

# The Soviet Rural Economy

Edited by  
Robert C. Stuart

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## *Preface*

The present book on the Soviet rural economy is the outgrowth of a long-standing perception about Western analysis of the Soviet rural economy in general and Soviet agriculture in particular. That perception, simply put, is that the demand for knowledge about the Soviet rural experience has in general outstripped the available supply of knowledge.

This imbalance seems to arise for at least three basic reasons. First, the Western demand for knowledge about the Soviet rural economy has been and remains strong. This demand results in part from the fact that the study of rural society/economy in the Soviet historical and institutional setting is of substantial interest to social scientists pursuing basic questions about rural development. At the same time, however, the rural sector has been and continues to be a crucial component of the overall Soviet economy and hence must be understood if we are to assess Soviet performance now and in the future.

Second, the number of specialists devoting some or all of their attention to the Soviet rural economy is quite small.

Third, the limitations facing researchers, for example, data limitations, have restricted progress in the field, particularly the extent to which empirical evidence can be brought to bear upon basic theoretical concepts long since tested and analyzed in market economic systems.

With this justification in hand, I began to consider a different and difficult question: How best could I induce authors to make contributions to a book, contributions that would not only enhance our basic knowledge of the Soviet rural economy, but also take us beyond traditional boundaries and provide a basis for further research? The answer, I perceived, lay in the implementation of five basic propositions, all of which have become cornerstones of the present book.

First, no major effort was made to cover all or even most of the topics that might be useful in a book devoted to the Soviet rural economy. It has been my experience that when one tries to "fill gaps" by producing a piece of research in a short period of time, the result is generally of limited worth. Thus where it could not be easily avoided, imbalance was viewed as acceptable.

Second, considerable emphasis was placed upon the selection of scholars whose work might represent a departure from tradition. This bias was in no

way a rejection of the traditional, but rather part of an effort to improve our knowledge through new methods, improved data bases, and new perspectives.

Third, emphasis was placed upon obtaining participation by scholars of a wide variety of ages, approaches, and disciplines. In part, this emphasis was thought appropriate for the achievement of departures from tradition.

Fourth, the contributors to this book were in no way constrained or limited by predetermined guidelines. On the contrary, it was hoped that the contributors would feel free to focus on whatever they thought important with whatever method or approach seemed appropriate in the particular circumstances.

Fifth, while a conference would be a useful mechanism for preparation and delivery of the research project, emphasis would be placed upon using the conference mechanism to improve the quality of the research and to do so through substantial revision of all papers based upon conference discussion and subsequent critical analysis of all papers.

Cast in this perspective, the outcome presented here represents diversity rather than conformity, and imbalance rather than balance. Furthermore, it represents the culmination of a long effort at writing and revision, one that it is hoped will serve as a stimulus to further work, not as a survey of past events.

Obviously the present book represents the inputs of many persons and a number of institutions. At the outset, I would like to thank James Millar and Paul Gregory, both of whom provided wise counsel at an early stage and on a continuing basis.

Naturally, support for such a venture is essential. In this context, I express my gratitude for the financial support of the United States Department of Agriculture, and in particular assistance provided by Kenneth Farrell, Anton Malish, and David Schoonover, all of whom were instrumental in making sure that this book could in fact appear. In the same vein, thanks go to the University of Houston Center for Public Policy for the provision of both material and administrative support.

For a superb job of presentation of the conference, I would like to thank Abbott Gleason and the staff of The Kennan Institute for Advanced Russian Studies, The Wilson Center, Smithsonian Institution, Washington, D.C.

I would be remiss if I did not thank the participants: those who delivered papers, those who chaired sessions at the conference, and those who participated from the floor. Finally, I would like to express my gratitude to the authors for their patience and understanding over the past two years as I badgered them for one revision after another, and to Matthew Held, Susan Thornton, Jim Le Maire and the staff of Rowman & Allanheld, who patiently waited for the final result.

It is with sadness that I must note the absence of a paper by Professor Arcadius Kahan, whose untimely death in March of 1982 removed from among us a colleague and scholar.

Belle Mead, N.J.  
January, 1983

# Contents

Preface	vii
Introduction: Perspectives on the Russian and Soviet Rural Economy <i>Robert C. Stuart</i>	1
<b><i>Part One Issues in Russian and Soviet Agrarian History</i></b>	
1. The Russian Agrarian Crisis Revisited <i>Paul R. Gregory</i>	21
2. A Reevaluation of Soviet Agricultural Production in the 1920s and 1930s <i>S. G. Wheatcroft</i>	32
3. Why Was NEP Abandoned? <i>Mark Harrison</i>	63
4. The Collectivization Drive and Agricultural Planning in the Soviet Union <i>Eugène Zaleski</i>	79
<b><i>Part Two Approaches to Soviet Rural Development</i></b>	
5. Views on the Economics of Soviet Collectivization of Agriculture: The State of the Revisionist Debate <i>James R. Millar</i>	109
6. The Relationship of the Death of Stalin to the Economic Changes of the Post-Stalin Era <i>Frank A. Durgin, Jr.</i>	118
7. Changes in the Soviet Model of Rural Transformation <i>Alfred Evans, Jr.</i>	143
<b><i>Part Three Contemporary Soviet Agriculture: Theory and Analysis</i></b>	
8. Factor Endowment, Variable Proportions, and Agricultural Modernization: Regional Production Functions for Soviet Agriculture <i>Elizabeth Clayton</i>	161

vi *Contents*

9. The Kolkhoz and the Sovkhoz: Relative Performance as Measured by Productive Technology	173
<i>Michael L. Wyzan</i>	
10. Improved Agricultural Location: Econometric Evidence from The Ukraine	199
<i>Kenneth R. Gray</i>	
11. The Effects of the Private Sector on the Labor Behavior of Soviet Collective Farmers	223
<i>Clark Chandler</i>	
<b><i>Part Four Contemporary Soviet Agriculture: Performance and Prospects</i></b>	
12. Rural Living Standards in the Soviet Union	241
<i>Gertrude E. Schroeder</i>	
13. Agro-Industrial Complexes: Recent Structural Reform in the Rural Economy of the USSR	258
<i>Valentin Litvin</i>	
14. Soviet Agricultural Management and Planning and the 1982 Administrative Reform	273
<i>Everett M. Jacobs</i>	
15. Prospects for Soviet Agriculture in the Eleventh Five-Year Plan: Econometric Analysis and Projections	296
<i>Daniel L. Bond and Donald W. Green</i>	
Index	321
List of Contributors	325

# ***Introduction: Perspectives on the Russian and Soviet Rural Economy***

Robert C. Stuart

It would clearly be presumptuous to think that a single essay could summarize the state of our knowledge on Russian and Soviet agriculture. Yet if a volume of essays is to make a contribution to that knowledge, clearly the content of these essays must move beyond the available literature. The reader, therefore, must be in a position to assess the findings of research in each topical area, to isolate the important questions that remain to be answered, and to consider each essay's contribution to answering those questions. In addition, the assessment should be carried out with knowledge of the available research tools and the data to which the tools will be applied.

Certainly it would be a grandiose task to expect each reader to develop the sort of assessment suggested above. At the same time, however, it would be quite unnecessary and inappropriate for this introductory essay simply to summarize each contribution. The articles can and do stand on their own, and each reader is capable of considering those that may be of particular interest. What contribution, then, can this introduction make for the benefit of the reader?

Rather than attempting to assess the extent of current scholarship about Russian and Soviet agriculture, let us consider a much narrower, but nevertheless useful, framework. Suppose we consider two questions: First, why do we conduct research on Russian and Soviet agriculture? Second, what specific questions do we seek to answer, and in what ways do data and methodological considerations constrain us in the real world?

The purpose of this introductory sketch of Russian and Soviet agriculture is to place each of the following essays in its proper context. Specifically, we will consider each contribution, seeking to elaborate those questions that are important to the topic at hand; the advances in our knowledge made by the essay; and finally, the sorts of issues that remain unresolved. The emphasis will be upon the context in which each essay arises.



## **RUSSIAN AND SOVIET AGRICULTURE: THE DEMAND FOR KNOWLEDGE**

There are two dominant reasons for our interest in Russian and Soviet agriculture. First, the Soviet agricultural model and its prerevolutionary underpinnings serve as an important component of a major economic system, a system fundamentally different from those with which we in the West are traditionally familiar. Thus prior to and after the Revolution of 1917, indeed until the late 1920s, alternative strategies of economic development for Russia and the Soviet Union were the focus of interest and frequently of discussion. Ultimately, choices were made; and institutional arrangements, incentives, and economic policies of a very different nature, namely those of centrally planned socialism, were chosen and implemented. Our interest centers not only on the nature of the choices perceived to be available and the manner in which specific alternatives were in fact chosen, but also on the degree to which the ultimate choices in fact influenced observed patterns of economic development. Underlying this interest, then, are the presumptions that the particular choices made influenced observed outcomes, and that the nature of those influences are of interest. But of interest to whom and in what context?

Consider, as an example, the case of currently less developed nations. Although Western (and some Soviet) observers have viewed Soviet agricultural performance as less than impressive, nevertheless the Soviet industrialization experience and its collective and state agricultural model are frequently appealing to underdeveloped countries, especially to those countries where rapid industrialization is a paramount objective. In this context, one would want to focus upon the nature of the Soviet agricultural system and the extent to which that system might be applicable in a different setting.

A second and obviously related source of interest in Russian and Soviet agriculture might be essentially pragmatic. Consider another example. In the present day and indeed in prerevolutionary times, the Soviet Union (and Russia) is a major consumer and a major producer of food products and, as such, a major factor in the world food balance. Any effort to understand that balance and to project its future trends must necessarily include the Soviet agricultural scenario. In short, it is necessary to understand how Soviet agriculture works, and how well it works.

Our pragmatic "need to know" about Soviet agriculture has necessarily influenced the nature of our research and the specific sorts of questions for which we have sought answers. At the same time, the search for answers has frequently been constrained, if not by methodological limitations then by the absence of data. However, if we are to develop a meaningful picture of this different agricultural system, then we must take some risks, try some new approaches, and apply the best methods and skills available to those data that we have. Thus we must look at the past and the present, and we must do so with both theoretical and empirical investigation.

This essay will follow the outline of the volume. Thus we begin with a discussion of the early years, the periods immediately preceding and follow-

ing the Revolution of 1917. Thereafter, we turn to an examination of contemporary Soviet agriculture, including examination of recent performance patterns and projections for the 1980s.

## **THE SUPPLY OF KNOWLEDGE: THE EARLY YEARS**

Although it may be somewhat artificial to isolate particular periods in economic history, our initial interest in this volume centers on what we have described as the early years, that is, the period from the 1880s through the Revolution of 1917, and thereafter through the 1920s. What are the important issues of this early era?

First, throughout the early years, agriculture in particular and the rural economy more generally formed the dominant sector of the Russian and later Soviet economies. This dominance could be observed by almost any indicator, such as labor and capital shares or value of output. Thus reference to the Russian and Soviet economic development of the early years must consider agriculture.

Second, it is well known that Soviet agriculture underwent a dramatic transformation in the late 1920s and early 1930s through the process of collectivization. Thus it was at the end of the early years that a new era began, an era characterized by new organizational arrangements, new incentive arrangements, and new policies. To what extent did the experience of the prerevolutionary and precollectivization agricultural scenario play a role in the ultimate choices that were made and the manner in which those choices were implemented?

Given the importance of agriculture in the Russian and subsequent Soviet arrangements, it is not surprising that the matter of agriculture's role in economic development would be a matter of continuing discussion. In particular, the question of agricultural performance would be a key issue. Much of the material in the first section of this volume is devoted to an examination of this central issue—how well did agriculture perform in the early years, and to what extent did performance or perceptions of performance influence the choices made?

Turning first to the prerevolutionary years, many analysts have focused upon the Russian rural economy for the light that such an investigation might shed upon political and economic forces leading to the Revolution of 1917, the base upon which postrevolutionary agricultural development would proceed.<sup>1</sup> Was Russian agriculture backward and unproductive, operating under the vestiges of feudal arrangements, inadequate inputs, lack of appropriate technology, and so on; or were the beginnings of a modern agricultural sector already observable in the 1880s?

In recent years, a number of scholars, including Kahan, Gregory, Wheatcroft, Davies, and others have attempted to reexamine the record of the early years.<sup>2</sup> What is the prevailing view of this era, and what do we learn from this reevaluation?

As Paul Gregory points out in his contribution to the present volume, the traditional view of prerevolutionary Russian agriculture is schizophrenic.

On the one hand, many have argued that the Emancipation Act of 1861 and the changes instituted thereafter did not provide the watershed of a new era and did not, therefore, provide the underpinnings for modernization in the rural sector. Thus it is argued that agriculture as a dominant but generally stagnant sector became a major factor in developments that led to the Revolution of 1905 and changes thereafter. In turn, this dismal picture of the prerevolutionary era forms part of the basis which subsequent postrevolutionary (1917) changes would be justified.

At the same time, if one examines simple aggregate statistics, there are some measures by which the performance of the Russian economy and Russian agriculture in particular appear to have been generally strong in the post-1880 period. Russia was a major grain producer (the world's leading grain producer at the time of the Emancipation Act of 1861) and a major exporter of grain products. How well did Russian agriculture perform in the years preceding the Revolution of 1917, and to what extent and with what justification did the performance of these early years influence later events?

Paul Gregory looks specifically at the extent to which changes in rural levels of living (as has been argued) were a factor leading to the Revolution of 1905. Examining a number of traditional indicators, Gregory argues that contrary to the popular conception, living standards in rural Russia increased considerably during the 1880s and 1890s. The conclusion, therefore, is that the materials available to date should at a minimum provoke a reconsideration of the events and outcomes of this era.

A more positive picture of Russian agricultural performance would necessarily lead to a reexamination of the role of agriculture in subsequent events and especially the role that agriculture might have been expected to play in subsequent economic development.

The postrevolutionary and precollectivization era, the years between 1917 and 1928, has been the subject of considerable interest. This interest stems in large part from an attempt to determine the nature of the forces that led to the implementation of a drastic change in Soviet agriculture, namely collectivization, in the late 1920s and early 1930s. Economists have tended to argue that during the postrevolutionary years up to 1928, state-peasant relations in the Soviet Union were generally abrasive. Thus in the face of a need to harness agriculture in the service of industrialization under less than ideal conditions, collectivization was a mechanism to exert control and, above all, to extract the surplus from the peasants. Accordingly, it has traditionally been argued that whatever the associated costs, the economic rationale of collectivization was the extraction of the surplus to finance industrialization; thus the peasants bore the major brunt of Soviet forced-draft industrialization of the 1930s and subsequent years.

In his contribution to the present volume, Mark Harrison examines some of the traditional explanations for the abandonment of the NEP arrangements.<sup>3</sup> In particular, he focuses upon the contrasting views of NEP as first, inconsistent with rapid socialist industrialization; second, inconsistent with further (though slower) industrialization; and finally, a purely political option. Harrison concludes that the abandonment of NEP was indeed a

political action, but that it had an economic logic, the desire of the state to enforce changes in the agricultural sector consistent with rapid socialist industrialization.

Thus much of the discussion of this paper deals with what turns out to be a crucial theme of the period, the state of Soviet agricultural production and the degree to which prevailing arrangements and performance could be viewed as consistent with the objective of rapid socialist industrialization. Of no lesser importance is Stalin's perception of reality on these issues.

Thus, as was true for the prerevolutionary years, agricultural performance during the NEP period (and indeed thereafter) is a matter of central concern for the proper understanding of events and options. Typically, agricultural performance has been seen in rather simple terms, namely grain output and grain marketings. Grain is the crucial product of the agricultural sector, and its distribution is of basic importance, not only for the contribution that it might make to improved living standards and thus economic development (the central focus of the prerevolutionary period), but also for the direct contribution that it might make to the development process, the issue that became dominant during the development discussions of the 1920s.

Steve Wheatcroft tackles the difficult question of assessing the actual state of Soviet agricultural production and distribution during the 1920s and early 1930s in his discussion. What do the numbers tell us about Soviet agricultural production in this period?

After a consideration of existing indices of Soviet agricultural production (the Soviet indices and the Johnson-Kahan index), Wheatcroft develops his own estimates of both grain and livestock production. The Wheatcroft indices differ in construction from other indices primarily in terms of the degree of inclusion and the product and regional weighting used to develop an aggregate production index.

Wheatcroft provides the empirical evidence to support two important conclusions. First, he concludes that Soviet agricultural performance (production) in the 1920s was generally worse than has typically been argued. Second, he concludes that the decline in output during the early years of collectivization (the early 1930s) was greater than had previously been thought. Finally, Wheatcroft examines grain production on a regional basis, a matter of importance to our understanding of this period, since a great deal of the discussion about collectivization and its impact and results has focused upon regional differentials, the so-called grain surplus and grain deficit regions, and the nature of production arrangements in each.

In a sense, then, the Wheatcroft results could be viewed as support for a quite traditional interpretation of the events of the 1920s and 1930s, that poor agricultural performance was indeed an economic factor in the collectivization decision, but that the outcome was more negative than might have been anticipated.

As we have already noted, Western interest in the Soviet experiences of the 1920s and 1930s has focused upon the rationale, mechanics, and outcome of collectivization. Until recently, much less attention has been fo-

cused upon microeconomic issues and, in particular, how organizational arrangements were changed and national economic planning introduced.

Eugene Zaleski attempts to fill this gap with an examination of Soviet agricultural planning in the early years. Zaleski deals with planning in a number of important and interrelated dimensions. First, he examines the nature of planning, as applied to both the character and the pace of collectivization. Second, he examines both production and procurement planning arrangements of the late 1920s and early 1930s. Zaleski's conclusions are important for our reevaluation of the rationale for, and outcome of, the collectivization decision. If, as has been argued, we should consider collectivization to have been, at least in part, a political decision with a long-term perspective of the socialist transformation of the countryside, then, Zaleski would argue, the poor economic performance of Soviet agriculture in the early 1930s could be viewed as a temporary necessity or expedient—a price that had to be paid to obtain better long-term results.

Zaleski draws an important conclusion from his analysis, that we ought to pay more attention to the late 1930s, a period in which we might view collectivization without the excesses of collectivization.

It is unlikely that the controversies surrounding the early years of Russian and Soviet agricultural development will soon subside. Indeed it is to be hoped that the essays in this volume can make a positive contribution to continuing discussion.

## **THE SUPPLY OF KNOWLEDGE: APPROACHES TO SOVIET RURAL DEVELOPMENT**

It is not difficult to find a framework in which to cast, and thus to explain, the role of agriculture in the process of economic development. There are many competing explanatory models, varying in such basics as prevailing climatic conditions, the initial level of economic development, the availability of various inputs, the assumed dynamics of the development process, the organizational arrangements chosen, and so on.<sup>4</sup> Typically the role of agriculture in the development process has been cast in terms of the contribution that agriculture can make and the nature of the transformation that must take place as economic development proceeds.

Thus it is argued that during the early stages of the development process, agriculture as the dominant sector must contribute toward development. This contribution is usually product (for processing, consumption, and/or export) and labor, the latter being provided to the industrial sector. As labor departs, factor substitution, typically capital for labor in agriculture, maintains the growth of agricultural output.

In this simplified form, the picture of a contribution by agriculture has been applied to the Soviet case and provides what James Millar would term the "standard story" of collectivization. What is this story, and how has it been challenged?

The essence of the standard story is as follows: Collectivization had an economic rationale, which was the provision to the state of an agricultural

"surplus" for the purpose of financing the industrialization drive. Thus, as noted earlier, the popular conception pictures the squeeze on the peasants, which, along with a neglect of agriculture, enabled the state to extract the means for promoting industrialization.

Thus both the peasants and the workers bore the burden of industrialization. Not until the 1950s and the rise of Nikita Khrushchev would the neglect be reversed, in a series of policy changes designed to begin the crucial process of agricultural transformation, as Soviet leaders would describe it, *intensification*.

The contributions by James Millar, Frank Durgin, and Alfred Evans challenge at least two of the three perceptions outlined above. What is the nature of the challenge?

Millar, on the basis of his reconstruction of the data provided from archives by the Soviet economist Barsov, argues that collectivization did not appreciably change the magnitude of the resource flow between agriculture and nonagriculture; thus the major economic rationale for collectivization, provision of an expanded net agricultural surplus for industrialization, falls to the ground.<sup>5</sup> As Millar points out, the picture that he presents is for a limited, though important, period of time. Basically, Millar concludes that we ought to reassess our picture of collectivization in light of the possibility that it was a policy mistake on all counts.

Frank Durgin challenges the "neglect" theory of agriculture in Soviet economic development, but he does much more. As noted above, it has become customary to "periodize" the development of Soviet agriculture and to tie particular policies to particular leaders—the "Stalin era," "the Khrushchev era," and so on. Durgin makes two points that present the long-term picture of Soviet agriculture from a new perspective.

First, Durgin argues that a careful reading of the literature of the Stalin and Khrushchev years will reveal that in fact Stalin was not the ruthless suppressor of agriculture and Khrushchev the great liberalizer of agriculture. In fact, many of the programs associated with the Khrushchev years, for example, expansion of irrigation and changes in organization and management, were in fact products of the earlier Stalin years. In short, Durgin argues that Soviet agricultural policies may in fact have a far greater degree of continuity through time than is commonly ascribed to them.

Second, Durgin suggests that if one examines the extent to which Khrushchev policies in fact originated in the Stalin years, the "neglect" theory is in fact simplistic. This view is in fact harmonious with the Millar position that by a number of measures, Soviet agriculture was a net recipient of resources from nonagriculture during the early and crucial years of collectivization in the 1930s.

If the papers by Millar and Durgin tend to cast doubt upon traditional Western interpretations of the role of agriculture in Soviet economic development, Alfred Evans argues that from the point of view of structural transformation, the long-term developmental patterns of Soviet agriculture might well be cast within a rather traditional framework. Thus he states that as the transformation of the countryside has taken place, specialization has

increased, and labor has departed for employment in the urban industrial sector, to be replaced by capital in the rural sector. Consistent with these changes are concomitant organizational changes, especially the introduction of the agro-industrial complex, a relatively recent development.

## **THE SUPPLY OF KNOWLEDGE: THEORY AND ANALYSIS**

Thus far discussion has concentrated on the past, particularly on agricultural performance, the impact of the record upon policy, and the effects of changing policies on performance. In an examination of contemporary Soviet agriculture, what are the important issues of the contemporary era, and to what extent do we have useful answers to pressing questions?

Once again, for many observers of the contemporary Soviet agricultural scene, performance is the focus of interest. This interest stems in part from the poor harvest record of the 1970s, a period in which the Soviet Union became a rather persistent net importer of grain; it also relates to the long-term prospects and projections of future performance. Will Soviet agriculture continue to be the Achilles heel of the Soviet economy, as some would argue? Or is it increasingly on a modern footing, capable of meeting the food and fibre needs of the country?

While one can imagine many indicators by which performance could be assessed, two directions of investigation are of particular importance: First, how well is the Soviet population provided with basic food needs? Second, in the provision of these basic needs, how well are the traditional inputs, land, labor, and capital, being utilized?

The Western view of contemporary Soviet agriculture is, to a degree, schizophrenic, in the manner that the Western view of early Russian agriculture is. The predominant view is that Soviet agriculture simply does not work very well.<sup>6</sup> What does this generally mean? Supplies of foodstuffs to the marketplace are generally sporadic; while there have been increases over time, they remain generally inadequate. In addition, agricultural productivity is typically viewed as being low, as a policy of limiting price increases at the retail level necessitates large state subsidies. Finally, the private sector is seen as the ideologically unpalatable saving grace of the agricultural sector.

These undesirable outcomes are pinpointed to a number of familiar causal factors, including climatic problems, lack of appropriate incentives, poor planning, cumbersome organizational arrangements, and lack of proper attention to matters of scale and specialization.

At the same time, however, critics of this negative posture point out that there have been significant long-term increases in the output of agricultural products in the Soviet Union, steady dietary improvement, and an agricultural transformation that fits rather closely to a number of approaches to the role of agriculture in the development process.<sup>7</sup>

In theory, it should be possible to resort to the facts to resolve this dispute and thus uncover Soviet agricultural reality. Unfortunately our task is by no

means this simple, though recent theoretical and empirical research is beginning to provide better answers to the questions that we pose. What are the improvements?

In the past, it has frequently been necessary to assess Soviet agricultural performance by reliance upon partial indicators, simply because data limitations precluded development of a more accurate though more complex picture. Thus it has been usual to look at yields per unit of land area as an indicator of the effectiveness of resource use, an indicator particularly difficult to interpret in a land-rich, if climate-poor country.

Further, despite a tendency to view the kolkhoz as an inherently poor performer vis-à-vis the sovkhoz, data by farm type, by product, and by region have typically been inadequate, precluding the sort of analysis that would isolate the influence of differing organizational arrangements.

Finally, to take another example, most would argue that the distribution system in the Soviet Union is very poor. Thus it is quite possible to have excess demand for certain food products in urban markets, while these products spoil from lack of storage, poor transportation, improper processing, and so on. But who can cite even minimal data on the distribution system? It is very difficult to assess the contribution of this factor to overall agricultural performance, since one must rely upon anecdotal evidence from the Soviet press and the complaints of Soviet citizens.

One methodology that has proven very effective for the analysis of agricultural production is the production function. This approach, using simple econometric techniques, views a product as generated by several inputs, typically land, labor, and capital. Thus we can generate a more realistic picture of the production process, relating output to a number of inputs, rather than a single input such as land.<sup>8</sup>

The production function method allows examination of the relationship between inputs and outputs, the nature of differences in this relationship across regions, and changes in the relationship through time. Furthermore, the question of substitution of factors, that is the replacement of labor by capital as labor departs for the urban (industrial) sector, can also be investigated.

In the past, the production function analysis of Soviet agriculture has generally been conducted on the basis of highly aggregated data. The present contributions adopt a different perspective.

Elizabeth Clayton develops a production function on a regional basis, not by the more usual yet controversial republic classification, but on the basis of agricultural production conditions. It is not surprising that when compared with an aggregate production function for agriculture, regional production functions show statistically significant differences, suggesting that gains can be achieved from shifting input-output patterns on a regional basis.

One theme that permeates the Western literature on Soviet agriculture, but which is very difficult to examine and analyze in an empirical framework, is the matter of organizational arrangements and their impact upon agricultural performance. Specifically, is the sovkhoz, supplied as it is



with state inputs, a more efficient form of organization than the kolkhoz, or is there a degree of decentralization of decision making in the kolkhoz that might offset the benefits of state financing?

Michael Wyzan examines Soviet agricultural production from the production function approach by disaggregating the analysis by farm type. In spite of the growing similarities between the two types of organizations, Wyzan considers the hypothesis that in fact the kolkhoz behaves in a manner similar to the labor managed firm. This hypothesis is generally not confirmed by empirical evidence, which conforms to the Western view of the kolkhoz as being largely within Soviet planning mechanisms and arrangements.

Wyzan finds that differences in production by farm type are much less important than past discussions of this subject would suggest. Surprisingly, the kolkhoz does better than the sovkhoz in a number of instances, especially with better yields and generally better prospects for the growth of output. The sovkhoz, Wyzan finds, is clearly superior in the indicator of labor productivity, though this difference (as with some other differences) can in part be explained by the fact that the sovkhoz has access to better nonlabor inputs such as capital and land.

There is yet another Western view of Soviet agricultural production that remains to be empirically examined. It has frequently been asserted in the Western literature that Soviet agriculture is not very specialized, by farm type, region, or both. Put another way, on-site inspection and anecdotal evidence would suggest that to a degree most Soviet farms tend to raise most crops and to engage in the raising of animals. Is this picture accurate, and if so, why does Soviet agriculture not pursue the gains to be achieved from specialization?

A simple interpretation of economic theory would suggest the following conditions for the most efficient usage of resources: The production of agricultural output should be shifted from high-cost to low-cost regions. Furthermore, such a pattern of reallocation should continue until, at the margin, the cost of producing, let us say, potatoes in region A, is the same as the cost of producing potatoes in region B. Cost minimization would be appealing in the Soviet (or any other) case to the extent that two conditions are met: First, appropriate cost data must be available such that cost differences by region, farm type, etc. can be determined. Second, this information must be available to those who make production decisions, whether on the farm, in the planning agency, or some combination of the two.

In the past, it has been difficult to examine this question of specialization, largely because of the lack of appropriate data. However, for a selected but important region, the Ukraine, Kenneth Gray examines the question of specialization.

Once again, the production function approach is used to examine a basic but very important question: To what extent is there rational specialization (as defined above) in the production of sugar beets, vegetables, and sunflowers in the Ukraine?

The analysis suggests that there is evidence (with some exceptions) to sug-