plots.⁹⁹

The weak links that the peasant has with the land is probably the greatest single problem in Soviet farming. This is especially true for state farms where the workers are virtually the same as factory employees. The kolkhozniki, as claimants to net income, have more direct identification with the soil and more incentive to work harder. But we have seen how they have been interfered with in their internal affairs, how they have been directed to grow crops for which the local climate is ill-suited and how they have thus incurred heavy losses to the detriment of the incentive fund.¹⁰⁰ It is not surprising then that the kolkhoznik's main interest undoubtedly lies in his private plot. And although they are ideologically undesirable, the State still depends upon these plots for the supply of large quantities of animal products, potatoes and vegetables. Indeed, if there was no private farming, the state and collective farms would have to produce almost twice the quantity of commodities (except cereals) they actually do.¹⁰¹

A large discrepancy in the marginal output of labour has arisen as a result of this peculiar tripartite system of state-collective-private farming. The number of active workers per 100 acres of sown land in the last census (1959) was 4.4 for sovkhozy and 9.6 for kolkhozy but most of the latter devote some of their labour to the private plots and so supplement the efforts of the 74.8 active family helpers per 100 acres of private plot area.¹⁰² There is no reason to believe that this situation has changed appreciably.

There is also a dilemma with prices. If procurement prices do not in some degree reflect regional cost differences there is as a result an inequitable disparity in incomes. But if prices do reflect differences in regional costs then this conflicts with rational specialisation since high cost production in unsuitable areas becomes profitable. There have been some Soviet pronouncements to the effect that gradually the State should concentrate its purchases of a given crop in those areas where production costs are low and where its cultivation is profitable for both kolkhozy and sovkhozy.¹⁰³ A solution may be found in

realistic calculations of differential rent (reflecting the productivity of land and then levying a tax on it). This may prove complicated but the Economics Institute of the Siberian Branch of the U.S.S.R. Academy of Sciences has already analysed differences in the cost of producing grain on sovkhozy in the Novosibirsk region between 1960 and 1963. They found that if one-fifth of all the state farms with the highest production costs are excluded (they accounted for 11% of the grain harvest), the highest cost to be taken as setting a regional price for differential rent calculations exceeded the average by 56% whereas including the highest cost farms raised it to 150%.¹⁰⁴ This entire question is linked to the issue of farm autonomy in the choice of product-mix; if they have to grow what they are told to grow, then there is force in the argument that prices must be such as to reimburse their expenses even in high cost areas.¹⁰⁵

Another part of the farm problem has been the inability of the ponderous state and larger collective farms to respond quickly to the vagaries of the weather or to other rapidly changing circumstances. As mentioned earlier, Brezhnev said that the very largeness of many farms has led to diseconomies of scale so that, in his words, "some collective farms have become so big as to be unmanageable...(and)...many of the new State farms have proved to be much too unwieldy and hard to manage..."¹⁰⁶ But at the same time he added that no hasty decisions should be taken about splitting up already merged farms; such is the strength of Party belief that large farms fit neatly into a pattern of centralized planning and supervision of agriculture. The size of Soviet farms seems to be influenced more by the greater ease of central control and direction than by any economies associated with size of operation. In the absence of a guiding market mechanism to push resources in the correct direction, overall plans are translated into specific operations most effectively by having as few units of contact between the State and farm management as possible: and in striving for largeness, per se, farm efficiency has actually been neglected.

Centralised planning techniques for the agricultural sector are still a detailed and complex matter. There are over 27 million agricultural workers in about 49,000 farms (excluding 4.5 million private plot workers) with an average of 619 workers for each state farm and 418 households per collective farm. With production units of this size, each of which can produce a great variety of end products from a given volume of inputs, the organisation and control of production brigades in itself often becomes a problem of "farms operating within a farm".¹⁰⁷ Moreover, it takes

about a year, for instance, to work out local procurement plans and distribute them to the farm level -- by which time changes may occur again; the dissemination of Party orders from Moscow takes place through a vertical system of republic, oblast, krai and regional party organisations before reaching the farm. Party appointees have so interfered with the day to day running of the collectives that Soviet sources admit to the majority of kolkhozniki taking no part in discussing important questions of the farm's work and in making collective decisions on them.¹⁰⁸ The Government has called for strict observance of "Leninist democratic principles" of collective farm management; but it is difficult to see how this can be done if the Party continues to control the appointment of the all-important chairmen. Significant gains could be made in this direction simply by a diminution of administrative interference and outside pressure.¹⁰⁹

In the early Soviet period farming was exploited to extract from the peasants much of the capital necessary for transforming the U.S.S.R. into the world's second most powerful industrial nation.¹¹⁰ Having achieved that transformation successfully, the Soviet Union can be criticized for not having used its undoubted economic resources to tackle the problems of agriculture. We have seen that initially under Khrushchev agriculture got off to a fair start; but then it lapsed into mediocrity. Brezhnev and Kosygin promised a brave new program of economic reform -- but it too appears to be slipping behind schedule. The whole Party and planning machine is partly to blame; agriculture has been dismissed as being of secondary importance for so long that there is an inbuilt resistance to progress.¹¹¹ There are officials in the planning organs who do not (wish to) understand the need for an accelerated development of agriculture and who continue to arrange priorities in favour of other branches of the economy.¹¹²

Finally, it is apparent that the Soviet economic system itself is not yet well enough equipped to carry out a farm program which seeks to spread overall developmental efforts and at the same time to improve the general quality of resources. The period of greatest agricultural success, in 1953-58, was when resources and efforts were concentrated in a relatively limited area -- the Virgin Lands -- and qualitative considerations were virtually ignored. The success of the space program and the continuing weakness of the consumer goods industry are other examples of this general principle at work.

5. Conclusions

"Agriculture is a vitally important sector of the Soviet economy. Its condition and development largely determine the country's economic achievements, the growth of the national income, the supply of the population with food-stuffs and of many industries with raw materials, and the rise in living standards of the people".

V. Matskevich, Minister of Agriculture.¹¹³

The eighth Soviet FYP, for 1966-70, envisages an increase in the national income of 6.6% to 7.1% annually, compared with 6.4% in the preceding five years. Soviet economists have stated that the expansion of agriculture is a decisive condition for such an accelerated growth of the national income. Accordingly, prime emphasis in the Plan is placed on agriculture; the C.P.S.U. at its 23rd. Congress stressed this. The relatively slower growth of the national income in 1961-65 was claimed to be due in large part to the lag in agriculture. Certainly, in the poor harvest year of 1963 the gain in the national income (at constant prices) was only 6,800 million roubles whereas in a good year for agriculture, such as 1964 or 1966, the largest gains in national income are registered (16,100 million and 14,800 million roubles respectively).¹¹⁴ [In general, however, the national income figures seem to understate the degree of fluctuations in agriculture; this is possibly due to a relative undervaluation of agricultural output compared with industrial output.]

During the first three years of the current FYP the growth in national income has been at the upper limit of the target; this is largely because industrial output has been about one-tenth above schedule.¹¹⁵ But agriculture, as we have seen, is performing at around one-quarter below the planned rate and, unless 1969 and 1970 are highly favourable years, it undoubtedly will fall seriously below the growth rate planned for it of 4.5% p.a. This will have far reaching economic and political repercussions.

It is true of course that the growth rates claimed for agriculture during the first four years of the Brezhnev and Kosygin régime (1965-68) are some two-thirds better than those obtaining in Khrushchev's Phase II. But they are still much less than half those in his Phase I.¹¹⁶ On the one hand, it can be said that Phase I performance was from a relatively low base level of output in 1953 and that it was able to gain short-term spectacular benefits

from the Virgin Lands scheme and the maize program. On the other hand, it must be said that, apart from 1965, the present régime has had a good run of seasons with no repetition, so far, of Khrushchev's unfortunate experience in 1963 when both the spring and winter wheat growing bases were crippled with drought.

Some sectors of the agricultural economy -- such as meat, milk, cotton, sunflower-seed and especially sugar beet -- have been doing fairly well under Brezhnev and Kosygin in relation to the unpretentious FYP goals (which for most of these products were well below the SYP targets). It remains to be seen, however, whether they can avoid a slowing down in the face of serious lags in other areas and in the absence of major policy changes to correct them. Shortfalls in the whole range of capital outlays and a tightening fodder situation present a clear threat.¹¹⁷ Grains, potatoes and eggs are falling behind plan and the same seems to be true for vegetables and wool. Pigmeat output is not doing as well as expected and pig numbers have fallen by 10.6 million since January 1966 (over half this fall has occurred in the private sector).

Within the grains industry, however, it is important to realise that wheat and barley appear to be doing relatively well; indeed net wheat and flour exports in 1967 amounted to 3.7 million tons and were the largest since 1962 -- indicating that domestic stocks, depleted after the 1963 drought to less than one month's supply,¹¹⁸ have now been partly replenished. In 1968 Government wheat procurements were at least 10 million tons more than normal domestic utilization -- thus indicating a further addition to stocks. Increased use of fallowing, fertilizer and winter-sown varieties are partly responsible for this improvement. Nevertheless, the total grains picture is clouded by the relatively poor performance of maize, rye and oats; for the future this may imply substantial feeding of wheat to livestock with a resultant restriction on large scale exports. Since Khrushchev was ousted the area under maize has been reduced by almost 11 million acres and the emphasis placed instead on annual and perennial grasses; another sensible step has seen a 50% increase in the area set aside to clean fallow. Despite these general improvements, production in the vital grains sector, with its implications for the livestock industry, must be seen in the light of Matskevich's recent statement that, to fully meet the country's grain needs, it will be necessary to increase the harvest to 180 million tons by 1970.¹¹⁹ Under Brezhnev and Kosygin output in the four years to 1968 has averaged only 152.4 million tons a year, including a record 171.2 million tons in

1966. The likelihood of sustaining a regular harvest of 180 million tons annually by 1970 is far from being great and a shortfall of 15 million tons on Matskevich's figure seems probable.

The most successful rural industry under the new régime, so far, has been sugar-beet growing. Production in the four years to 1968 was 46% better than in the four preceding Khrushchevian years. Remarkable increases in average yields account almost wholly for this rise. Industrial crops, such as sugar beet, have received priority treatment in deliveries of fertilizer since 1964. Given the assured supplies of relatively cheap sugar from Cuba, however, it is pertinent to question the wisdom of pursuing a domestic expansion program. Calculations made by a Soviet economist in 1966 showed that it takes as much labour to produce sufficient sugar-beets in the Ukraine to give 1 ton of sugar as it does to produce 6 tons of wheat.¹²⁰

On the inputs side, we have seen that despite the promises of the FYP very serious shortfalls have arisen already in the volume of capital investments and in deliveries of fertilizer and machinery. These shortfalls must be held largely responsible for lagging production. The situation with fertilizers is particularly serious. It will not be possible to lift grain yields by the planned one-third over the next few years without greatly increased applications of fertilizer in the Ukraine and especially in the Non-Black Earth Zone, which has over 100 million acres of cropland with a stable rainfall pattern. With deliveries of machinery and state capital investments, it has been demonstrated that resources are frequently diverted to non-farm uses. Machinery manufacture is organised on a fragmented and unco-ordinated basis and this has hindered rationalisation of output. State farm investment is being syphoned-off by regional planning bodies for other, non-assigned, uses. Some state farms could carry out more building works, such as cattle sheds, from internal funds but it is not easy to get building materials for non-State financed activities.¹²¹ Collective farms have been unwilling to provide capital investments at the high level planned because this would erode funds set aside for incentive payments. Brezhnev has criticised this.

Regarding incentives, the 1965 measures, which introduced stable compulsory delivery quotas and higher procurement prices for some products together with special over-quota prices, appear to have worked to some extent.¹²² Certainly, wheat and meat have benefited and we know that kolkhozy incomes are almost keeping up with the planned increment and that fewer sovkhozy

are making operating losses -- thus making their transition onto a khozraschot basis easier. Nevertheless, the production of some commodities for which higher prices were paid in order to stimulate output has actually fallen. This applies to rye, millet and buckwheat, and maize; and the output of the private-sector dominated products, potatoes and eggs, for which no price increases were announced, is also lagging. There is still a great deal of scope for a rationalisation of relative profitabilities between different farm products.

It has been said that the problems of Soviet agriculture are considerably more complex than those in the industrial sector. In the past the fundamental economic nature of these problems has been masked by the deep personal involvement in farming questions, both large and small, on the part of Khrushchev.¹²³ This has given rise to undue emphasis in the West on political issues whereas the basic problems affecting Soviet agriculture are the level of financial incentives for the peasant and the volume of capital inputs allotted to the farm.¹²⁴ Of course, major economic decisions are inseparable from political ones; for instance, incentives must inevitably be closely related to the context of the political system. And we have seen that deep-rooted faults are still at large within that system, especially in relation to its differing attitudes to state, collective and private farming. Nevertheless, the basic reason for supposing that in the long-run Brezhnev and Kosygin have a better chance than Khrushchev of succeeding with agriculture is economic, not political, in emphasis, viz.:-

- (a) While attaching more importance than did Stalin to economic matters, Khrushchev still believed that organizational measures were decisive in determining the economic growth of agriculture -- this was evident in his major shake-ups in 1953, 1955, 1958, 1961 and 1962. Most of his schemes to lift production (or productivity) centred upon some new act of administrative coercion. Between 1953 and 1959 he favoured decentralization but thereafter tightened up central controls: the period 1957-62 in particular was very confusing. Many of his economic measures, such as the Virgin Lands campaign and the maize program, were ill-conceived, impulsive, and generally harmful in the long-run. In this sense, his endless administrative reorganisations were merely attempts to save the day along prescribed Marxist-Leninist lines of promoting the proper social and individual relationships of the peasant with the means of production.¹²⁵

- (b) Brezhnev and Kosygin, on the other hand, have attached prime importance to overcoming the crisis in agriculture with a conventional economic solution. And although they are at present encountering weaknesses in their plan at least they are directing renewed efforts along lines mainly economic. There has been no major administrative upheaval since the re-unification of industrial and rural Party organisations at regional and territorial levels at the Plenum of the C.C. of the C.P.S.U. in November 1964. The March 1965 reforms, the April 1966 23rd Congress on the 1966-70 Plan, and more lately the October 1968 Resolution of the C.C. of the C.P.S.U. all contain carefully considered (on Soviet standards) economic measures, the like of which agriculture has not experienced before. True the economics is interlaced with largely meaningless political statements -- but this is to be expected. The economic reforms brought down since 1965 have been sensible in concept: their partial failure so far in the FYP has been because they have not gone far enough and because of the lack of a quick and flexible response mechanism to short-comings as they arise.

In the first instance, the new price incentives could have been usefully extended across the board to other important products and state procurements diverted in a more realistic way away from high-cost areas.¹²⁶ Greater freedom of choice in product combinations and quota deliveries, at the farm-level, could also have led to improved profitability (in a khozraschot sense) and still have met planned goals; the main difficulty here for the State would be in working out relative product profitability against plan priorities. In the meantime, the private sector needs some encouragement if growth in the livestock industry is to be maintained. Secondly, because there is no flexible response system, the State has failed in exactly the area where it should be strong; the planned amounts of capital outlays have not been forthcoming from the planning mechanism. If it wishes to succeed, the régime must see to it that scarce resources assigned to agriculture do actually reach it, and promptly too. And if such input allocations are not to impinge on net farm incomes, and so avoid interference with incentives, this in its turn may have implications for the growth rates of other budgetary sectors in the economy, such as heavy industry, consumer goods or defence. That may be just the price the U.S.S.R. has to pay for a strong and expanding agriculture in the 1970's. Already, the 1965 reforms are costing the State an estimated 4,000 million roubles per annum

over the term of the FYP;¹²⁷ this in itself is a large transfer of national resources (equal to about half the foreign exchange normally earned from merchandise exports). For the future, the financial burden must increase before a lasting improvement is brought about in Soviet agriculture.

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June 1969.

APPENDIX 'A'

A NOTE ON THE INDEX OF GROSS AGRICULTURAL OUTPUT AND SOVIET AGRICULTURAL STATISTICS

Soviet gross agricultural output data represents the total value of farm products not the total value of enterprise outputs as is the case in secondary industry. There is double counting, so that grain for fodder is included in the index even though it is consumed by livestock, perhaps on the same farm, which are also included in the index. Each agricultural product is measured in quantitative terms, valued at the appropriate price (claimed to be revalued on a constant 1965 price basis) and added together. It is truly a gross index and in no sense measures the value added contribution by the rural sector to the Soviet economy. Gross agricultural output also includes any increase in the value of work done for the following year's harvest (e.g., ploughing) and work relating to long-maturing projects such as orchards.

Another problem is that of valuing the large volume of unsold products consumed on the farm or by the peasants. Until 1960 the practice was to value the unsold portion of kolkhoz and private sector agriculture at the average prices which obtained for their sales normally of such produce to the state and in the free markets respectively. Sovkhozy however valued their unsold produce at cost. In 1960 the valuation of kolkhozy unsold produce was changed to a cost basis also.

Until 1958 gross agricultural output data included the value of work done by the MTS as an independent product of agriculture. This inflationary measure disappeared when the MTS were disbanded.

There are sound reasons for supposing that both the absolute level and rate of growth in the gross output of some farm products which make up the index are exaggerated (although farm output data in national income figures are probably under-valued in relation to industrial output). In general it is difficult to estimate by how much but in the wheat industry the order of magnitude is likely to be about 20% too high using Western measures of what is a realistic barn yield; maize is another problem because of the large proportion of lactic stage and green fodder crop harvested and the difficulty of estimating a dry-matter content; the all-inclusive category of "meat output"

is known to be swollen by the inclusion of a high percentage of offals; and in the past the quantity of milk sucked by calves has been incorrectly added to total milk output. Such are the problems encountered when using Soviet agricultural statistics. Some Western commentators attempt to assess the real situation, as they see it, by deflating the Soviet figures with methods part scientific and part intuitive; this has led to significant areas of disagreement. Other commentators (including the writer), whilst being aware of the pitfalls in Soviet farm statistics, tend to rely more on "the law of equal cheating" which presumes that over a significant time series the comparison of data in an undeflated form will have some meaningful validity and will maintain a degree of consistency in approach. The major area of difficulty undoubtedly centres around Soviet statistics on grain production, especially the bread grains, because these have been the main concern of Soviet agriculture throughout the post-war period. (Bread grains and potatoes still comprise over 55% of the Soviet diet).

In general, Soviet data on agricultural production is less reliable and less accurate than data on industrial output. Agricultural statistics in the U.S.S.R. have been adopted to suit the peculiar farm organizational structure which is divided into State, collective and private sectors; in industry, however, the homogeneous State system lends itself to closer statistical controls and moreover the very nature of manufacturing output can often be more readily and more accurately measured. Within agriculture then, the tripartite organizational split, the problems of applying uniform standards of quantification and the huge geographical spread of the U.S.S.R. all tend towards greater statistical difficulties. In addition, in the Soviet era agriculture has not enjoyed the spectacular successes of manufacturing industry and so there has been a greater reason for statistical manipulation.

[The reader who is interested in learning more about this subject is referred to A. Kahan's article: "Soviet Statistics of Agricultural Output", in Soviet Agricultural and Peasant Affairs, R.D. Laird, ed. London 1964, pp. 134-160, and the associated Commentary by L.O. Richter at pp. 161-168].

APPENDIX 'B'

THE 1971-75 PLAN FOR AGRICULTURE

Brezhnev's speech to the October 1968 Plenum of the C.C. of the C.P.S.U. (reported in Pravda on 31 October and 1 November) indicated some general production targets "for the near future". Implicitly, these are the levels to be achieved for the forthcoming 1971-75 Five Year Plan and they are set out below and compared with the 1966-70 goals and 1966-68 actual performances for particular commodities:-

<u>Product</u>	<u>Average Annual Output (million tons)</u>		
	<u>1966-68 Actual</u>	<u>1966-70 Plan</u>	<u>1971-75 Plan</u>
Sugar Beet	84.9	80	90
Raw Cotton	6.0	6.0	7.0
Sunflower Seed	6.5	6.0	7.0
Potatoes	95.0	100	115
Milk	79.3	78	90-95
Eggs (milliard)	33.7	34	45-50
Meat	11.3	11	14-15
Grains ^(a)	162.8	167	190-200
Wool ('000 tons) ^(b)	393	n.a. ^(c)	480-500

(a) includes pulses and feed grains

(b) greasy

(c) estimated 415-430.

The largest proportional increases aimed at, compared with 1966-68 output, are for eggs and meat; wool, potatoes and milk are next closely followed by grains and cotton; the smallest gains are planned for sunflower seed and sugar beet. In general then livestock products receive the major emphasis.

FOOTNOTES

1. Narodnoe Khozyaistvo SSSR v 1965 godu, p. 259.
2. Data for Australia are 13% of the workforce, 12% of GNP and more than 70% of exports; but note that Soviet national income figures cover material production only and are not directly comparable.
3. Narodnoe Khozyaistvo SSSR v 1967 godu, p. 7.
- ✓ 4. The 1963 drought resulted in the poorest grains crop since 1957; in the Virgin Lands the wheat harvest was 13.5 million tons below that of 1962.
5. See the writer's The Economics of the Soviet Wheat Industry, Bureau of Agricultural Economics, Canberra, December 1966, p. 47.
- ✓ 6. Meat production fell by 19%, egg supplies by 6.5% and wool output by 8.5%.
- ✓ 7. Keesings Contemporary Archives, 1964, p. 20390, reporting a document which was supposedly shown to foreign Communist delegations who had arrived in Moscow to ask for explanations of Khrushchev's dismissal; L.G. Churchward in Contemporary Soviet Government, London, 1968, p. 13, states "it seems certain that agricultural failures played a considerable part in the removal of Khrushchev in October 1964".
8. "Urgent Measures for the Further Development of Soviet Agriculture", report by L.I. Brezhnev at the plenary meeting of the C.C. of the C.P.S.U. on 24 March 1965, Pravda 27 March 1965.
9. Narodnoe Khozyaistvo SSSR v 1958 godu, p. 350; the actual rate of growth was 0.7% per annum.
10. Ibid. pp. 418-419, 467.
11. Ibid. pp. 445-446.
12. J. Wilczynski Economic Record, December 1965, p. 593; between 1931-32 and 1934-35 the U.S.S.R. imported 67,000 tons of wheat and 36,000 tons of flour from Australia; in 1937-38 through 1938-39 a further 199,000 tons was shipped.
13. J.F. Karcz "Thoughts on the Grain Problem", Soviet Studies, April 1967.
14. A. Nove, "Rural Taxation in the U.S.S.R.", Soviet Studies, October 1953.

15. Pravda, 15 September 1953.
16. S. Nedelin, Finansy SSSR, No. 10, 1957.
- ✓ 17. Before this, in 1950, he had been responsible for the amalgamation of collective farms into larger units (their numbers were reduced by 25% between 1950 and 1953) and also for the stillborn agrogorod scheme.
18. T.H. Rigby in T.H. Rigby and L.G. Churchward Policy Making in the USSR 1953-61 -- Two Views, Melbourne 1962, p. 21; and R. Conquest Power and Policy in the USSR, London 1961, Chapter 10 passim.
19. M. Frankland, Khrushchev, London 1966, p. 101.
20. The Economics of the Soviet Wheat Industry, op.cit. pp. 16, 29.
21. Ibid. pp. 23-27.
22. Between 1957 and 1961 Soviet meat output rose by 17.6% (1.3 million tons slaughter weight) and all this increase was derived from state or collective farms, not from the private sector which had no access to maize fodder. With maize silage the most efficient distribution is central feeding to large numbers of cattle, since it is a bulky as well as a perishable commodity once the silo has been opened. Maize silage is thus somewhat less readily divisible than hay (traditionally an important component for payments in kind to kolkhozniki for use on their private plots) and its relative indivisibility may have been a useful tool in coercing the private livestock holdings into collectivization.
23. The Economics of the Soviet Wheat Industry, op.cit., p. 17.
24. Ibid., pp. 23-27; 76.
- ✓ 25. M. Lemeshev, Agriculture in the U.S.S.R., Novosti Press Agency, Moscow (undated), p. 53.
26. H. Walters and R. Judy, Soviet Agricultural Output by 1970, University of California, August 1965.
27. The Economics of the Soviet Wheat Industry, op.cit., p. 79.
- ✓ 28. L.I. Brezhnev, op.cit., Pravda, 27 March 1965; State capital investments in agriculture were 11.3% of total investments in the economy in the five years 1954-58, whereas the target figures for the SYP 1959-65 put them at only 7.5%.

29. The Economics of the Soviet Wheat Industry, op.cit. , p. 29.
30. Ibid., pp. 27-29.
31. Plenary session of the C.C. of the C.P.S.U., 9 December 1963.
32. L.G. Churchward, Contemporary Soviet Government, op.cit., p. 3.
33. M. Frankland, op.cit., pp. 152-153.
34. For further details see I. Gordijew, "A recent development in Soviet agriculture", The Economic Society of Australia and New Zealand, Monograph. 227, July 1960.
35. Direktivy KPSS i Sovetskovo Pravitel' stva po Khoziaistvennym Voprosam, Vol. 4, Moscow 1958, pp. 605-611.
36. Pravda 13 February 1958; and N.S. Khrushchev in Stenograficheski otchyot, Moscow 1958, pp. 54-55, speech at C.C. Plenum December 1958.
37. Izvestiya 24 November 1961; Komsomol'skaya Pravda 12 January 1961.
38. Narodnoe Khozyaistvo SSSR v 1964 godu, p. 361.
39. Pravda, 4 March 1951.
40. L.I. Brezhnev, op.cit., (Novosti translation in full p. 6.).
41. Ibid.
42. 23rd Congress of the C.P.S.U., Novosti Press Agency, Moscow (undated).
43. USDA The Farm Index, April 1966;
 USDA Foreign Agriculture, February and March 1966;
 USDA Soviet Grain Imports, September 1965;
 H. Walters and R. Judy, op.cit.;
 International Wheat Council Review of the World Wheat Situation 1964-65, November 1965;
The Economics of the Soviet Wheat Industry, op.cit.;
 K. Bush, "The New Plan for Soviet Agriculture", Radio Liberty Research Paper, No. 4. 1965;
 J.F. Karcz "The New Soviet Agricultural Program" Soviet Studies, October 1965.
44. Down from 65.49 million tons to 55.67 million tons Zachotny ves, (i.e. a standard accounting weight which includes a constant moisture content but excludes waste and foreign matter).

45. L.I. Brezhnev, op.cit., p. 11.
46. J.F. Karcz, Soviet Studies, October 1965, op.cit.,
47. N. Nimitz "Soviet Agricultural Prices and Costs" Comparisons of United States and Soviet Economies, JEC, US Congress, Washington, 1959, p. 255.
48. L.I. Brezhnev, op.cit., p. 18.
49. Brezhnev, (loc.cit.) said that with current facilities only 60% of necessary farm repairs could be carried out without delay and at sufficiently high standards.
50. Narodnoe Khozyaistvo SSSR v 1965 godu p. 187.
51. The Economics of the Soviet Wheat Industry, op.cit. p.58; and see footnote (100).
52. In July 1966.
53. L.I. Brezhnev, op.cit., p. 25.
54. Ibid., p. 24.
- ✓ 55. About one-fifth of the USSR cultivated area is in the Non-Black Earth Zone; under Khrushchev it was largely neglected.
56. H.E. Walters and R.W. Judy op.cit., pp. 24-29.
57. 23rd. Congress of the C.P.S.U., op.cit., p. 211.
58. Strana Sovetov za 50 let, Moscow, 1967, p. 120.
59. Narodnoe Khozyaistvo SSSR v 1967 g., pp. 326-327.
60. 23rd Congress of the C.P.S.U., op.cit., p. 212.
61. M. Lemeshev, op.cit., p. 59.
62. H. Jacoby, Some Comments on the Grain Situation in Eastern Europe and on the U.S.S.R.'s Grain Economy, F.A.O., April 1966.
63. 23rd. Congress of the C.P.S.U. op.cit., p. 216.
64. Ibid., p. 74.
65. Ibid., p. 91.
66. SSSR v Tsifrakh v 1967 g., p. 66; and Pravda, 11 December 1968.
67. This paper was written in June 1969; Narodnoe Khozyaistvo SSSR v 1967 g. was the most recent statistical source available.

68. Pravda, 11 December 1968; Pravda, 26 January 1969.
69. The plan for 1969 is to provide the livestock sector with an additional 2 million tons of grain fodder from the State.
70. The actual yield figures were as follows (tons/acre):
- | | <u>1961-64</u> | <u>1965-68</u> |
|------------|----------------|----------------|
| Sugar Beet | 6.36 | 8.76 |
| Cotton | 0.80 | 0.96 |
| Sunflower | 0.45 | 0.51 |
71. J.P. Cole and F.C. German, A Geography of the U.S.S.R., London 1961, p. 90; in the late 1930's some non-irrigated cotton cultivation was tried in the Ukraine and N. Caucasus.
72. L.I. Brezhnev, op.cit., p. 12; Pravda, 26 January 1969.
73. N. Nimitz, "Soviet Agricultural Prices and Costs", op.cit.
74. Pravda, 31 October 1968; Pravda, 1 November 1968.
75. Kolkhozy gross capital investment in 1966 was 4,888 million roubles, in 1967 it was 5,576 million; it is estimated at 5,900 for 1968. To reach the FYP target of 30,000 million roubles the annual rate of investment will need to average 6,000 million. [In comparison, total kolkhozy investments for 1961-65 were 18,072 million roubles.] (SSSR v Tsifrah v 1967 g., p. 109).
76. SSSR v Tsifrah v 1967 g., p. 70; and Pravda, 11 December 1968 (N.K. Baibakov).
77. Pravda, 1 November 1968; [Ekonomicheskaya Gazeta No. 9, March 1968, had already criticized the lag in building new fertilizer facilities].
78. Ibid.
79. Pravda, 31 October 1968.
80. "Martovskii plenum TsK KPSS o pod'eme sel'skovo khozyaistva" Aktual'nye problemy ekonomiki sel'skovo khozyaistva, Gosplan, Moscow 1965; Sovkhozy are better equipped with machinery than kolkhozy and have 12.2 h.p. available per worker compared with the latter's 5.3 h.p.
81. Pravda, 2 April 1969.
82. Pravda, 19 November 1968.
83. "Martovskii plenum TsK KPSS o pod'eme sel'skovo khozyaistva", op.cit.

84. Pravda, 31 October 1968; Pravda, 1 November 1968.

85. Ibid.

✓ 86. Khozraschot is an abbreviation of the words khozyaistvenny raschot (enterprise accounting); an enterprise operating on this basis keeps account of all outlays which are to be covered by its income leaving also a margin of profit by which its economic performance can be measured. This is the basis of the 1965 "economic reform" which now covers almost 75% of industrial output.

✓ 87. Between 1965 and 1967 the number of sovkhozy increased by 1,102 but those of kolkhozy fell by 100.

88. T.H. Rigby, Communist Party Membership in the USSR 1917-1967, Princeton 1968, puts the number of party members engaged in agriculture in 1965 at 2,164,000 and the total number of rural communists at about 3,250,000. (pp. 490-491).

89. Pravda, 11 December 1968; Pravda, 27 December 1968.

90. Pravda, 29 December 1968.

91. Yearly losses of grain to pests in the U.S.S.R. are put at 25 million tons; overall losses to agriculture as a whole are 5-6 milliard roubles. It is planned to increase the output of chemical pest-killers in 1969-72 by 52% (Pravda, 15 November 1968).

92. Pravda, 25 November 1968; the allocation of farm pasturage for private livestock is confirmed in the revised Principles of Land Legislation in the USSR and Union Republic, 13 December, 1968, Moscow.

93. "Martovskii plenum TsK KPSS o pod'eme sel'skovo khozyaistva", op. cit.

94. The biggest problem with non-private sector beef production is that most of it comes from dairy farms where beef cattle are subsidiary to milch cows. But labour outlays for beef cattle on dairy farms amount to 31 man-days per cow p.a. whereas on beef cattle breeding farms only 9.5 man days per cow are required, or less. (Pravda 16 October 1968).

95. L.I. Brezhnev, op.cit., p.6.

96. M. Lemeshev, op.cit., p. 93.

✓ 97. In 1965 sovkhozy losses exceeded 2,000 million roubles (P.P. Silinskii Planirovanie Narodnovo Khozyaistva v Oblasti, Moscow, 1967).

- ✓ 98. In 1958, 38% of kolkhoz income came from the private sector; it was still about 31% ten years later.
- ✓ 99. On average a field-working kolkhoznik is occupied 193 days a year whereas for a worker in livestock breeding it is 321 days, [A. Emel'ianov "Neobkhodimi produkt i oplata truda v kolkhozakh" Voprosy Ekonomiki No. 3. 1966]
- ✓ 100. Early in 1965 the kolkhozy owed 2,000 million roubles to Gosbank, including 1,450 million roubles of long-term loans and 560 million roubles of short-term loans (less than one year).
- ✓ 101. A.N. Sakoff "The Private Sector in Soviet Agriculture" FAO Monthly Bulletin of Agricultural Economics and Statistics, September 1962, p. 11.
102. The Economics of the Soviet Wheat Industry, op.cit., p. 36; a sixth of rural employment is able-bodied workers on private plots.
- ✓ 103. V. Matskevich, "A New Stage in the Development of Agriculture" Soviet Economy - Plans, Problems, Prospects, Novosti Press, Moscow (undated) p. 126.
104. Information obtained by writer at Novosibirsk, September 1968.
105. Letter from Professor A. Nove to writer, 22 January 1969.
106. L.I. Brezhnev, op.cit., p. 24.
107. D. Muratov, Sel'skaya Zhizn, October 1960.
108. M. Lemeshev, op.cit., p. 87.
109. Letter from Prof. A. Nove, op.cit.; on a recent visit to Czechoslovakia, Nove was told that a substantial rise in output had resulted, without any change of system or any increase in investments, simply by letting the farm management do what they thought best in their particular circumstances.
- ✓ 110. R.D. Laird, ed., Soviet Agricultural and Peasant Affairs, London, 1964, p. (ix).
111. D.S. Poliansky (Politburo member), in Kommunist, No. 15, October 1967, pp. 15-31, cited the case of leading Gosbank officials who were deliberately trying to hinder the introduction of guaranteed monthly remuneration for kolkhozniki and also obstructing the granting of farm credit facilities. Earlier in 1967 he had warned about attitudes to cutting back fertilizer and machinery deliveries (Pravda 3 March 1967).

112. Ibid.
113. op.cit. p. 120; see also Matskevich in Itogi i Perspektivy, Sel'skoe Khozyaistvo Posle Martovskovo Plenuma Ts.K. KPSS Moscow 1967 p. 5.
114. Narodnoe Khozyaistvo SSSR v 1965g. p. 589; SSSR v Tsifrah v 1967 g. p. 23.
115. The target for industrial growth is 8.0% to 8.5% p.a.
116. The actual growth rates are 3.5% p.a. for 1965-68, 2.1% for 1959-64, 8.3% for 1953-58 and 2.7% for 1947-52. [See Appendix for explanation of short-comings in the index of gross agricultural output.]. In Australia, the average rate of growth in the volume of rural production over the last decade or so has been 4.8% a year.
117. Fodder supplies are a continuing problem; in the SYP they increased by only 0.3% for a livestock population which rose by 15.6%.
118. The Economics of the Soviet Wheat Industry, op.cit., p.40.
119. V. Matskevich, op.cit., p. 130; on this basis an educated guess would put the 1971-75 grains target at about 190-200 million tons; if acreage is not to be enlarged, this implies an increase in average yields of one-third -- not an easy task. (see Appendix 'B').
120. A. Il'ichev Voprosy Ekonomiki No. 2 1966.
In 1966 the U.S.S.R. paid 122.6 roubles per ton, f.o.b., for its imports of raw sugar from Cuba; it obtained 59.75 roubles per ton, f.o.b., for its exports of wheat (mainly to E. Europe). On this basis, labour used in the Ukraine sufficient to produce sugar beets to give 1 ton of sugar would be worth 122.6 roubles (plus freight) in import replacement cost terms; that same labour could produce wheat worth 358.5 roubles for export, i.e., almost three times the value of labour used up for sugar farming. All this would depend upon movements in the relative prices of wheat and sugar from year to year.
121. Pravda, 19 November 1968.
122. The prices of wheat, rye, sunflower seeds (for sovkhozy), buckwheat, millet, rice, cattle, pigs, sheep and, in effect, milk were raised in 1965; in 1966 the over quota prices of feed barley, oats, maize and peas were also increased.

123. See H.R. Swearer and J.F. Karcz "Agricultural Administration under Khrushchev", in Soviet Agricultural and Peasant Affairs, op.cit., pp. 9-50.
124. Prof. S. Bialer in "The Peasant vs. the Consumer: A Crisis in Prices", Problems of Communism XI No. 51 (Sept.-October 1962) pp. 9-20, implies that solving the agricultural problem is primarily a matter of "purely economic incentives". R.S. Laird in "The Politics of Soviet Agriculture", Soviet Agricultural and Peasant Affairs, op.cit., pp. 269-286, refutes this and says that whilst there must be significant increases in incentives, the main problem remains political.
125. "...the violations of the economic laws of socialist production, the principles of material incentives, the correct combination of social and personal interests and the subjectivist approach that we have had in the management of agricultural production had a negative effect on the development of agriculture". Fiftieth Anniversary of the Great October Socialist Revolution - Theses of the Central Committee of the C.P.S.U., Novosti Press, Moscow (undated), p. 31.
126. Brezhnev's report to the Plenum of the C.C. of the C.P.S.U. in October 1968 indicated that procurement prices for vegetables, raw cotton and poultry meat would be increased; but the zonal differentiation for some products would be widened, presumably to encourage production in high-cost areas. (Pravda, 31 October 1968). In February 1969 the average cotton procurement price was raised by 15%.
127. W. Klatt, "Soviet Farm Output and Food Supply in 1970" St. Antony's Papers. Number 19, Soviet Affairs: Four, ed M. Kaser, Oxford 1966, p. 110, says that this estimate adds some 5% to planned State budgetary expenditures.

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Staff 1969

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Research Interests

The Department is working in selected areas of four fields: Australian politics, bureaucracy and public policy, comparative politics, and world politics.

Structural studies of the Australian party system and political attitudes are supported by regional and national survey research; the compilation and analysis of comprehensive election statistics; case studies of party and pressure group organization and strategy; and research on Australian political history and thought since 1890.

The work on bureaucracy includes history and organization of Australian and New Guinea public services and public service associations; case studies in the administration of selected government policies; studies of ministerial responsibility and public service neutrality; and organization theory.

In comparative politics, the Department's main present interests are in power structures and personal leadership in the USSR All-Union government and selected Republics. Comparative research is also done on political parties and elites in south-east Asian countries and on political development in New Guinea.

In world politics the Department's work is complementary to that of the Department of International Relations in the Research School of Pacific Studies. It is concerned with the political theory of the subject; specifically with the structural development and future of the nation-state system; with the peacekeeping and other political roles of international organizations (e.g. UN and EEC) within the system; with strategic theory as that is related to political theory; with the nature of the nation-state and its relationships to international organizations; and with the connection between states' foreign and domestic politics.