SOVIET AGRICULTURE:

INTRODUCTION

In the West the "death" of socialism has been long predicted and eagerly anticipated by many.1 Recent events in Eastern Europe and the (former) Soviet Union seem to confirm predictions made by the critics of socialism. These critics have diligently maintained that socialism cannot work and that capitalism is a superior alternative. Over the course of the past half of a century, Western students of Soviet agrarian matters,2 in particular, have amassed an enormous body of evidence which all seems to lead to the inescapable conclusion that Soviet agriculture has been on an ever accelerating downhill course since the collectivization of the 1930's. In the words of Robert Campbell, one of America's leading specialists on Soviet economic matters, Soviet agriculture is "unreliable, irrational, wasteful, unprogressive... almost any pejorative adjective one can call to mind would be appropriate"(1974:65). And in the words of Campbell McConnell, the author of the most popular economics text in use on U.S. campuses today, "Soviet agriculture is something of a monument to inefficiency"(1975:900). These authors, more eloquently than anyone else, thus sum up the prevalent Western view of Soviet socialist agriculture.

In this paper it is argued that the Western critique of Soviet agriculture has some substance: Soviet agricultural plans often did fail; Soviet farms were inefficient and crop got wasted on the way from field to table; the Soviet Union imported much grain; had shortages of meat; etc. In fact, the object of this paper is not to dispute evidence amassed by Western critics. Soviet agriculture could probably operate much more effectively than it has.

The intent of the paper in contrast, is to contest the myth that Western critics have constructed from (relatively) accurate observations about the Soviet Union. The paper begins by presenting the Western critics' performance criteria, their evidence concerning relative Soviet performance and then analyzes their far-reaching conclusion: socialist agriculture is, necessarily and always, a failure. The paper argues that despite the accuracy of the cited facts, the conclusions reached exaggerate the relative weaknesses of socialist agriculture. The critics' case is weak, their conclusion that socialist agriculture has failed relies upon myth.

THE CRITIQUE OF SOVIET AGRICULTURE

Western (and some Soviet) critics of the (former) Soviet Union's agricultural system claim that it suffers widespread, persistent and severe problems.3 The critics contend that these deeply rooted problems constitute evidence that the Soviet system has irredeemably failed. They further contend that, ironically, the only bright spot in the Soviet system is the private sector. They say hard Soviet reality proves that the agricultural system's genuine crisis can only be resolved by a transition to private farming, i.e., capitalism.

The heart of the critics' argument is that the Soviet agricultural system has failed both to adequately provide for the food and fiber needs of its population and to make progress towards

agricultural self-sufficiency.4 They say that compared to viable alternatives Soviet performance has been poor for more than a decade. By the late 1980's budget subsidies for food consumption had risen to about 90 billion rubles (Marrese 1990: 156) and the Soviet Union had become the world's largest importer of grain (Laird 1990:11). These high and unrepaid debts, huge subsidies and massive imports were major contributors to system-wide macro-economic instability (Brooks 1990: 90-91).
The Western critics have concluded that, however promising Soviet socialist agriculture may have once seemed, its fatal flaws are now exposed.

Western critics argue that the Soviet agricultural system has failed relative to its viable alternatives because it is inherently plagued by low efficiency in utilizing resources, by difficulties in raising productivity and by extensive waste of output and damage to the environment. The central contention of Western theoretical critiques is that Soviet agriculture is flawed in theory as well as in practice. In their view the key weaknesses of the socialist system are social ownership of the means of production and predominance of central planning as a means of economic organization and decision-making. In particular, they believe that the failure to employ private ownership and free markets ensures that the micro-incentive system will be deficient (i.e., no profit motive and weak labor incentives) and that the agricultural system will, therefore, be doomed to suffer with misallocated and inefficiently utilized resources. Such a poorly conceived system will inevitably produce shortages, require huge government subsidies and generate large trade and budget deficits.

The crisis of Soviet agriculture can only be resolved, Western critics believe, by dramatic transformations of Soviet social institutions and decision making processes. The key in their view is to allow firms to link production to the market (Nove 1986: 164; Desai 1989: 17; Marrese 1990: 166-67); to link farmworkers' rewards to their individual efforts (Marrese 1990: 166 Hedlund 1984: 203; Nove 1986: 164); and to institute private ownership (or de facto private control) of land and support the development of private farming (Marrese 1990: 166, Hedlund 1984: 203; Nove 1986: 164). As Gary Becker bluntly put it (Business Week, December 24, 1990) the Soviet Union can only avoid catastrophe if it rapidly moves towards private, free-market agriculture.

MYTH-MAKING AND SOVIET AGRICULTURE MYTHS

It may seem obvious that capitalist agriculture is both superior and preferable to socialist because evidence, facts and logic weigh in this direction. Why contend that Western critics have constructed a myth? A myth is not a lie or even just a misrepresentation. A myth is a story which seizes on aspects of the world as we know it and dramatically exaggerates some parts of the whole to make the story's point. The core myth about Soviet agriculture is that it can only be judged successful if it provides for all the Union's agricultural needs, becomes the world's leading agricultural nation and achieves theoretically defined optima in resource allocation, productive efficiency and consumer satisfaction. If not, it is judged a failure because Western critics maintain

that a better alternative, capitalist agriculture, can achieve all these results.

In Western critiques facts about relative Soviet crop yields, work force size or import levels are used as launching pads to jump to pretty far-reaching conclusions. The conclusions (low efficiency, waste, weak performance, low consumption, dependency, etc.) are then amassed to reach a crushing judgement: socialist agriculture is a failure. In the following sections this paper examines the criteria established by Western critics to judge Soviet agriculture and the sets of facts/conclusions that support their positions. Although many of the facts about Soviet agriculture are accurate, the conclusions reached exaggerate the relative weaknesses of socialist (and/or conversely, the relative strength of capitalist) agriculture.5

The Failure of Agricultural Plans

The entire history of Soviet agriculture is replete with failures of agricultural plans. From this information Western critics draw the conclusion that economic systems based on social ownership and planning are unworkable in both theory and practice (Hedlund 1984; Nove 1986; Theen 1988; Marrese 1990). Soviet plans for agriculture have failed more frequently than they have succeeded over the course of the past fifty years of socialized agriculture. Failure, however, is a relative term which tells us nothing of the magnitude of the goals set, nor of the results achieved. For example, the meat target set in the 1982-1990 Soviet Food Program was an average annual output of 20.25 million tons. Although production in 1990 reached 20 million tons (RSEEA 1991a:8), the Food Program target was not met. Therefore, the plan failed. However, to focus only on the failure to reach the meat target overlooks the important facts that in 1990 meat output was up some 30% over that in 1981 (20 million vs. 15.2 million tons) and that 1990's per capita meat consumption (67 kg)(RSEEA 1991a:8) was up some 18% over that of 1981.

In other words, significant progress towards meeting the goal of increasing meat production and consumption was achieved within the socialist agricultural system even though the plan "failed". This underlines a more general point about socialist agriculture. Its failures to achieve ambitious goals do not prove that it is a failed system; they instead emphasize the high expectations for continued improvement associated with it.

Is Socialist Agriculture a Barrier to Economic Development?

The prevalent Western view is that up until quite recently the Soviets have neglected agriculture. The critics conclude that underinvestment in agriculture has kept an overly large percentage of the work force (which they claim could have been shifted into industrial production and services) tied down in largely seasonal work (Hedlund 1984:8; Buck and Cole 1987:74). They argue that this evidence shows that socialist agriculture is a barrier to overall economic development.

Although the annual rate of investment in agriculture during and after collectivization rose some ten fold over that of the NEP period, one can nevertheless argue that the level has been sub-optimal. Compared to the many needs of its citizens, the USSR is short of resources, infrastructure and equipment. The demands on funds for investment are widespread. For example, labor-saving investment in agriculture in the Soviet Union would have released labor to its urban areas. The urban areas did not have the factories to employ, the social infrastructure to serve, or the housing

to shelter these potentially displaced workers. In other words, labor-saving investment in one sector, rural agriculture, would have released resources to sectors, e.g., urban industry, which were not prepared to productively employ them and would have increased costs to sectors, e.g. government and social services, that were as yet unprepared to bear them. Over time, as Soviet stocks of industrial plant and equipment and social infrastructure increased, labor-saving investment in agriculture might have become increasingly reasonable.

In a purely capitalist economy the implicit costs of the displacement of labor by the mechanization of agriculture are borne by the affected individuals. In (neoclassical) theory, individuals are assumed to have the capacity (and the opportunity) to deal with these costs because in theory they can always find work (full employment), borrow capital and get access to the latest technologies. In practice, however, whether in the Third World or in the U.S., mechanization of agriculture has usually entailed massive displacement of labor, significant urban migrations and creation of massive urban slums plagued by high levels of un- and under employment (Perelman 1977: 4-5).

In the U.S., in contrast to the Soviet Union, government subsidies have pumped capital into agriculture at a cost to agribusiness far below its true cost to society. Each U.S. agricultural worker, consequently, is now supported by about one third more capital than her/his industrial counterpart and by as much as fifty to seventy times (at actual exchange rates) as much as her/his Soviet counterpart. (US Statistical Abstract 1988,NKhSSSR 1989). Labor productivity and total output have soared, it is true, but so have the number of failed farms, the stocks of unsold agricultural commodities and the numbers of unemployed former agricultural workers. Replacement of labor by machinery forced an average of a million persons a year to flee rural areas. Because of lack of skills and insufficient demand for their labor, many of these migrants joined the ranks of America's already many millions of urban unemployed, poor and hungry. If U.S. agriculture appears to be free of so many of the problems which plague Soviet agriculture, it is to a large degree because these problems have been exported to the cities.6

The high social costs to displaced, unutilized and uncared for labor are explicitly recognized and added to the costs of agricultural investment in a socialized system. Consequently, under this sort of calculation it is conceivable that, given scarce investment funds, urban (or rural) industrial investments should be given priority over labor-saving agricultural investments until a sufficient demand for the labor which will be displaced from agriculture is created. A higher percentage of the labor force, especially older workers, would be retained in rural areas for a relatively longer period with socialized agricultural development. Thus evidence of a high percentage of the workforce retained in agriculture does not necessarily support Western critics' conclusion that socialist agriculture unduly hampers economic development. Instead, it suggests that in this respect the Soviet Union may have pursued a different (perhaps more humane) kind of economic development.

Soviet Incentives, Efficiency and Productivity Levels

In the eyes of Western critics, socialist ownership, management and job systems promote misallocation of resources, underperformance and land abuse. Agricultural conditions in the Soviet

Union are very difficult because much of the country has a harsh and variable climate, poor soils and inadequate rainfall. However, Western critics frequently contend that adverse natural conditions only account for a small portion of the several fold disparity between Western and Soviet yields (Laird 1990: 11). Growth in overall output levels has stagnated (Desai 1989: 15), critics argue, because of low and even declining factor productivities (Desai 1989: 3, 17;Hedlund 1984: 6).

The declines in factor productivity have occurred because socialist agriculture's incentive systems are flawed and ineffective (Desai 1989: 17, Theen 1988: 84). The absence of profit discipline, buttressed by subsidies and easy loans, means that farm management can "prosper" even though it is inefficient (Brooks 1990: 87). The system's failure to link reward to performance among collective and state farm workers means that they need not, and will not, put forth their best efforts (Theen 1988: 84; Nove 1986: 153). On the other hand, critics argue that land won't be shifted to its best use and land abusers won't be penalized because the land is not privately owned and/or because rents are not determined by market measured relative scarcity (Hedlund 1984: 185). The critics, therefore, conclude that low yields and slow growth are the product of faulty socialist economic organization and decision making, not because of an inhospitable natural environment.

Western critics make much of the point that the Soviet Union has lower yields per hectare and claim that this indicates that Soviet efficiency levels are abnormally low because of its incentive system. It is true that Soviet crop yields are only a fraction of those in the US. In 1977 the overall per hectare yield in comparable value terms was only 54% of that in the US (Diamond and Davis 1979:47). However, yields per unit of land are not, in and of themselves, a gauge of the comparative efficiency of differing types of economic systems. Conditions of soil and climate, levels of capital stock and choice of techniques together with use fertilizer and irrigation, are key factors. For example, the Soviet cotton yield habitually runs some 50% higher than that of the US (Whitehouse and Havelka 1973) and, as Harry Shaffer pointed out some years ago, East Germany has higher wheat yields (1977:95). In particular, over a 6 year period 1973-1978, the average East German wheat yield was 4.09 metric tons per hectare vs. 2.03 for the US (USDA 1979:4). During the same period the East German yield on all grains (3.86) was higher then that of the US (3.53) as was that of Czechoslavakia (3.64) and Hungary (3.96). Agricultural performance cannot be judged by yields alone, or else we'd be forced to conclude that E. European performance is superior to the US.

No amount of managerial reform or incentives will bring Soviet yields up to U.S. levels because the climate and geography of the Soviet Union will not permit it. Nevertheless, contrary to the implications of Western critics the steady increase in Soviet yields has been quite respectable (Shaffer 1990:4 and Table I). On a sown area which was roughly the same (218 vs. 216 million hectares) Soviet output during the 10th plan (1976-1980) was some 48% larger than that of the 7th (1961-1965)(NKhSSSR V 1963:242;NKhSSSR V 1980:224). This increase is largely a result of a tripling of fertilizer application and an almost two-fold expansion of the irrigated land area (NKhSSSR V 1980:238,240) (For 1986-90 output was up another 16% on 210 million hectares, RSEEA 1991a:8). These results suggest that over time additional investment and improvement of farm administration and practice can produce increases in output within a socialist

system.

Even with additional investment, geography and climate will always make Soviet agricultural performance volatile. Up until 1963 the expansion of Soviet output came primarily via an expansion of the sown area. Between 1950 and 1963, sown area increased by 49%. But that meant expansion into more marginal geographical and climatic areas. Since that time the sown area has remained rather stable, and because of the marginal character of new lands, levels of output have been more volatile. Since 1965, increases in output have come from ever higher levels of investment and material inputs, much of which attempts to compensate for the marginal character of the land. Inputs into agriculture in 1977 were up 75% over that of 1950, but output was up 145% (Diamond and Davis 1979:20). Regardless of Western perceptions, in the 1970's the combined productivity of the resources devoted to agriculture averaged more than a third greater than in 1950 (Diamond and Davis 1979:20).

The productivity of Soviet farm labor is only a fraction of that of US farm labor. In 1977 26.5 million Soviet farm workers produced some $33 billion (1957-1959 prices), while some 4.2 million US farm workers produced some $36.7 billion (Diamond and Davis 1979:42). Each Soviet farm worker therefore produced only $1,296 of output, i.e., less than 13% of the $10,082 produced by his/her US counterpart. However, Soviet productivity of agricultural labor runs about the same as, or higher than that of many nations of Western Europe. According to a well known study by Earl Brubaker, the productivity of Soviet agricultural labor (depending on the price weights used to value output) ran from 3% to 25% higher than the Italian(Brubaker 1972:440).

The productivity of Soviet agricultural labor is lower than that of the US, primarily because in addition to a far less favorable climate and soil, the Soviet worker has far less capital stock with which to work. In 1977, for example, there were 1.3 tractors and 71 HP of tractor power for each worker on US farms. At the same time there were only .95 tractors and 7 HP of tractor power per worker on Soviet farms. In 1977 there were .73 trucks per worker on US farms, while there were only .056 per worker on Soviet farms. That same year there were 36.7 hectares of sown area per worker on US farms while there were only 8.68 per worker on Soviet farms. In addition, fertilizer utilization per worker on US farms in 1977 was about four times as great as on Soviet farms and energy use per farm worker in the US was a multiple of the Soviet's (NKhSSSR V 1979 andU.S. Statistical Abstract 1978). The US farm worker is more productive than his/her Soviet counterpart by a factor of 7 or 8 to 1 because the US farm worker employs vastly more resources. Considering the differences in climate, geography and, especially, capital stock between the US and the former Soviet Union, the difference in agricultural output per worker in the two countries clearly cannot be reduced to their different ownership and incentive systems.

Waste in Soviet Agriculture

Western critics argue that the Soviet agricultural system wastes natural, labor and other resources (as well as output) because it doesn't have a system of ownership rights that ensures that labor and materials are economized, property is maintained and output is preserved. They implicitly suggest that such waste does not occur within a capitalist economy. William Webster, while director of the CIA, claimed that as much of 40% of total Soviet agricultural output was wasted

(Boston Globe, May 31, 1991). Other sources more commonly quote a figure of about 25% (Marrese 1990:156). This waste occurs in the field, in transit and in storage, often because of the poor use of existing resources, as well as because of a lack of facilities (Hedlund, 1984:6). Critics point to the overly large agricultural work force, evidence of wasted output and degraded land to show that compared to capitalism, socialist economic actors lack the motivation and/or ability to economize and conserve resources.

Soviet farms utilize far more labor than US type farms, even when climate, soil conditions and capital intensity are adequately taken into account. It seems, then, that capitalist type farms are far more effective than socialist types in minimizing labor costs. They seem to not waste nearly as much precious human skill and effort as a socialist system does. Capitalist farms appear more efficient in the utilization of labor resources only if one confines the analysis to the point of production. If one expands the analysis to the farm economy as a whole, thereby including some usually ignored costs, the verdict becomes decidedly less clear. The work force of Soviet farms (both state and cooperative) is permanent and year round. On US farms, on the other hand, there are few permanent workers; most are hired on a temporary basis. Labor costs on Soviet farms are high because they are fixed and designed to cover year round living costs. On capitalist farms costs (wages) are incurred only for the part of the year during which the labor force is actively engaged in the fields. However, since families must live year around the US type farm does not eliminate these costs, it merely transmutes them into a different set of costs: chronic rural underemployment, rural poverty and attendant high social costs.

In the US in 1966, for example, underemployment in rural areas for persons between the ages of 20 and 64 was equivalent to one year of unemployment for 2.5 million persons(Freeman 1967:A921). In 1973 it was estimated as equivalent to the year round unemployment of 3 million persons (Tweeten and Walker 1977:46). Consequently, US rural life is associated with unbelievably harsh working conditions, extremely low wages, horrendous housing, and grossly inadequate diets (Physician Task Force 1985: 8-10, 25-95). Except for the Soviet prison camps, no one has ever claimed to find comparable conditions in the contemporary Soviet countryside.

If one were to charge US farms with the cost of this excess labor, as Soviet farms are, how would the balance sheet appear? The reported net income of US farms in 1973 was $33 billion (Statistical Abstract of the U.S. 1979:696). If one subtracts from that the estimated $22 billion in the lost wages (Tweeten and Walker 1977:46) of the 3 million lost person years and also the some $2.6 billion in direct subsidy payments to farmers, 1973 net farm income of $33 billion (a banner year) turns out to be a net farm income of only $8.5 billion or a mere 2% return on assets tied up in farming. On the other hand, in 1972 net farm income was only $18 billion, clearly not enough to cover the $20 billion in opportunity costs of lost labor and the $3.9 billion in government payments. The 1972 figures show a net social loss of $5.9 billion, even without deduction of huge irrigation and other indirect subsidies.

The point is simple. Labor resources are undoubtedly wasted in the Soviet Union; it is probably possible to motivate increased effort towards farm work and to allocate labor effort more effectively on Soviet farms. Part of the Soviet farm labor force is likely redundant at least part of the year. On

the other hand, capitalist farms tend to ruthlessly cut direct labor costs whenever possible. Ideally, the conserved labor time is productively employed elsewhere, to the mutual benefit of worker, employer and society as a whole. The myth promoted by Western economists is that comparisons of Soviet socialist practice to the capitalist ideal are sufficient to draw conclusions about the failure of socialist agriculture.

The perceived weaknesses of socialist agriculture may really include strengths. To the extent that capitalism generates a push to economize on labor costs, it can lead to unemployment and poverty and thus waste people's lives. Conversely, while the Soviet agricultural system may retain excess labor it often does so because it supports its farm families year around when they have no other alternatives. The issue is therefore not as clear as Western critics contend. Since labor resources are wasted in both systems, albeit in different ways, it is not justified to leap to the conclusion that because socialist agriculture wastes some labor resources it is, therefore, inherently inferior.

It is also true that a considerable amount of Soviet farm output is wasted. Not only do losses during the harvest run high, but also due to the lack of sufficient storage and transportation facilities, part of all bumper crops spoils. Mechanized farming, regardless of system, is wasteful, because machines miss and leave a considerable amount of the crops in the fields. One-fifth of the US corn crop, for example, is missed by the combines and left to rot each year in US fields (Illinois County Extension Service, cited in New York Times, October 9, 1975:24). Given the relationship between wages and corn prices, it does not pay profit-conscious US farmers to glean this residue. One can, therefore, argue the US system wastes considerable food and that this waste is not prevented by a desire to preserve ownership rights, but is instead caused by the desire to make a profit.

Farm output often varies due to non-economic effects (e.g. yearly climate changes). Because it does one has to choose to invest in either excess storage and transportation capacity or to allow a shortage of such capacity. In the US problems of this kind are less critical than in the Soviet Union because, due to a more stable climate, crop output varies less. Nevertheless, during both the 1977 and the 1979 harvest seasons shortages of both storage and transportation facilities were acute in the US. Reports from all over the Midwest showed that grain was left in piles on the ground and, because many other farmers knew that the grain could not be either moved or stored, they did not bother to harvest (New York Times December 23, 1979: 14E).
Capitalist farming has its own unique kind of waste: market induced abandonment or destruction of output. Western European farmers dump their products along the roads and pour tons of milk into ditches, and US farmers destroy hogs, burn grain and potatoes, and leave their crops on the ground to rot because market prices are frequently too low. This happens even though there are hungry people in their countries. The conscious destruction of food in order to preserve profits (or to reduce money losses) and to retain ownership rights, points out that waste means something different in the two systems and that , consequently, comparisons must be carefully analyzed.

Both systems, in practice, waste resources and output. However, they waste in different ways, with different effects on different groups of people. Socialist agriculture should not be rejected because it is wasteful under the presumption that capitalist agriculture isn't wasteful. Western critics contend that the efficiency of capitalist agriculture and the wastefulness of socialist agriculture are clearly

evident "truths." Sufficient counter-evidence has been presented to suggest that the correct conclusion should be more tentative and multi-faceted.

The Food Problem

The weak performance of the Soviet agricultural system, according to Western critics, dooms the Soviet economy to dependence upon foreign imports, while relegating the population to suffer low overall domestic consumption. Despite the massive imports of grain, food shortages are still commonplace (Marrese (1990: 156). Opinion polls show that Soviet consumers believe that not enough meat, vegetables and fruit are available and that, overall, their dietary needs are not met either quantitatively or qualitatively (Laird 1990: 11). The food problem seems to epitomize the weaknesses of the Soviet agricultural system.

The food problem, President Gorbachev has said, "is the most serious problem facing our nation today, and until we solve it, all of our other problems will remain intractable." As any visitor to the Soviet Union quickly ascertains, food shortages, evidenced by empty shelves and long waiting lines, are a reality of Soviet life. But to infer from these widely publicized phenomena that Soviet citizens are going hungry is simply erroneous. Despite food shortages, hunger has not been, and is not today, a part of the Soviet scene. As Dr. Kenneth Gray, the US government's top expert on Soviet agriculture, said in his testimony to the Joint Economic Committee of Congress "...the food shortages in the USSR are occurring at fairly respectable levels of consumption."

As can be seen from the United Nations data given in Table II, whether it be in terms of daily per capita intake of calories or proteins, Soviet levels of consumption for more than a quarter of a century have been on a par with those of many of the world's affluent nations. During the period 1964-1966, for example, the Soviet per capita daily intake of calories and proteins exceeded those of Sweden, Norway, West Germany and Japan.

The Soviet diet has continued to improve since the mid-sixties. The data in Table III (from 1965 to 1989) shows increased consumption of meat (63%), milk, etc. (45%), eggs (116%), vegetables (32%) and fruits (46%) among others. People have substituted these foods for potatoes (down 31%) and grain products (down 17%) so, in that sense, people have improved the quality of their diets as well as the quantity.

Their failures and weaknesses notwithstanding, the Soviets have engineered an impressive transformation of their diet. Per capita meat consumption in 1988 was at a level slightly below that of Sweden, higher than that of Norway and more than double that of Japan. While seemingly low by US standards, Soviet per capita consumption of meat, fish, and fruit is highly respectable by European standards. This can be seen in Table IV which compares Soviet and British per capita consumption levels.

Imports, Dependency and Meat

Tsarist Russia was a net exporter of grain (NKhSSSR V 1969:669). The Soviet Union of the 1980's is a large net importer of grain (Laird 1990:11; Buck and Cole 1987:74). The Soviet Union apparently has forfeited its agricultural self-sufficiency. Therefore, in the view of Western critics, this shows that socialist types of agriculture are clearly less capable of meeting national food and fiber requirements than are capitalist types.

An economic system is not inefficient because it imports. The European Community (EC-12) in 1987, for example, was a net importer of some $25.8 billion (Commission of the Eurpoean Community 1990:T/139) of agricultural products, i.e., almost double the $12.9 billion (USDA 1989:40,42) of net Soviet agricultural imports. Even when the larger population of the EC is discounted, the net per capita agricultural imports of the EC exceeded those of the USSR by over 75%. One can't simply conclude from this that the small capitalist family farms of Western Europe are less efficient than the large socialist farms of the USSR. Similarly the fact that during the pre-WW II period, as well as over the course of 1950-1960 (Statistical Abstract of the U.S. 1960:885) and during 1968 and 1969 (Statistical Abstract of the U.S. 1970:781) the US was a net importer of food and live animals does not prove, by itself, that US agriculture was inefficient. Nor do the facts that the US is the world's largest importer of meat and currently a large net importer of vegetables, fruits and fish (Statistical Abstract of the U.S. 1988), prove that US agribusiness is a failure.

Imports are also not good indicators of the overall productive capacity of an economy. The Soviet Union has a big agricultural economy. In 1989, for example, it had more cattle, hogs and sheep and produced more wheat, rye, oats, barley, cotton, potatoes, sugar, wool, milk, butter, eggs and fish (among many other products) than the US (USDA 1991). Imports only reflect an economy's relative resource endowments and productive capacities.

Soviet agricultural imports have changed significantly over the course of the past two decades. During the period 1956-1970 the USSR was a net exporter of grain, exporting (net) an average of 3.5 million tons per year (Goldich 1979:144). From 1970 onward it became a progressively heavier importer. Net grain imports rose from an average of 9.88 million tons per year over the period 1970-1974 to 20.52 million during the period 1975-1979, to 30.88 in 1980-1984 and to 32.1 million tons during the four year period 1985 1988 (USDA 1989:49). Prior to 1970 Soviet net meat imports were small but by 1990 they were approaching US levels.

These rising imports of grain and meat were not triggered, as one might be inclined to infer, from declining production. Grain production rose from an average 181.6 million tons in 1971-75 to an average 206.9 million in 1986-89. Meat production rose from 14.0 million tons in 1971-75 to 19.2 million tons in 1986-89, i.e., a 37 percent increase. The imports were triggered by the rising demand for meat which accompanied rather sharp increases in income. Per capita consumption of

meat, rose from 47.5 kg per capita in 1970 to 67 in 1989 (NKhSSSR V 1980:201-202 and V 1989: 118). In a very approximate fashion, the 5.2 million extra tons of meat produced in 1986-89 over and above the 1971-75 level required approximately 50 million tons of grain for feed, 25 million of which have come from domestic production and some 25 from additional imports. Since the increase in grain output and imports has not been sufficient to cope with the increasing requirements for domestic meat production, meat imports were increased.

Critics contend that the Soviet Union has been plagued by increasing shortages of meat, even while the government provides massive subsidies, overburdens its budget and, consequently, creates inflation. The Soviet government does provide large subsidies for consumption of meat (and dairy) products (Koopman 1990:4). The large consumption subsidy strains the Union budget. However, the problem is not that socialist agriculture has failed to produce meat, or that the Soviet population is going hungry. As shown in the last section, meat production increased in the 1980's. Yet in 1965 there were surpluses, while today there are shortages.

The solution to this paradox, as Ken Gray has pointed out, has to do with pricing (Gray 1981:44-46). Soviet meat prices had remained in the neighborhood of 2 rubles per kilo of beef, or approximately $1.24 per pound, for decades. In the setting of 1965, when the average wage was 96.5 rubles per month, meat was an expensive item for the family (NKhSSSR V 1979:394). In the setting of the late 1980's when the average wage had risen to 257 rubles per month (Durgin 1990:24), it was relatively much cheaper, consequently people have purchased much more meat. Ironically, increased shortages have grown hand in hand with increased consumption because meat is so inexpensive.

The Private Sector: A Solution?

The Soviet Union, Western analysts point out, already has in place and in operation successful alternatives to its socialized sector (Hedlund 1984; Laird 1990). Soviet citizens are permitted to farm some land individually and to either consume, barter or sell the output at free market prices on the farmers' markets. Their private plots average .1 or .3 hectares depending on the region. In 1988, private farming accounted for some 2.7% of the nation's sown area but produced some 23% of the nation's total agricultural output. In particular, these private plots produced 58% of the nation's potatoes, 29% of its vegetables, 54% of its fruits and berries, 28% of its meat and 20% of its milk. Thus, it is obvious, the analysts conclude, that private farming props up the shaky socialist agricultural system. Therefore, any thinking person, irrespective of his/her political persuasion, can only conclude from this evidence that the private sector is far more efficient and productive than the socialized sector. The Soviet Union could solve its farm problems, the critics point out, by breaking up the large socialized farms and by shifting their resources and decision-making powers to smaller, private family farms (NKhSSSR V 1988 AND AKP 9 1989: 124).

The "private" sector of Soviet agriculture is a good example of deceptive first impressions. In order to gain perspective on the efficiency of the private sector, one must consider what is grown, the contributions made by the socialized sector, and the amount of the labor input that the private sector has absorbed.

The private sector produces mostly labor intensive crops. Sixty-nine percent of the private sector plots are devoted to potatoes, vegetables and melons. Those plots account for 46% of the nation's total potato acreage and almost 50% of its potato output (NKhSSSR v 1988: 452). In the case of milk production, in 1988 the private sector had 31% of the nation's cows and produced 20% of its milk (NKhSSSR V 1988: 481 & 485). In these cases, it is not obvious that the private sector uses its resources more efficiently than the socialized sector.

The private sector depends heavily on the socialized sector for feed. Some 60% of Soviet grain output is used as feed for livestock, but less than 1% is produced on the private plots. Except for potatoes, as has been pointed out by a US study, (Lane 1983:23-40), only a small amount of forage is grown on private plots. Hay, straw, green fodder and silage all come from the socialized sector. The same study shows that the private sector has access to large amounts of socialized sector land which it uses to pasture privately owned livestock and to harvest hay. If all of the area in the socialized sector that directly or indirectly produces feedstuff for the private sector is added to the relatively small area directly held by the households, the total area given over to supporting private farming comes to roughly 110 million hectares, or nearly 20% of all of the arable land in the USSR.

The labor input into the private sector is quite large. As of the early 1980's some 43 million families (well over a third of all families) were engaged in personal subsidiary farming. These figures include 12.6 million kolhoz farm families, 10.8 million families of employees of state agricultural enterprises, 8.8 million families of blue and white collar workers (primarily urban residents), and 10.7 million families which belong to collective orcharding and gardening societies (Shmelev 1986:10). This large number of families and persons involved in private plot production translates into a sizeable labor input. In 1962 it amounted to 43% of the total labor input into agriculture and in 1983 it accounted for 39%. (Nimitz 1967:192; Ekonomika Selskove 1986:55). The private plots may produce 25% of agricultural output on only 3% of the land, but they require about 40% of agricultural labor to achieve this level of output. Western critics argue that because capitalist farming in the Soviet Union is more efficient than socialist, it should replace it. To support their argument they point to the high output to land ratio in private farming. Their view obscures the special characteristics of the crops upon which private farming concentrates, it overlooks the socialist sector's comparable productivity in those particular crops, it omits mention of the significant indirect contribution that the socialized sector makes in support of the private and it ignores the disproportionately large labor requirements of the private sector.

The private sector is a valuable component of socialist agriculture. For example, the private sector employs family members who might otherwise be underemployed, it allows people to independently do extra work for extra income/compensation and it can give each family a greater degree of control over its productive life. Recent surveys of Soviet farm families' views on this issue indicate that they want private farming within the context of a reformed and improved socialist agricultural system (RSEEA 1991b:24). The Soviet Union will change and intensify, not resolve, it's agricultural problems by privatizing its agricultural system.7

CONCLUSION

Soviet socialist agriculture can perhaps be improved, but it has not failed. Socialist plans have often failed, but they have frequently failed only relative to admirably high goals. Soviet agriculture is reasonably productive but it is likely that it could be made more productive with increased investment in equipment and infrastructure, with more decentralized, better organized management and with rewards more carefully linked to work effort. Waste exists, but it could be reduced with improved storage and transportation facilities. Persistent shortages of meat and dairy products (and associated high subsidy costs) exist because of increased levels of consumption, however, shortages could be reduced if those items were priced to better reflect their cost of production. In this paper it has been shown that over the past decades Soviet socialist agriculture has made much progress, so in that sense it is not a failure. Further, it is conceivable that it could be improved with appropriate (socialist and democratic) reforms and investments, so in that sense it is not a failure.

The myth that socialist agriculture has failed gains much of its potency from a corresponding myth that capitalist agriculture always operates with an optimal allocation of resources, with efficient (and thus highly productive) utilization of those resources and with a consumer satisfaction maximizing distribution of agricultural outputs. Western critics employ a double standard when they compare the imperfect practice of socialist agriculture to an ideal (neoclassical) theory of capitalist agriculture. Not surprisingly, according to this misleading comparison critics conclude that socialist agriculture is a failure. In contrast, the comparison of socialist practice to capitalist practice shows that capitalist agriculture in the US does not always correspond to the neoclassical ideal. The highly subsidized mechanization of U.S. agriculture has contributed to waste in the field, to rural un- and underemployment and poverty, to massive urban migrations and to slum formation. With its emphasis on profitability capitalist agriculture has encouraged the destruction of food when prices are unprofitably low, while millions of low income people have gone hungry. The paper's brief comparisons show that capitalism in practice has serious flaws and that it is unlikely to automatically solve the problems of Soviet agriculture.8

The myth created about Soviet agriculture is pernicious because it supports seemingly non-ideological policy interpretations and alternatives. In isolation each contention by Western critics seems reasonable, despite some exaggeration and inattention to conflicting evidence. However, taken all together they form a chorus singing the praises of one system while damning another. The net effect is to create a mythology of capitalist rationality and efficiency that contrasts favorably with the exaggerated weaknesses of the Soviet agricultural system. The possibility that socialized agriculture may be able to make valuable contributions to improving human welfare should not be dismissed on the basis of this myth.

NOTES

1.This paper relies heavily on Frank A. Durgin's research, data choice and knowledge of Soviet agriculture.

2.There are many different critics of Soviet agriculture and society. The ones to which I refer are among the academic economists who specialize in Soviet agriculture. I've tried to cite a diverse set of critics to illustrate how widely these views are held.

3.The CIA's agricultural production index for the USSR was 99 in 1970 and 100 in 1980, while the comparable numbers for the US were 81 and 100. Soviet sources have admitted to unprecedented stagnation, crisis and agricultural decline (Aganbegyan 1988: 2-3). The first few years of the 80's were also not terribly good for the USSR However, it is worth noting that the index for the USSR rose to 111 in 1985 and to 122 in 1989, while the index numbers for the US in those years were 113 and 105. These figures were cited in RSEEA (1991a).

4.The Western critics' criteria for evaluating economic performance include efficient allocation and utilization of resources (e.g., percentage of labor in agricultural sector, yields per unit land and labor), the preservation and efficient distribution of output (e.g. waste and shortages), relative output and consumption levels and growth rates, and direct comparisons of private and socialized sector performance in the (former) USSR.

5.See Frederic Pryor (1991) for more general comparison of the performance of socialist and non-socialist agricultural systems. He argues their performance is highly similar in all important areas - with the exception of total factor productivity, which growth is generally lower in the socialist countries. Alan Abouchar (1991) looks at the overall economic performance of the Soviet Union. He argues that it is not obvious that its economy has failed and that it had some strengths and offers some good lessons for the Third World. In particular, he stresses that it is inappropriate to conclude from Soviet experience that socialism has failed.

6.For a systematic, historical critique of the US agricultural system see Michael Perelman (1977). On the crisis in US agriculture see Joseph Belden et. al. (1986). For an extensive treatment of the effects of the agricultural and food distribution system on the people of the US see Physician Task Force on Hunger in America (1985).

7.Some of the effects of the current transition to private ownership and market allocation can now be documented.

Shortages for most items have been eliminated in the private markets. However, the elimination of shortages occurs in a context of dramatic decreases in output (greater than 20% in many cases), increases in prices (more than 1000 percent), and consequent decreases in real purchasing power and per capita consumption (e.g., a 20-30 percent decrease in p.c. consumption of meat and dairy products) (RSEEA 1992). Michael Claudon has pointed out that some highly efficient state farms are being broken up into economically tenuous small farms as a consequence of privatization (RSEEA 1992:14).

8.In an article entitled "Dangers of Democracy", Gavriil Popov (1990) a leading reformer, (former)

Mayor of Moscow and editor of an influential economics journal was quite blunt about these matters. He wrote: "I see the main problem in the relationship between, on the one hand, populism and, on the other, the tasks that must be carried out if the economy and the society are to be transformed." He continued: "The masses long for fairness and economic equality. And the further the process of transformation goes, the more acute and the more glaring will be the gap between those aspirations and economic realities." He then made his own position clear: "The participants in the political struggle in our countries today lack the element that is most needed for them to shape a workable society: new forms of property. And in order for new forms of property and new political forces that would reflect them to appear, we need time. But that is precisely what we do not have. If we cannot soon denationalize and privatize property, we will be attacked by waves of workers fighting for their own interests."

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