

***PROPOSAL***

**Land, Labor, and Purchased Input Market Constraints on  
Economic Growth in Russian Agriculture:  
Analysis of Current Conditions and Policy Options**

**BASIS CRSP Phase II**

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**IRIS Center of the University Research Corporation, International  
University of Maryland, College Park**

**Senior Principal Investigators**

Bruce Gardner, Professor  
Department of Agricultural and  
Resource Economics  
University of Maryland  
College Park, MD 20742  
301-405-1271  
fax: 301-314-9091  
[bruceg@arec.umd.edu](mailto:bruceg@arec.umd.edu)

Eugenia Serova, Head Professor  
Higher School of Economics  
Institute for Economy in Transition  
103918 Moscow, Russia  
Gazetny pereulok, 5/3  
Phone: 7 (095) 229-7078  
Fax: 7 (095) 229-6596  
[serova@iet.ru](mailto:serova@iet.ru)

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**Submitted to:**  
Danielle Hartmann  
BASIS CRSP  
Land Tenure Center  
University of Wisconsin-Madison  
1357 University Avenue  
Madison, WI 53715

**Submitted by:**  
University Research Corporation, International  
an Affiliate of the University of Maryland, College Park  
2105 Morrill Hall  
University of Maryland  
College Park, Maryland, 20472  
Phone: 301-405-3010  
Fax: 301-405-3110

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## **Abstract**

While Russia's partial and hesitant agricultural policy reforms have had only limited success, experiments in price liberalization, restructuring of former collective farms, and new forms of private farming and contracting have generated the raw material for assessment and analysis of constraints to development of a productive, profitable market-oriented agricultural sector. Many of the key constraints are in factor markets. This research proposes to investigate four areas: (1) policy-related barriers to entering and transacting in purchased input markets, and new contractual arrangements in farming to cope with those barriers; (2) emerging forms of land markets, including leasing and movement towards transferable property rights in land; (3) coping strategies under constrained and disorganized farm credit and public financing systems, and (4) constraints on efficient allocation and mobility of farm labor. Our goals are, in each area, to improve our knowledge of the facts and emerging trends, to analyze the causes of constraints and factors promoting successful change, and to assess the pros and cons of possible policy remedies for problems. We propose a mix of surveys and case studies in a few selected regions, and econometric analysis of data from these surveys as well as secondary aggregate data in each of the four areas. The work is to be carried out primarily by Russian economists, with collaboration of U.S. experts. The research team comprises the leading reform-minded Russian agricultural economic experts and U.S. counterparts with wide and deep experience in the economics of Russian agriculture and the CIS economies more broadly.

## **Narrative Description of Proposed Research**

### *Background*

Since 1991, Russian agriculture has faced problems and policy dilemmas as grave as any confronting a developed country's agricultural sector in peacetime. Liberalization of food commodity prices, in January 1992, introduced market uncertainties at the same time that government support to agriculture declined from an estimated 11% of GDP in 1992 to 1% of GDP in 1997 (Amelina 2000). Kolkhoz and sovkhoz (both referred to hereafter as "collective farms") were reorganized, subsidized inputs were not reliably available, provision for pensioners and others on farms was sharply cut back, and private farming was introduced. All these changes occurred differently in different regions, and the pace of change varied greatly among them. The goal of market-oriented reform was a central motivation, but this goal was not fully shared by many people in agriculture and in government.

The results have been as mixed and inconclusive as the preceding policy story would lead one to expect. Restructuring of former collective farms has not proceeded very far in many areas, and after an initial spurt the growth of private farming has been slow. Incomes of workers employed in agriculture remain depressed. Yet significant changes have occurred, and market responses can be observed in the period since the ruble devaluation that accompanied the financial crisis of 1998 (Serova 2000). Output increases have been noted on household subsidiary plots, which have been enlarged and play an important role, especially where former collective farms are weakest. New arrangements are springing up in which input suppliers or other businesses related to agriculture are establishing vertically integrated or other contractual arrangements with agricultural producers. These arrangements are managing to supply much-needed fertilizer, chemical, and energy inputs in ways more promising than the barter arrangements that have characterized the dealings of many former collective farms and the *ad*

*hoc* and unpriced ways in which owner-employees of these farms often acquire inputs for their own farming enterprises on private plots. Despite the lack of fully developed land ownership rights, rental transactions under which new operators may acquire the use of increased acreage are increasing and are beginning to be economically important.

In this situation opportunities for policy-related economic research on Russian agriculture abound, and the payoff to well-chosen and carefully executed projects could be immense. The goals of the proposed research are (i) to improve our knowledge of the facts and emerging trends, (ii) to analyze the causes of constraints and factors promoting successful change, and (iii) to assess the pros and cons of possible policy remedies for problems.

(i) While data bearing on the situation as outlined above exist, the data are spotty. And the accuracy of practically all such data has been disputed. There is a crucial need for research that would assess the available data and move forward to solidify the quantitative knowledge of the facts in Russian agriculture, overall and on a regional and commodity-specific basis. Bad data have been cited as a reason to do no analytical work, but this results in a vicious circle of doing no analytical work and thereby creating no group of data users who can continually demand higher quality data. We hope in this project to create a critical group of data users who can promote the improvement of agricultural data by applying the latest economic techniques to Russian agriculture using existing data, however flawed, and thereby helping to generate demand for data needed to create a useful statistical base.

(ii) The reasons for both the good news and bad news of what has transpired in Russian agriculture since 1991 are in dispute. There can be no hope of agreement among analysts, much less policy-makers, on appropriate steps, both short- and long-run, for agricultural development

until at least a critical mass of Russian economists and other strategically placed advisors become convinced of the main explanations for the events that have transpired.

(iii) Factual and analytical findings have to be developed in ways that make sense and are acceptable to policymakers. This means specification of concrete policy options, clear statements of the pros and cons of each, and assessment from an economic perspective (encompassing both efficiency and equity considerations).

No single project could address the gamut from facts, explanation, and policy analysis for all issues confronting Russian agriculture. This proposal focuses on selected areas believed to be most important and tractable. In the judgment of the Russian and American experts who cooperated in preparing this proposal, the key topics involve land markets, labor markets, and other inputs in agricultural production. A research agenda addressed to these areas of inquiry is well suited for a 3 to 5-year BASIS project during 2001-6. The issues pertain directly to the “factor market nexus” described as being at the core of the BASIS project involving “how various factor and product markets interact and work,” and further elaborated as Crosscutting Theme 2 in the BASIS CRSP Phase II Request for Pre-proposals. All of the important agricultural inputs – land, labor, capital, and purchased inputs -- are characterized by constraints on the operation of markets and upon people who desire to transact in these markets.

#### **Current State of Knowledge**

Many scholars from Russia and around the world have attempted to gauge the post-1991 Russian economy and to make recommendations for spurring economic growth. The agricultural sector has received less attention than some others, but here too there has been a steady stream of attempts to quantify what is happening and why, and to propose appropriate remedies for problems of transition to a market economy. An early comprehensive effort was coordinated by the World Bank at the invitation of the Russian government in November 1991. That effort

resulted in a wide-ranging set of studies and recommendations (World Bank 1992a and 1992b) that nonetheless was incomplete in many details. The result was 45 recommendations for food and agricultural policy reform under six headings, of which three had a heavy component of factor market reforms (World Bank 1992a, pp. 10-14). These included a mix of structural reforms (private land ownership, a diversified rural commercial banking system, farm service enterprises for machinery) and short-term managerial changes (shift feed rations in favor of protein feeds, evaluate the energy efficiency of nitrogen fertilizer plants). But prioritization and practical recommendation on how to carry out reforms were scant. Seen from eight years later, it is striking how few of the recommendations have been followed, although some objectives of the recommendations have been at least in part achieved by other means – e.g., land rental transactions without full property rights having been established, and lending without formal collateral specifications.

The development of Coasian theory of the firm, which explains whether activities occur within economic entities (unpriced) or between them (through markets or contracts) according to the transactions costs involved (see papers by Coase and Klein et al.), has generated hypotheses that may throw light on innovations in Russian agriculture that are evolving to cope with high transactions costs in factor markets. The literature on economies of scale and scope in this framework (see Leathers 1991) may also help to throw analytical light on one of the most controversial issues in Russian agricultural policy, namely the advantages of large industrialized farms as compared to smaller, more specialized and entrepreneurial farms.

In the years since 1992 there have been numerous smaller-scale efforts to survey, analyze, and make recommendations on particular aspects of the Russian agricultural economy. Because of the early liberalization of food commodity prices, and the comprehensive efforts of

Russian statistical agencies to collect and publish prices of goods sold in state stores and city markets, several econometric studies of liberalized food market functioning have been published (e.g., Berkowitz, DeJong, and Husted, 1998; Goodwin, Grennes, and McCurdy, 1999; Gardner and Brooks, 1994). These studies indicate how difficult it is to draw conclusions about the extent, effectiveness, and consequences of even quite well documented and widely implemented reforms – so that even to this day there remains substantial disagreement about how far Russia has gone in establishing a functioning market economy in retail food commodities (particularly with respect to the importance of regional barriers to trade and arbitrage between markets).

With respect to factor markets the informational and statistical base is less well developed. Indeed much of the anecdotal evidence pertains to barter transactions (e.g., a farm trading wheat for fuel with an energy company as counterpart) that suggests a lack of functioning factor markets. Nonetheless there have been formal surveys as well as informal, but well informed and organized, interviewing efforts that have provided a substantial informational base. An important task in the early stages of the project proposed here will be to assess and draw upon this informational base, to avoid doing again what has already been done.

A most helpful step in consolidating the current state of knowledge was the conference organized by Eugenia Serova under USAID-BASIS auspices on October 1-2, 1999, at Golitsino (Moscow region). The conference focused on the status of farm privatization and restructuring, with a view to developing recommendations for national agrarian policy. Key policy figures from the Russian government as well as a variety of Russian experts and a few U.S. and Western European economists also participated. The resulting dialogue clarified considerably what the main points of contention in current Russian agricultural policy are, and what kinds of arguments and evidence would be necessary to resolve factual, analytical, and policy disagreements. The

Golitsino conference proceedings include four papers by Russian participants that provide an excellent summary of what is known about the progress of agricultural reforms to date and how the reform experience is seen by knowledgeable and influential Russian experts. The authors are E.V. Serova, V. Yu. Uzun, R.E. Praust, and A.N. Tarasov (see reference list for full citations). Serova and Uzun provide a wealth of country-wide data on production, land use, input use, and private farming since 1989, while Praust and Tarasov focus on detailed surveys of particular areas (Pskov and Rostov areas, respectively), with particular interest in private household farming by members of large formerly collective farms. Also available at the conference was a report of work by Rylko (1999) on emerging innovations in the economic organization of farming in Russia.

#### **Proposed Research Agenda for BASIS Phase II**

In contemplation of a possible extended U.S./Russian collaborative research effort under BASIS II, Richard Blue (organizer of U.S. participation at Golitsino) and Bruce Gardner (a U.S. participant at Golitsino) convened a small group of Russian and U.S. scholars, mostly economists, at the IRIS Center at the University of Maryland on July 10-12, 2000. Care was taken to obtain participation from Russians who have good academic connections and reputations, as well as links to the policy process.

The Russian participants were:

Eugenia Serova, Analytical Centre, Institute for Economy in Transition, Agrifood Economy (AFE) and Professor, Higher School of Economics

Sergei Kiselev, Deputy Minister, Ministry of Agriculture

Dmitri Rylko, Head of Center, Institute of World Economy and International Relations (IMEMO), Russian Academy of Science.

Natalya Shagaida, Senior Researcher  
Institute of Agrarian Problems and Information

Olga Yastrebova. Netherlands Economic Institute and Assoc. Professor, Moscow State University

The American participants (in addition to IRIS and USAID staff) were:

Gregory Brock  
Assistant Professor  
Georgia Southern University  
(Former USAID Moscow economist)

Bob Jolly  
Department of Economics  
Iowa State University  
(Chief of Party for multi-year USAID Ukraine Agricultural Research project)

Bill Liefert, Stefan Osborne, and Michael Trueblood  
Economists  
Economic Research Service (ERS)  
USDA

Howard Leathers and Wes Musser  
Associate Professor and Professor  
Agriculture and Resource Economics  
University of Maryland

Leonard Rolfes  
Attorney and Russia Project Leader  
Rural Development Institute  
University of Washington

Zvi Lerman  
Professor and Economist  
Hebrew University and World Bank

Bruce Gardner  
Professor, Agricultural and Resource Economics, University of Maryland and  
Director, Maryland Center for Agriculture and Natural Resource Policy

Richard Blue  
BASIS Phase I Project Director

After intensive discussion it was decided that the following areas were most promising for collaborative work:

1. Factor Market Integration and Coordination: local barriers to entering and transacting in input markets, output market relationship to input markets (including vertical integration and experimentation with new forms of contracting), transmission mechanisms of price signals for energy, fertilizer, and other purchased inputs as well as raw commodities.
2. Emerging forms of land markets: Implications for land use, investment strategies, and alternative strategies for resource sustainability.
3. Farm level and investor coping strategies under constrained and disorganized farm credit and government financing systems, the interplay between private domestic and foreign investment, and politically oriented public financial flows.
4. Labor Markets in a Labor Surplus Economy: demographics, regulatory constraints, and changing incentives in Russian agriculture sector labor markets. Implications for efficiency, employment and income generation

An overall commonality of the proposed research areas is the need for careful and detailed attention to the economic organization of factor markets, and constraints upon efficient operation and integration of factor markets attributable to governmental (national, regional, and local) policies. The subjects each contain some partially separable sub-topics, but all four are also interrelated. For example, the constraints upon financing under #3 contribute to the need for innovative contractual arrangements under #1.

### **Research Procedures**

At the IRIS College Park conference in July 2000, the Russian participants came prepared with specific research ideas. During and after the conference, interactions among the Russian and U.S. participants began the task of refining these ideas and identifying specific roles for Russian

Principal Investigators and U.S. research collaborators. Each specific topic will cover three areas of work: establishment of facts and data bearing on the issue; explanation of the facts, using econometric methods to the extent possible; and analysis of policy implications and alternatives.

1. Factor market integration and coordination.

- a. Facts and data. We will focus on quantifying the emergence of new and forms of contracting and economic organization of farming, with emphasis on how they deal with factor market constraints in purchased inputs, credit, and how they interact with existing former collective farms as sources of raw material and inputs, and linkages with output outlets. This work will be able to draw upon the USAID sponsored PRARI project in its initial stages. It is proposed to conduct case studies and industry surveys in a few selected locations (tentatively selecting three areas from the regions of Rostov, Voronezh, Krasnodar, Lipetsk, Samara, and Saratov). Data will be collected for factor payments and product receipts, quantities of inputs and outputs involved (for evaluation of barter transactions), and such details as can be obtained about contractual provisions. Methodology for work in this area has been developed by Rylko (1999). Bob Jolly has worked with such survey problems in Ukraine and will work with Rylko on further survey work in the selected regions. There will not be an attempt to obtain fully representative samples; rather there will be oversampling of new private farming arrangements, some of which have already been contacted, and comparisons with former collective farms and small independent private farms in the same area. Related research focusing on former collective farms will tackle the difficult issue of accounting for input use and income distribution between members in their capacities as workers for the whole enterprise as compared to their role as operators of household plots, an area in which Zvi Lerman among our collaborators has extensive experience in Russia and elsewhere in the CIS.

In work on this subject using secondary data, we will utilize Goskomstat statistics to trace a macro picture for Russia of the allocation of resources that has followed the redistribution of some resources away from former collective farms. A template from which this work will elaborate is that of Uzun as reported in his Golitsino conference paper (Uzun 1999). We will critically evaluate the Goskomstat and other aggregate data available, in part by comparison with survey work in some of the individual regions listed above.

Further work in this area will quantify the extent and significance of entrance barriers to agri-food markets. The subject has been investigated under the EU's TACIS project on Economic Federalism, but much further work remains to be done. The Centre for Agrifood Economy has analyzed transport costs as an impediment to market integration in Siberia and found that even there policy-related barriers to regional trade are more important. The research will focus on selected regions (to be coordinated with the farm-level surveys mentioned earlier) where barriers to trade and to entry of new firms in input supply will be assessed.

b. Analysis. A key task is to assess what difference in farm productivity is made by constraints in input markets and alternative arrangements to deal with these constraints, that is, to link the performance of input markets to farm performance. The first step is to identify quantitative indicators that measure input market performance. Indicators specific to certain inputs would include: land—the percentage of total area involved in market sales or leases; labor—the degree to which real wages correspond to the value of the marginal product of workers (which equals workers' marginal product times the price of output); capital—the percentage of loans eventually paid back; and intermediate inputs—the elasticity of transmission between changes in world prices changes in domestic prices, and regional integration of input prices.

The second step is to identify farm performance indicators. These would include productivity, cost minimization, and profitability measures (all of which are interrelated), and the third step is to link quantitatively the input market performance indicators to the farm performance indicators. ERS collaborators have carried out research on efficiency and productivity in Russian agriculture that quantitatively links market developments, institutional features, and government policies to the efficiency performance of Russian agriculture (Sedik et al., 1999; Brock, 1997). The procedures used here would build upon that work.

Because the extent to which deficient input markets cause problems for agricultural producers depends largely on the degree to which producers can substitute between inputs, we will estimate the degree of substitutability between inputs. ERS collaborators have established the feasibility of this in its study of production functions for Russian agriculture (Sedik, Trueblood, and Arnade, 1999), and their approach will be extended for purposes of this project.

With respect to regional integration of input markets, using secondary statistical data, the approach will be further development of methods that have been developed already in assessing Russian commodity market integration in research of Gardner on the U.S. side (e.g., Berkowitz et al., Gardner and Brooks). The Russian investigators will be Eugenia Serova and her colleagues.

c. Policy implications. Implications for policy issues will stem from both the descriptive and analytical findings. We hope to be able to quantify the gains in productivity, output growth, and farm income that could be attained through improved input market performance. The main policy consequence of identifying the least substitutable inputs is that priority should be given to tackling deficiencies and impediments in markets for these inputs. The work on regional input market integration will allow estimation of welfare losses to constraints on factor movement and trade, and so to quantify the benefits that can be obtained through removal of these barriers.

2. The emerging market for farmland.

a. Facts and data. We intend to survey information available on transfers of land shares, the use of “normative” prices in taxation and transfers, and quantities of land involved in various types of arrangements. All of the Russian investigators, and others connected to the Ministry of Agriculture that have asked to become involved in the period since the July College Park conference, have expressed eagerness to work in this area. Leonard Rolfes brings extensive legal and economic experience to this topic from the U.S. side. The Land Committee of the Russian Federation can provide relevant information, but for details it is necessary to go to Land Committees of *rayons* that have undertaken pilot programs in land transfer. The following areas are tentatively considered promising locations for surveys: Rostov (an oblast with intensive agriculture), Tyumen (an oblast where the government actively supports private farming), Leningrad (an oblast with less productive agricultural land but a well functioning Land Committee), and Vladimir (characteristic of Central Russia). We will also collect information from regional governments and localities on legal and regulatory obstacles to land transfer, leasing, and use of land of collateral.

b. Analysis. Descriptive data on the extent of land transactions and transfers will be linked, statistically where possible, to data on the performance of agriculture in these areas. Using approaches broadly similar to those outlined under research area #1 above, we will statistically associate land leasing arrangements, size of cultivated crop area, and productivity measures for types of farms, and as an aggregate for areas where land leasing is more prevalent as compared to areas where policies are more restrictive.

c. Policy implications. The idea here will be simply to provide evidence on what is at stake in productivity, investment in agriculture, and economic growth, and avoid explicit advocacy in this sensitive area.

### 3. Agricultural Credit and Public Finance.

a. Facts and data. Credit issues in Russia are bound up with broader questions of public finance and barriers to entry and performance in financial markets. We will undertake a study of the facts about financial and in-kind flows at the farm and *rayon* level, and of who gains and who loses as a result of these flows. Greg Brock has broad experience and expertise in this area. One level of analysis will be to choose a particular *rayon*, yet to be determined, and uncover the full details of financial flows between government budgets and farms within the region. Another is to survey both creditors and debtors in the private sector, including arrangements that occur that amount to partial vertical integration between agribusiness and farm enterprises. The work on this topic will be more purely descriptive and data development than in the preceding two areas of inquiry.

### 4. Agricultural labor and incomes

a. Facts and data. Despite obstacles to labor mobility, the Russian agricultural labor force is estimated to have shrunk since reform began by about 10 percent. As part of our surveying outlined above we will obtain information on the number of workers on farms of different types, their employment activities (on and off the farm), and wage and nonwage remuneration. We will open information on the anecdotally reported observation that some farms have incurred serious shortages of certain categories of technically skilled workers, which has limited their capacity to adopt new technology. We will also make extensive use of national and regional secondary data on population in rural areas and on farms of different sizes, including both workers and

dependents (children and the retired or disabled persons), and their economic status as compared to urban residents in these areas and nationwide.

b. Analysis. Using factor supply and demand models widely applied in the literature (e.g., Barkley 1990), we will examine whether the outflow of agricultural labor by region is correlated with the difference between the wages paid to agricultural and nonagricultural workers. A key empirical challenge will be measuring the *real wage* of agricultural workers, which can include monetary payments, in-kind payment of agricultural output, and the social-welfare services collective farms provide (health, education, housing, and entertainment).

We will also test the hypothesis that because of continued surplus labor on collective farms, the farms pay their workers a *real wage* higher than the value of their marginal product (VMP). We will then determine how far any gap between wages and the VMP of labor goes to explain the current unprofitability widely reported for former collective farms, as well as measured efficiency and other farm performance indicators. On a related matter we will attempt to determine whether that part of the real wage consisting of social-welfare services is the dominant element in the gap, and therefore the dominant explanatory variable with respect to the identified performance indicators. This will test the commonly made assertion that collective farms suffer strongly from the burden of providing for their workers' social welfare needs. The work that ERS has done in estimating agricultural production functions by region will be at the heart of this research, as the production functions allow estimation of labor's marginal product (Sedik et al., 1999).

c. Policy Implications. We hope to be able to throw light on gains to be had at the farm level from better functioning labor markets, and more broadly to contribute to the policy

discussion of the importance of off-farm work opportunities. This is important in arguing for a broader view of rural development policy than a focus on agriculture alone.

Further Development of Research Procedures. While some Russian and U.S. investigators have been mentioned in the preceding discussion, many personnel assignments and details of survey data collection, and of the analytical procedures just outlined, need elaboration and expansion to be made fully concrete and operationally effective. That will be the primary task during the preparatory year October 2000-September 2001. If our pre-proposal application is successful, we plan to coordinate this effort with the plan of work proposed by Richard Blue for the final year of his BASIS Phase I project. That work plan centers on a conference to be held in Russia, referred to as Golitsino II, a follow-up to the Golitsino conference of October 1999 mentioned earlier. Golitsino II, to be held in Spring 2001, will clearly establish the Russia-US BASIS collaboration as a positive force for research relevant to the policy dialogue. Preparation for it will involve continued e-mail interchange through which the approaches outlined for each of the four areas above will be made concrete and articulated with one another (for example by coordinating planned interviews and surveys, and agreeing upon a common set of regions for detailed study).

Research Budget Constraints. It is recognized that the budget imposes considerable constraints on the activities and approaches feasible for this project. We propose including a fairly large number of Russian and U.S. experts, being encouraged by finding in the College Park conference that we can work effectively as a team and have a usefully complementary set of skills and experiences. But this means the budget must be spread very thin (although we intend a vigorous search for funding of an expansion of the effort). In any case, our research must be extremely cost effective. The following general approach was agreed to among the Russian and

U.S. principal investigators and other participants, subject to further refinement and cost analysis. First, we cannot afford to investigate many regions in the detail necessary to make progress on the factual and analytical issues that are proposed to be addressed. The work will be concentrated in perhaps four to six oblasts selected on the basis of agro-climatic zones, access to urban markets, and, most important, evidence of governmental interest in policy reform and of response to changing price signals (for example as triggered by the 1998 devaluation). Each Russian participant has ideas about regions that will work best, as outlined earlier. Modified Delphi techniques using project participants and other experts would be used to identify regions that will provide the greatest contrast and net new information within the budget available. This task will be undertaken in the preparatory year 2000-01, so that exploratory data collection (necessary to test the workability of interview and questionnaire design) can be done in the first year of the Phase II project (October 2001-September 2002).

### **Research Personnel**

We have assembled what we believe to be a preeminent team of Russian and U.S. scholars that cover the range of expertise needed in economic theory, empirical methods, policy analysis, and on-the-ground familiarity with the situation and policy options facing Russia today. On the Russian side, the Senior Principal Investigator will be Eugenia Serova. She has a unique breadth and depth of experience in carrying out and coordinating research on Russian agriculture, and a proven track record of effectiveness in getting projects done and the results heard in the policy process. The Russian co-Principal Investigators, apart from representatives of the Ministry of Agriculture, will be those listed above as participants in the July IRIS meeting, plus one or two others from their institutions. Those institutions are the leading agricultural economics research

centers in Russia today. The Ministry of Agriculture is eager to participate and has identified two persons and associated NGOs as candidates for this project. Their involvement would be with the land and labor market aspects of the project. However, the specific individuals and extent of their activity remain to be determined during the preparatory year 2000-01. On the U.S. side, Bruce Gardner will be the Senior Principal Investigator, with Richard Blue as consultant on overall coordination of the project, and as investigators cooperating with the Russian PIs we have leading researchers on Russian agriculture from the Economic Research Service of USDA; from the Rural Development Institute, a key institution in the study of farmland issues in Russia; and experts with wide experience in the analysis of Russian commodity markets, labor markets, government finance, and the conduct of farm level surveys in the former USSR. Biographical data for all Russian and U.S. co-principal investigators and cooperating researchers are presented separately.

A number of agreements have already been tentatively reached about cooperation between U.S. and Russian team members on particular subjects, but the full range of specific activities remains to be worked out during the preparatory year 2000-01.

#### **Linkage to BASIS II Priorities and Requirements**

Institution Building in Russia: The research with each Russian participant will have an institution-building component that will vary with the type of institution (university, private research organization, or public institute) and with the type of work carried out at that institute. Improvements in knowledge and research skills will by the nature of the work and collaboration with U.S. counterparts be generated in most aspects of the work. More specifically, where surveys or interviewing is done, the research budget will incorporate training and on-the-job experience for young Russian social scientists. U.S. or other foreign nationals are to be used

only for a few specialized advice and consultant tasks. At the collaborating Russian institutions of higher education, the research will utilize upper-level students. If subsequent increases in funding permit we will also explore possibilities for assisting in the development of an upper-level policy analysis course covering benefit/cost analysis in a market setting as part of this project, using the findings and implications of our ongoing research as case study material for such a course.

Gender: Gender issues did not arise prominently in the Golitsino conference or in the IRIS meeting of July 2000. Nonetheless we recognize that the role of women in collective farm restructuring, production and marketing from household plots, and new independent private farming raises important issues in access to factor markets and credit as well as farm management and labor supply. One of our U.S. collaborators has worked in this area and is familiar with gender-related work on the Russian nonagricultural labor force that is likely to be applicable to our factor-market research (see Ogloblin 1999).

Poverty Alleviation. Theme I of the BASIS Request for Pre-Proposals refers to “breaking constraints to resource access, resource use, and asset accumulation by poor rural households.” The World Bank has described rural poverty in Russia as “wide but shallow.” A large percentage of Russian farm households have low incomes but are not desperately poor in the sense of inability to meet a minimal standard of living for survival, the situation of the poor in many countries in which USAID operates. The breadth of rural poverty in Russia means that sector-wide economic measures have a better chance of providing remedies for problems of poverty than is the case in many countries where policies aimed specifically at a subset of poor people are essential. And the shallowness of such poverty means the chances of success are higher (but still not necessarily high)! In this research we are provisionally accepting the view

that sectoral agricultural and rural policies are the most appropriate and feasible approach for providing a factor market nexus best suited to breaking constraints facing the poor. But we will be testing this view by classifying survey responses by income or other economic status indicators as the data permit, and paying special attention to the situations of the lowest-income households.

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## **Anticipated Outputs and Dissemination Activities**

The outputs to be generated include conferences open to policymakers and the general public, papers in scholarly journals, conference proceedings, briefing notes for policymakers and the public, and academic workshops and seminars in Russia.

Approximately a year after the planned Golitsino II conference, in spring 2002, we would convene a conference at which Russian policymakers, researchers, and other interested parties would have an opportunity to review our survey research plans and test-case results from the first year of the project's activities. In later years, as descriptive and analytical results emerge, working papers will be widely circulated to interested parties and posted on a website at a participating Russian and U.S. institutions (in Russian and English as applicable).

Dissemination through written materials and frequent briefings and informal seminars in Russia will be ongoing throughout the second and third year of the project. Even in the first year the project will publish informational and policy-issue briefings based on findings synthesized from the existing literature and survey work, and from the papers to be prepared for Golitsino II in the preparatory year. In addition to published written materials, we will conduct two public events and periodic government briefings in each of years 2 and 3 (and onward should the project be extended). One public event will be addressed primarily to social science professionals in Russia (both Russians and foreigners working or visiting Russia). The idea would be to keep the research community abreast of our ideas and progress and to obtain ongoing feedback on research and policy ideas. The other public event would be aimed at a wider public – press, government officials, agribusiness leaders. Here we would tentatively discuss the policy implications of our work, and address some broader economic and policy issues related to the work. Again, the idea is not only to get our results out but also to obtain feedback from interested parties. The periodic

government briefings would depend on who is interested and what we have to say. Plans for such briefings would be developed in consultation with USAID, the Russian government, and others who may be interested such as some regional governments in areas where we are working. The form, frequency, and distributional mechanisms for briefing notes and longer policy-related publications are not specified here. The intention is to adapt these to the demands perceived by policymakers and USAID.

## **Time Line of Activities**

Before the project formally begins, in October 2001, we would use the preparatory year October 2000-September 2001 to further refine the scope of initial data collection efforts, including range of questions asked, regions surveyed, and sampling frame from which to randomly select respondents. We will also carry out further literature review and make contact with ongoing analytical and data gathering efforts in Russia by the World Bank, the EU, and other institutions in Russia. We will also systematically review work on agriculture in the transition economies of Central Europe and other former Republics of the USSR.

In the first year of the project, starting in October 2001, we will test primary data gathering instruments in a selected region and will collect secondary data from all available sources. Analysis of secondary (regional aggregate and time series) data will begin. We will utilize existing data sets to the greatest extent possible before embarking on new data collection procedures. The Russia Longitudinal Monitoring Survey [see website <http://cpc.unc.edu/projects/rlms> for details] other household survey data, and other Russian primary and secondary data are well developed for some topics and regions. Greg Brock among the U.S. participants is familiar with and has access to much of the recent micro-survey work. In the first year, with input from all PIs, the team will design and test a core survey research activity, collecting only those data most critical to statistical analysis by each of the teams.

In the second year, the best developed survey designs will be implemented in selected regions, and the topics using secondary statistical data for Goskomstat and other sources will carry out further quantitative descriptive and econometric analysis of trends and cross-section variation. Full scale primary data work will be undertaken. The expertise of Bob Jolly of Iowa State, who

has extensive experience with such data collection in Ukraine, will be highly valuable in the planning and execution of this effort.

In the third year policy implications of detailed analytical studies will be tentatively developed and reviewed with Russian policymakers in informal seminars. Throughout the research, in all years, statistical and survey research will be supplemented with key informant interviews, especially with local government and farm-level decision-makers.

In the fourth and fifth years, should the project be extended, the data, econometric, and policy analysis work will continue and be elaborated as lines of inquiry pursued in earlier years prove promising or not, and in accord with policymakers questions and interests as they evolve.

## **RESEARCHERS' QUALIFICATIONS**

## Summary of Researchers' Qualifications

**Dr. Richard Blue** has been a Research Program Leader for BASIS since its inception, with responsibility for SE Asia Programs. He is currently the Principle Investigator for the BASIS Russia program. He was a Senior Foreign Service officer responsible for technical support, program strategy and development management for a variety of countries with significant agricultural development programs supported by USAID. Prior to joining USAID, he was Associate Professor at the Univ. of Minnesota, with research interests in the impact of new agricultural technologies on social and political structures in South Asia. For USAID he has managed wide-ranging evaluation research programs on issues of agriculture and rural development. Since 1997, he has developed considerable experience working with Russian leaders and with USAID program in Russia.

**Dr. Gregory Brock** received his PhD in Economics from The Ohio State University. He has FS4+ fluency in the Russian language and has published numerous articles on Russian regions and Russian agriculture specifically. Dr. Brock formerly served as a Program Economist and Program Evaluation Officer at USAID/Moscow, 1996-1998. He also worked in Russia for USAID contractor Barents Group LLC, 1994-1995 on a Fiscal Federalism project. He has lectured in English and Russian at Moscow State University, Volgograd State University and Vilnius University (Lithuania).

**Mr. Charles Cadwell** is the Chair and Principal Investigator of the IRIS Center at the University of Maryland. A lawyer with twenty-six years' experience in economic reform, deregulation, private sector development, and policy and management, Mr. Cadwell worked with IRIS founder, Professor Mancur Olson, to launch and build the IRIS project. Following Olson's death in 1998 Mr. Cadwell was named by the University to head the IRIS Center. In addition to his role as director of IRIS, Cadwell has both conducted and managed specific research and technical assistance projects at IRIS in the areas of tax reform, credit market operation, legal reform and government organization. He launched the IRIS Index research program on institutions and growth and has designed and participated in investment climate and legal and regulatory reform initiatives in Nepal, Egypt, Morocco, Indonesia, Madagascar, Malawi, Russia, Poland, Romania and elsewhere. He has studied reform processes and developed specific strategies supporting both local reformers and donors in numerous countries. In Nepal a coalition leading to a five-year liberalization project grew out of such advice. In Russia, an NGO active in 57 oblasts was formed. Cadwell has also advised USAID/Washington and missions, as well as other donors, on their strategy and plans for increasing the success of democratic and economic reform. Cadwell has experience in many countries, including Armenia, Belgium, Canada, Egypt, France, India, Indonesia, Kyrgyz Republic, Kazakhstan, Madagascar, Malawi, Mongolia, Morocco, Nepal, Philippines, Poland, Romania, Russia, United Kingdom, United States, and the West Bank.

**Dr. Bruce Gardner** is a Professor in the Department of Agricultural and Resource Economics at the University of Maryland, College Park. He has been on the faculty there since 1981, and was appointed a Distinguished University Professor in 1995. Previously he was a faculty member at Texas A&M University (1977-1980) and North Carolina State University (1968-1975). During 1975-77 Gardner was a Senior Staff Economist with the President's Council of Economic Advisers, covering agricultural issues, during the time of the first Soviet Grain Trade Agreement and the development of the 1977 Farm Bill in the Carter Administration. During 1989-92 he was U.S. Assistant Secretary of Agriculture, and the USDA's Chief Economist, in the Bush Administration. There he led the Administration's economic analysis for the 1990 Farm Bill, the Uruguay Round GATT negotiations, and the Department's general economic analysis and forecasting functions, including initiatives to develop such capabilities in Poland, Hungary, and Bulgaria. Since leaving USDA, Gardner has carried out research on several aspects of agricultural policy reform, addressing issues in both the U.S. and abroad, particularly in the former Soviet Union, Eastern Europe, Egypt, and India. Gardner's writings have concentrated on agricultural

commodity and trade policy, marketing, and farm income distribution. He has published many articles on these topics, and three books: Optimal Stockpiling of Grain (1979), The Governing of Agriculture (1981), and The Economics of Agricultural Policies (1987). His books and articles have been widely cited and have received three awards for excellence from the American Agricultural Economics Association. He was elected Fellow of the Association in 1989 and its President in 1999.

**Robert W. Jolly** is Professor of Economics at Iowa State University. He has been on the faculty since 1979 and has held a number of academic and administrative appointments. Dr. Jolly received his B.S. in Soil Science and his M.S. and Ph.D. in Agricultural Economics from the University of Minnesota. Prior to coming to Iowa State, Dr. Jolly was a research economist at Agriculture Canada from 1975-1979. Dr. Jolly's professional interests are in managerial economics and finance applied to agricultural firms. He is active in teaching, research, extension and international programs. Since 1991, Professor Jolly has been involved in several international projects in Eastern Europe and the former Soviet Union. He served as PI or Co-PI for two USAID-funded projects in the Czech and Slovak Republics (1991-1995, \$8 million). From 1995-1996 he worked with Timiryazev Agricultural Academy in Moscow, Russia on a World Bank-funded project supporting the development farm advisory systems. He currently serves as PI of the USAID-funded Ukraine Agricultural Policy Project (1997-present, \$5 million). He has also served as consultant to the World Bank on several smaller projects related to the transformation of agricultural research systems in the former Soviet Union.

**Anthony Lanyi** is Director of Economic Policy at the IRIS Center. Since joining IRIS, his projects have included: two in-depth reports (1997 and 2000) on the contribution of technical assistance to fiscal reform in Russia; a study setting out a template and strategy for modernization of the executive branch of the government in Latin American countries, with the Dominican Republic as a case study; direction of refereed studies and publications on economic reform, and organization of seminars, in India; evaluation of small- and medium-enterprise projects in Eastern Europe for the German Agency for Technical Cooperation (GTZ); and organization of a USAID-supported conference in Egypt on “Growth Beyond Stabilization” (in collaboration with the Egyptian Center for Economic Studies and the Harvard Institute for International Development). He was a co-author of the background document and a facilitator for the USAID-funded “Partners in Transition” conference, Warsaw, October 3-5, 1999. More recently, he has been working on a USAID-supported anti-corruption case study in Bolivia. Prior to joining IRIS, Lanyi served for 26 years at the International Monetary Fund, his work there included operational work--primarily in Asia and Latin America—as well as research on external debt and macroeconomic policy issues. Both inside and outside the IMF, he has taught courses on macroeconomic policy and international economics for civil servants, legislators, and students at the undergraduate and graduate levels.

**Howard Leathers** is an Associate Professor in Agricultural and Resource Economics at the University of Maryland, College Park. During 1992-93, he was a senior economist for agriculture, trade, and natural resources at the President's Council of Economic Advisers. His research focuses on agricultural policies, production, finance, and marketing. He has international experience in Zambia, Tanzania, and Moldova.

**Zvi Lerman** is a professor at the Department of Agricultural Economics and Management, The Hebrew University of Jerusalem, Israel, where he teaches financial management and accounting. Since 1991 his research focuses on land reform and farm restructuring in transition economies. He has conducted several farm-level surveys in various countries of the former Soviet Union and Central Eastern Europe, covering family farms and large farm enterprises. Much of the fieldwork is done in collaboration with the World Bank, and the survey findings have been reported in numerous publications co-authored with World Bank colleagues. Many of these publications have been translated into Russian and other languages.

**Olga Liefert** received an M.A. in Economics from Moscow State University in 1975, and Ph.D. in Economics from the Central Institute of Economics & Mathematics in Moscow in 1981. During the 1980's she was a research specialist at the Institute of Economics of the USSR Academy of Sciences in Moscow. From 1992 to 1995 she worked for the Agriculture Directorate of the Organization for Economic Cooperation and Development in Paris as a specialist on agriculture in transition countries. She began work at ERS in 1995, specializing in transition agriculture. In addition to participating in research projects (such as a current one on restructuring of the livestock sector in transition countries), she leads ERS' short term monitoring work on commodity developments in NIS agriculture. She is also an expert on Russian and other NIS agricultural data and information sources, with extensive contacts in the NIS countries.

**William Liefert** received an M.A. (1982) and Ph.D. (1986) in Economics from the University of Michigan. His fields of specialization were comparative economic systems, with a subspecialty in the economics of the former Soviet Union, and international economics. During 1984-88 he was an assistant professor of economics at Kent State University, where he taught courses in the Soviet Economy, Comparative Economic Systems, International Economics, and Microeconomic Principles. In 1988 he began work at ERS, and was promoted to senior economist in 1994. The main focus of his research at ERS has been on agriculture in Russia and the other countries of the former USSR, and he is leader of the ERS team studying agriculture in these countries. In 1993-94 he was a consultant with the Agriculture Directorate of the Organization for Economic Cooperation and Development in Paris, where his main task was to examine agricultural trade and relations among the countries of the former USSR. Liefert has presented papers at numerous professional meetings, and published extensively in outlets both inside and outside of ERS/USDA, including such journals as *American Journal of Agricultural Economics*, *Weltwirtschaftliches Archiv*, *Comparative Economic Studies*, and *Review of Income and Wealth*.

**Stefan Osborne** received an M.A. (1995) and Ph.D. (1999) in Economics from Indiana University. His fields of specialization were economics of transition and industrial organization. He taught economics in Siberia during the 1996/97 academic year with the Civic Education Project. Osborne joined ERS in 1999, where he specializes in agriculture in the countries of the former USSR. He has co-authored a paper with Michael Trueblood "An Examination of Economic Efficiency of Russian Crop Output in the Reform Period," submitted to *European Review of Agricultural Economics*. Currently he is examining market integration in Russia by measuring the price and exchange rate transmission elasticities in domestic and foreign trade for prices of various commodities, using cointegration analysis.

**Dr. Leonid Polishchuk** is an economist with broad experience in research, teaching, policy analysis and technical assistance. His main areas of research include institutional reform and development, federal-provincial relations, political economy of transition and regional economics. Since 1994 Dr. Polishchuk has been conducting projects aimed at strengthening domestic capacity for high quality economic research and education in Russia. He participated in and/or supervised collaborative studies of policy-relevant issues, such as privatization, fiscal and public sector reform, social programs and poverty reduction, etc., implemented jointly by Russian and US economists. He also worked with newly-established Russian universities and think tanks to introduce modern advanced level economic curricula, standards and tools of economic analysis, management and accounting procedures. His efforts included strengthening links of these universities and policy institutes to the government and private sector, and developing professional networks of experts and policy analysts. Another area of Dr. Polishchuk's activities is work with senior officials from the federal and regional governments and leading Russian and Western scholars on the reform of intergovernmental finance, interregional economic inequality, regional development, and legal and constitutional foundations of a federal state.

**Leonard Rolfes** is an attorney and Deputy Director of the Seattle-based Rural Development Institute (RDI). Mr. Rolfes has over eight years of legal and policy advisory experience on land tenure reform,

land market development, farm restructuring, and other rural development issues in eight countries, with his most extensive experience in Russia, where he was a resident advisor for three years. His experience includes carrying out farm-level field research, drafting legislation to establish and strengthen private land rights, designing and advocating policies for reorganizing state and collective farms into smaller and more efficient units, designing and implementing programs for providing legal assistance to rural citizens to help them exercise rights to land. Mr. Rolfes has successfully completed assignments with USAID, the World Bank, and foreign governments. Mr. Rolfes received his law degree from the University of Washington in 1990, and undergraduate degree from Tulane University (New Orleans) in 1986.

**Dr. Dmitri Rylko** has published more than 30 articles and chapters, two books and more than 100 reports, memorandums and staff papers on the main problems of agriculture and agribusiness in Russian, FSU and developed countries. He has spoken at a number of international agribusiness conferences and symposiums around the world. He received a Ph.D. in Agribusiness, Developed Market Economies from the Institute of World Economy and International Relations in 1990. He began as a researcher at the Institute of World Economy and International Relations (IMEMO) in 1983. His years of experience as a Senior and Leading Researcher at IMEMO have brought him to his current position since 1996 of Head of Agribusiness Center at IMEMO. Rylko is a member of the Working Group on Privatization and Agrarian Reform.

**Eugenia Serova** has a unique breadth and depth of experience in carrying out and coordinating research on Russian agriculture, and a proven track record of effectiveness in getting projects done and the results heard in the policy process. She has been employed with the Institute for Economy in Transition as the Head of the Agrarian Policy Division since 1994. She has also served as the Head of the Chair on Applied Microeconomics at the Higher School of Economics since 1998. Dr. Serova has specialized in the areas of agricultural economics, agri-food policy, farm cooperatives, land tenure and Russia's agrarian reform.

**Dr. Natalya Shagaida** is presently a Consultant with the Foundation for Support of Agrarian Reform and Rural Development, the RosAgroFond. She is also a Senior Researcher with the Institute of Agrarian Problems and Information. Prior to this, from 1992-1998, she was a Chief Economic Consultant of the land project (IFC) in Russia. Dr. Shagaida's primary areas of interest are land privatization and farm restructuring. Her project experience includes participation in the World Bank's research on farm debts in Russian agriculture.

**Michael Trueblood** received a Ph.D. in Agricultural and Applied Economics from the University of Minnesota in 1996. He began work at ERS in 1984, spent 1993-96 getting his Ph.D. from Minnesota, and resumed work at ERS in 1996. In recent years he has specialized in agriculture in transition and developing countries. With David Sedik and Carlos Arnade, he coauthored a paper in 1999 in *Journal of Comparative Economics* "Corporate Farm Efficiency in Russia, 1991-1995: An Efficiency Analysis." Papers of his currently submitted to journals are: "Agricultural Supply Response in the Presence of Inefficiency: The Case of Russia" (with Carlos Arnade), submitted to *American Journal of Agricultural Economics*; "An Examination of Economic Efficiency of Russian Crop Output in the Reform" (with Stefan Osborne), submitted to *European Review of Agricultural Economics*; and "Global Crop Yield Convergence: How Russian Crop Yields Compare to Other Regions" (with Carlos Arnade), submitted to *Comparative Economic Studies*.

**Dr. Vasily Yakimovich Uzun** is an experienced, qualified research specialist in economics of agriculture. He received his Doctor of Economics Degree in 1983 and he has been working at the Agrarian Institute since 1991. For the previous 15 years, Dr. Uzun has been working on issues of economic and agrarian reform in the USSR and Russia. In 1989, he published a brochure entitled, "Implementation of Economic Reform in Agro-Industry." In 1992 he co-authored the publication, "Ownership of Land and Property."

He took part in developing a concept for agrarian reform, drafts of Laws and Russian President's Decrees on implementation of the agrarian reform in Russia. From 1993 to 1998 he worked for the International Finance Corporation and was responsible for methodological leadership in developing and implementing the project, *Land Privatisation and Farm Reorganisation in Russia* (Nizhny Novgorod model). The model was supported by the Russian government and some elements of the model were endorsed for dissemination across Russia. Since 1998 he has been working as a RosAgroFond consultant for the projects *Sustainable Rural Livelihoods* and *Financial Recovery and Reorganization of Insolvent Farms* funded by the BKHF and implemented in Leningrad, Oryol, Moscow and Nizhny Novgorod oblasts.

**Dr. Olga Yastrebova** is a Senior Consultant with the Netherlands Economic Institute in Moscow. She also serves as an Associate Professor and the Chair of Agricultural Economics in the Economic Department of Moscow State University. Dr. Yastrebova has a profound knowledge in the field of agricultural economics, food and agricultural marketing, farm privatization, agrarian policy, agrarian reform, regional economics, industrial organization, commodity markets and antitrust policy. She also has vast experience as an economist in the field of agricultural and food project design, management, monitoring and evaluation, marketing studies, development of training materials in agricultural economics and food marketing, and development of practical marketing manuals for farmers. In addition, she has broad experience in lecturing in agricultural and food marketing. Dr. Yastrebova received her PhD Degree in Agricultural Economics from Moscow State University in 1981.

**CURRICULUM VITAE - PRINCIPAL INVESTIGATORS**

## **BRUCE GARDNER**

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### **EDUCATION:**

Ph.D. Economics, University of Chicago, 1968.  
B.S. Agricultural Science, University of Illinois, 1964.

### **EXPERIENCE:**

August 1981 to present: Professor, University of Maryland (Distinguished University Professor since 1995).

Assistant Secretary for Economics, U.S. Department of Agriculture, August 1989 to January 1992.

August 1980 to August 1981: Visiting Fellow, Center for the Study of the Economy and the State, University of Chicago.

July 1977 to August 1980: Professor, Texas A&M University.

August 1975 to July 1977: Senior Staff Economist, Council of Economic Advisers.

1968-1975: Assistant and Associate Professor, North Carolina State University.

### **PUBLICATIONS:**

#### **BOOKS:**

Bruce L. Gardner. Optimal Stockpiling of Grain, Lexington, Mass.: Lexington Books, 1979.

Bruce L. Gardner. The Governing of Agriculture, Manhattan, Kansas: The Regents Press, 1981.

Bruce L. Gardner. The Economics of Agricultural Policies, New York: Macmillan, 1987 (paperback edition, McGraw-Hill, 1990).

Brian D. Wright and Bruce L. Gardner. Reforming Agricultural Commodity Policy, Washington, D.C.: AEI Studies in Agricultural Policy, 1995.

SELECTED CHAPTERS IN BOOKS:

Bruce L. Gardner, "Gains and Losses from Economic Growth in Rural Areas," in Benefits and Burdens of Rural Development, Iowa State University Press, 1970.

B.L. Gardner and D.M. Hoover, "Income Distribution Effects of the Major Federal Agricultural Commodity Programs in 1966," in The Economics of Federal Subsidy Programs, U.S. Congress, Joint Committee Print, April 30, 1973, pp. 928-952.

Larry Morgan and Bruce Gardner, "Potential for a U.S. Guest-Worker Program Agriculture: Lessons from the Braceros," in the Gateway: U.S. Immigration Issues and Policies (B. Chiswick, ed.), Washington, D.C.: American Enterprise Institute, 1982, pp. 361-411.

Bruce L. Gardner, "Effects of the Reagan Administration's Macroeconomic Policies and Agricultural Programs on Agriculture," Role of Government in a Market Economy (L. Hill, ed.), Ames: Iowa State University Press, 1982, pp. 91-102.

Bruce L. Gardner, "The Case Against Mandatory Production Controls," in Farm Policy Perspectives, U.S. Senate, Committee on Agriculture, April 1984, pp. 221-24.

Bruce L. Gardner, "Seasonal Farm Labor and U.S. Farm Policy," in R. Emerson, ed., Seasonal Agricultural Labor Markets in the U.S., Iowa State U.P., 1984, pp. 450-75.

Bruce L. Gardner and Randall Kramer, "Experience with Crop Insurance Programs in the U.S." in P. Hazell, ed., Crop Insurance for Agricultural Development, Johns Hopkins Univ. Press, 1986, pp. 195-222.

Bruce L. Gardner, "International Competition in Agriculture and U.S. Farm Policy" in M. Feldstein, ed., The U.S. in the World Economy, University of Chicago Press, 1988, pp. 423-459.

Bruce L. Gardner, "Agricultural Protection in Industrial Countries," in D. Greenaway, ed., Global Protectionism, London: Macmillan, 1991, pp. 99-118.

Bruce L. Gardner and Theodore W. Schultz. "Trends in Soil Erosion and Farmland Quality," in J. Simon, ed., The State of Humanity, Oxford: Blackwell, 1995, pp. 416-424.

Bruce L. Gardner, "Why Experts on the Economics of Agriculture Have Changed Their Policy Tune," in J. Antle and D. Sumner, eds., The Economics of Agriculture, Vol. II: Papers in Honor of D. Gale Johnson, University of Chicago Press, 1996, pp. 225-243.

Bruce L. Gardner, "The Political Economy of U.S. Export Subsidies for Wheat," in Anne Krueger, ed., The Political Economy of American Trade Policy, National Bureau of Economic Research: University of Chicago Press, 1996, pp. 291-331.

Bruce L. Gardner. "Regional Trade Agreements: The Case of Agriculture," in Burki, Perry, and Calvo, eds., Trade: Toward Open Regionalism, World Bank, Conference on Development in Latin America and the Caribbean, 1998, pp. 165-69.

Bruce L. Gardner, "Canada and U.S. Farm Policies and the Creation of a Single North American Grain Market," in J. Antle and V. Smith, eds. The Economics of World Wheat Markets, Westview Press, 1999.

Bruce L. Gardner, "Returns to Policy-Related Research in Agriculture," in P. Pardey, ed. What's Economic Research Worth: Valuing Policy Research, IFPRI-Johns Hopkins, forthcoming, 2000.

Bruce L. Gardner, "Agriculture, Economics of," in *International Encyclopedia of Social Sciences*, forthcoming, Elsevier Science Publishers.

SELECTED ARTICLES:

Bruce L. Gardner, "Determinants of Farm Family Income Inequality," Am J. of Agr. Econ., Nov. 1969, pp. 753-69.

Bruce L. Gardner, "Minimum Wages and the Farm Labor Market," Am. J. of Agr. Econ., August 1972, pp. 473-6.

Bruce L. Gardner, "Economic Aspects of the Fertility of Rural-Farm and Urban Women," Southern Econ. J., April 1972, pp. 518-24.

Bruce L. Gardner, "Economics of the Size of North Carolina Rural Families," J. of Pol. Econ., March/April 1973, part II, pp. S99-S122.

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Bruce L. Gardner, "The Farm-Retail Price Spread in a Competitive Food Industry," Am. J. of Agr. Econ., August 1975, pp. 399-409.

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- H.F. Gallasch and B.L. Gardner, "Schooling and the Agricultural Minimum Wage," Am. J. of Agr. Econ., May 1978, pp. 264-268.
- Bruce L. Gardner, "Robust Stabilization Policies for International Commodity Agreements," Am. Econ. Rev. Proceedings, May 1979, pp. 1969-72.
- Bruce L. Gardner, "Efficient Redistribution through Commodity Markets," Am. J. Agr. Econ., 65 (May 1983): 225-234 (reprinted in G. Stigler, ed., Chicago Studies in Political Economy, Univ. of Chicago Press, 1988, pp. 479-97.
- B. Hottel and B. L. Gardner, "Measurement of Farm Income and Returns to Capital in Agriculture," Amer. J. Agr. Econ. 65 (August 1983): 553-557.
- Bruce L. Gardner, "Causes of Farm Commodity Programs," Jour. Pol. Econ. 95 (April 1987): 290-310.
- Bruce L. Gardner, "Rollover Hedging and Long-term Futures Markets," Am. J. Agr. Econ. 71 (May 1989): 311-18.
- Bruce L. Gardner, "Economic Theory and Farm Politics," Am. J. Agr. Econ. 71 (Dec. 1989): 1165-71.
- Bruce L. Gardner, "Changing Economic Perspectives on the Farm Problem," Journal of Economic Literature, 30 (March 1992): 62-101. (Reprinted in George H. Peters, ed., Agricultural Economics, Edward Elgar, 1995.)
- Bruce L. Gardner, "The Political Economy of Agricultural Pricing," (Review Article), The World Economy, 16 (Sept. 1993): 611-19.
- Bruce L. Gardner, "Commercial Agriculture in Urban Areas: Economics and Regulatory Policies," Agricultural and Resource Econ. Review, (April 1994): 100-109.
- Bruce L. Gardner and Karen M. Brooks, "Retail Food Prices and Market Integration in Russia," Am. Jour. Agr. Econ., 76 (August 1994): 641-46.
- W. Hoffman, B. Gardner, R. Just, and B. Hueth, "The Impact of Food Aid on Food Subsidies in Recipient Countries," Am. Jour. Agr. Econ. 76 (Nov. 1994): 733-43.
- Bruce L. Gardner, "Rationalizing Export Subsidies: Comment," Am. Jour. Agr. Econ. 77 (Feb. 1995):205-208.
- Bruce L. Gardner, "The Federal Government in Farm Commodity Markets: Recent Reform Efforts in a Long-Term Context," Agricultural History, 70 (Spring 1996):177-195.

Bruce L. Gardner and Ramon Lopez, "The Inefficiency of Interest Subsidies in Commodity Price Stabilization," American Jour. Agr. Econ., 78 (August 1996):508-16.

Bruce L. Gardner. "Agricultural Relief Legislation in 1998," *Regulation* 22 (1999) No. 1, 31-35.

Kevin McNew and Bruce Gardner, "Income Taxes and Price Variability in Storable Commodity Markets," American Jour. Agr. Econ., 81 (August 1999):508-16.

Bruce L. Gardner. "International Trade and the Future of American Agriculture," *Journal of Agribusiness* 18 (March 2000).

#### **WORK IN PROGRESS:**

"Synthesis" of Volume II (covering agriculture and the environment, macroeconomics of agriculture, agricultural policy, and economic development and agriculture) of *Handbook of Agricultural Economics*, Bruce Gardner and Gordon Rausser, eds., to be published by North-Holland, 2000 or 2001.

"The Joint Influence of Agricultural and Nonfarm Factors on Real Estate Values," (with Ian Hardie and Tulika Narayan), *American Journal of Agricultural Economics*, forthcoming, 2000.

"Economic Growth and Low Incomes in Agriculture," *American Journal of Agricultural Economics*, forthcoming, 2000.

#### **AWARDS:**

Award for outstanding article in the American Journal of Agricultural Economics, 1976 ("The Farm-Retail Price Spread in a Competitive Food Industry").

American Agricultural Economics Association, award for quality of research discovery, 1980 (Optimal Stockpiling of Grain).

AAEA honorable mention for quality of communication (with M. Martin, et al.), 1981 (for "Structural Changes in Agriculture").

Fellow, American Agricultural Economics Association, 1989.

Fellows Lecture, AAEA, 1993.

AAEA Award for Distinguished Policy Contribution, 1994.

Appointed Distinguished University Professor, University of Maryland, 1995.

AAEA Award for Quality of Communication, honorable mention (with D. Sumner and others), 1996.

Dean Gordon M. Cairns Award, University of Maryland, College of Agriculture and Natural Resources, 1997.

Elected President of American Agricultural Economics Association, 2000-01.

### **INTERNATIONAL ACTIVITIES:**

Mission to Tokyo, Japan and several days in Washington with a joint U.S./Japanese team on agricultural policy cooperation, 1979.

Summer, 1982 at International Institute for Applied Systems Analysis, Laxenburg, Austria, evaluating their world agricultural modeling system.

Served as U.S. agricultural expert at conference on Regulation and Deregulation in France and the U.S., Paris, Jan. 27-28, 1986, sponsored by the German Marshall Fund.

Member of U.S. delegation to US/USSR scientific exchange of economists, Tbilisi and Moscow, USSR, sponsored by U.S. Dept. of State, Sept. 1987.

Consultant on agricultural policy options and implications for Europe at the invitation of the Swedish Ministry of Agriculture, Nov. 16-17, 1988.

USDA missions to Bulgaria, April and December 1991, and Poland and Hungary, April 1991.

Joint work with Center for Economic Analysis and Forecasting, Moscow, on food prices and marketing in Russia, June 1992.

Presented Course of Lectures at Nordic Agricultural Economics Program, Uppsala, Sweden, June 1992.

Member, Dispute Settlement Panel under the U.S.-Canada Free Trade Agreement: Quebec's UHT milk shipments to Puerto Rico, March-May 1993.

World Bank agriculture sector review of Moldova, February 1993, and Ukraine, August 1993.

Three lectures on agricultural policy at University of Siena, Italy, June 1993.

World Bank. Advice to Government of Latvia on Agricultural Tariffs, July-August, 1994.

World Bank. Advice to Ministry of Agriculture, Poland, on Grain Storage and Processing Sector Privatization, Sept. 1994.

US State Dept. Advice to Hungary's Parliamentary Committee on Agriculture, July and October, 1995.

World Bank. Visitor and consultant on Indian Grain Price Stabilization Policy Options, Indira Ghandi Institute for Development Economics, Bombay, Feb. 1996.

US AID Advice on cotton pricing and marketing policies in Egypt, Jan.-March, 1997.

World Bank Conference with Poland's Ministry of Agriculture on Agricultural Policy Reform in Poland, Jan. 1998.

World Bank Conference on a Strategic Agricultural Data System for Mexico. Guadalajara, Feb. 1998.

Advisor to the World Bank's International Task Force on Commodities, Geneva, June 1999; Rome, March 2000; Paris, June 2000.

U.S. AID Conference on Economic Reforms in Russian Agriculture, Golitsino, Sept. 1999.

Advisor on World Bank Agricultural Strategy for ESA (Europe and Central Asia, with a focus CIS countries), May-June 2000.

**SELECTED US POLICY ACTIVITIES (since 1990):**

As U.S. Assistant Secretary of Agriculture for Economics: Led Bush Administration Testimony and Informal Discussion on the 1990 Farm Bill with the Senate Agriculture Committee, 1990, and economic analysis in support of Uruguay Round GATT negotiations. Led economic analysis in USDA of environmental policies as related to agriculture, reform of dairy marketing orders, ethanol subsidies, and other policy issues. Led missions to Bulgaria and Poland in 1991 to develop economic statistical and analytical capabilities in their Ministries of Agriculture.

Member of Dispute Resolution Panel under the U.S./Canada Free Trade Agreement, Spring, 1993.

Member of Bi-national Panel on Canadian Exports of Wheat to the U.S., under NAFTA, 1995.

Testimony before the Senate Finance and Agriculture Committees on the 1995 Farm Bill, and participant in many debates and discussions of the legislation, 1995.

Testimony before the Senate Agriculture Committee on Tobacco Buyout Legislation, Sept. 1997.

Testimony before the House Agriculture Committee on the Agricultural Economy and Farm Income Situation, July 1998.

Chair of Round Table on Risk Management Policy, before the U.S. Senate Agriculture Committee, April 1999. Testimony before the Senate Agriculture Committee on Risk Management Legislation, October 1999.

Paper for USDA's Commission on 21st Century Agriculture, January 2000.

## **EUGENIA V. SEROVA**

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### **EDUCATION:**

Moscow State University, Economic Department, (1973-1979)  
Doctor of Economics (Ph.D - 1984, Doctor - 1993)

### **EXPERIENCE:**

- since 1994     Institute for Economy in Transition  
                  Head of the Agrarian Policy Division
  
- since 1998     Higher School of Economics  
                  Head of the Chair on Applied Microeconomics
  
- 1991-1994     Ministry of Agriculture of Russia  
                  Economic advisor to the Minister
  
- 1990-1991     Agrarian Institute of the All-Union Academy of  
                  Agricultural Sciences Senior researcher
  
- 1984-1990     All-Union Academy of Agricultural Sciences  
                  Learned Secretary
  
- 1983-1984     Institute of Cybernetics of the Ministry of Agriculture  
                  of the USSR, Researcher

### **OTHER ACTIVITIES:**

- 1989-1990 - Expert of Agrarian Committee of the Supreme Soviet of the USSR, member  
of the Working group on Land Law
  
- 1990-1992     Co-ordinator of the Soviet-British research on social and historical  
development of the Soviet villages
  
- 1991-1997     Member of the Agrarian Institute of Russian Academy of Agricultural  
Sciences
  
- 1992-1994     Head of the Working group on Ag Co-operative Law in the Ministry of  
Agriculture
  
- since 1992     Member of the expert group on East/West Economic Relations in  
Agriculture, OECD
  
- 1992-1993     Expert of the Russian branch of Soros Foundation

1994 Short term expert for Arthur Anderson project "Farm restructuring"

since 1994 Professor of Higher School of Economics

1995 Expert of the Russian Center on Privatization Coordinator for USAID project "Market Oriented Farm Support Activity".

Expert for the World Bank, various projects.

Visiting expert in the OECD

Contracted for two projects for the FAO

since 1997 Member of International advisory board of Economic Education and Research Consortium (ERRC)

since 1998 Member of Board of the National Fund for education.

#### **SELECTED PUBLICATIONS:**

*Land Reform and Property.* 1990

*Agrarian Reform and Forms of Farming.* 1990

*Agricultural Co-operation in the USSR.* 1991

*Agricultural Co-operation in Russia in the Conditions of Perestroika.* 1993

*Essential Issues of Agrarian Reform in Russia.* 1994

*Problems of Monopoly in Downstream Sector.* 1994

*Finance Subsidies and Pricing in the Russian Food and Agriculture Sector in Transition.*  
1995

*La Reforma Agraria en Russia.* 1995

*Economic Groups in Countryside.* 1995

*Land Tenure in Russia.* 1995

*Producer Subsidy Equivalents for Russian agriculture: Estimation and Interpretation.*-  
Amer.J. Ag.Econ. 78,1996 (with co-authors).

*Russia's Food Economy in Transition: Current Policy Issues and the Long-Term Outlook.* Washington: IFPRI.1996 (with co-authors)

*Economy of Transition Period* Moscow: IET.1998 (with co-authors)

*Economic Behavior of Collective Enterprises.* 1998

*Agricultural economics.* (Text-book) Moscow,1999

BASIS ANNUAL WORKPLAN FY02

*Research Title*

**Input Market Constraints Upon the Growth of Russian Agriculture: Land, Labor, Capital, and Other Inputs Under Alternative Economic Reform Policies**

*Collaborating Institutions and Researchers:*

Institute for Economy in Transition, Analytical Centre (AFE) Moscow, Russia:  
Eugenia Serova, Principal Investigator

University of Maryland, Institute for Reform and the Informal Sector and Department of  
Agricultural and Resource Economics:  
Bruce Gardner, Principal Investigator, Leonid Polishchuk, Howard Leathers

Moscow State University:  
Olga Yastrebova, Sergei Kiselev

All-Russia Institute of Agrarian Problems:  
Natalya Shaigaida, V. Uzun

Institute of World Economy:  
Dmitri Rylko

Georgia Southern University:  
Greg Brock

Economic Research Service, USDA:  
Bill Liefert

Rural Development Institute:  
Leonard Rolfes

Hebrew University:  
Zvi Lerman

Iowa State University:  
Bob Jolly

*Dates/Schedule:* October 1, 2001 to September 29, 2002

*Completion Date:* September 30, 2004

*Financial Support:* Core Funding, \$201,318

### *Program Overview:*

A decade after the initial reforms of the former Soviet economy, the results in agriculture remain disappointing. Despite food price liberalization, barriers to marketing agricultural output are still present in many regions, and access to modern inputs is very limited almost everywhere. Agricultural output remains about one-third below the pre-reform levels of 1989-91. Incomes of workers employed in agriculture remain depressed. Yet significant changes have occurred. Output increases have been noted on household subsidiary plots, which have been enlarged and play an important role, especially where former collective farms are weakest. New arrangements are springing up in which input suppliers or other businesses related to agriculture are establishing vertically integrated or other contractual arrangements with agricultural producers. These arrangements are managing to supply much-needed fertilizer, chemical, and energy inputs in ways more promising than the barter arrangements that have characterized the dealings of many former collective farms and the ad hoc and unpriced ways in which owner-employees of these farms often acquire inputs for their own farming enterprises on private plots. Even without fully developed land ownership rights, it appears that rental transactions under which new operators may acquire the use of increased acreage are increasing and are beginning to be economically important.

Despite work of the World Bank in the early 1990s, and the general interest and concern of many observers, there have been few systematic research efforts to survey, analyze, and make recommendations on the post-1991 economic development of Russian agriculture. Reviews and studies undertaken to date indicate how difficult it is to draw conclusions about the extent, effectiveness, and consequences of even quite well documented and widely implemented reforms—so that, for example, even to this day there remains substantial disagreement about how far Russia has gone in establishing a functioning market economy in retail food commodities (particularly with respect to the importance of regional barriers to trade and arbitrage between markets). With respect to factor markets, the informational and statistical base is less well developed. Indeed much of the anecdotal evidence pertains to barter transactions (e.g., a farm trading wheat for fuel with an energy company as counterpart) that suggest a lack of functioning factor markets.

The objectives of the BASIS research are to quantify the extent to which factor market constraints have impaired the ability of Russian agriculture to function efficiently and profitably, to establish which constraints are most important in both the short and long run perspectives, and to provide the analytical knowledge needed to formulate policies to remedy obstacles and constraints.

### *Annual Work Plan:*

We will develop findings of three kinds: facts, analysis, and policy implications. The first year's work will be relatively heavy on mobilization of factual information and econometrically usable data, through case studies, surveys, and acquisition of secondary data from both national and selected regional government agencies.

*Facts:* Through case studies we will quantify the emergence of new forms of contracting and economic organization of farming, with emphasis on efforts by farmers to deal with factor market constraints in purchased inputs, credit, and how independently operating farms interact with existing former collective farms as sources of raw material and inputs. Methodology for the case studies has been developed and piloted by Rylko, for surveys of collective farms by Uzun, and for farm surveys we will draw on the experience of Serova and of Lerman and Jolly in former Soviet republics outside Russia . There will not be an attempt to obtain fully representative samples; rather we will focus on a four locations that are similar in soils and climate but in regions with different policy regimes. There will be oversampling of new private farming arrangements, some of which have already been contacted, and comparisons with former collective farms and small independent private farms in the same area.

Second, using secondary data, the project will trace a macro picture for Russia of the allocation of state funds that has followed the redistribution of some resources away from former collective farms. This includes flows of subsidies and other payments to farms, and taxes upon them, by all levels of government.

Third, the project will survey information available on transfers of land shares, the use of “normative” prices in taxation and transfers, and quantities of land involved in various types of arrangements. The Land Committee of the Russian Federation can provide relevant information, but for details it is necessary to go to Land Committees of *raions* that have undertaken pilot programs in land transfer. We will also collect information from regional governments and localities on legal and regulatory obstacles to land transfer, leasing, and use of land as collateral.

Fourth, despite obstacles to labor mobility, the Russian agricultural labor force is estimated to have shrunk by about 10 percent since 1991. We will develop information on the number of workers on farms of different types, their employment activities (on and off the farm), and wage and nonwage remuneration, and on reports that some farms have incurred serious shortages of certain categories of technically skilled workers, which has limited their capacity to adopt new technology. We will make extensive use of national and regional secondary data on population in rural areas and on farms of different sizes, including both workers and dependents (children and the retired or disabled persons), and their economic status as compared to urban residents in these areas and nationwide.

Fifth, we will assess the importance of lack of access to key purchased inputs through surveys of input quantities on various types of farm enterprises, including household plots and their relationship to the larger farm enterprises in which they are embedded.

*Analysis:* The analytical work will assess the consequences of observed differences across farms, regions, and over time in product prices, input availability, and other constraints discussed earlier, upon output and productivity of farming. For this work we will use several well established approaches from production economics, both parametric production function estimation and nonparametric data envelopment analysis, utilizing

the experience and expertise of Bill Liefert's team at USDA's Economic Research Service. Data on the extent of land transactions and transfers will be linked, statistically where possible, to data on the performance of agriculture. We will statistically associate land leasing arrangements, size of cultivated crop area, and productivity measures for types of farms, and as an aggregate for areas where land leasing is more prevalent as compared to areas where policies are more restrictive. This work will only begin in the first year, and will be mostly carried out in the second and third years.

Second, using factor supply and demand models widely applied in the literature, we will examine whether the outflow of agricultural labor by region is correlated with the difference between the wages paid to agricultural and nonagricultural workers. A key empirical challenge will be measuring the *real wage* of agricultural workers, which can include monetary payments, in-kind payment of agricultural output, and the social-welfare services collective farms provide (health, education, housing, and entertainment). We will also test the hypothesis that because of continued surplus labor on collective farms, the farms pay their workers a *real wage* higher than the value of their marginal product. We will then determine how far any gap between wages and the value of marginal product of labor goes to explain the current unprofitability widely reported for former collective farms, as well as measured efficiency and other farm performance indicators. On a related matter we will attempt to determine whether that part of the real wage consisting of social-welfare services is the dominant element in the gap, and therefore the dominant explanatory variable with respect to the identified performance indicators. This will test the commonly made assertion that collective farms suffer strongly from the burden of providing for their workers' social welfare needs. The work that ERS has done in estimating agricultural production functions by region will be at the heart of this research, as the production functions allow estimation of labor's marginal product (Sedik et al., 1999).

Third, we will empirically estimate the effects of farm productivity, control over land, labor market conditions, and other variables on measures of economic well-being of rural people. For example, to what extent have off-farm employment opportunities or on-farm non-agricultural activities on former collective farms enabled people to improve or maintain their standard of living even when agriculture remains stagnant and unprofitable?

*Policy Implications:* These are unlikely to emerge until the 2<sup>nd</sup> and 3<sup>rd</sup> years of the project. Our general thrust will be not to make policy recommendations directly, but to make as clear and convincing statements as possible about the consequences of policy options. Which constraints in factor markets is it essential to remedy if productivity or incomes are to grow, and which constraints can be overcome by indirect means? (For example, can contracting with agro-processing firms provide a viable way around the limitations of credit that result from the lack of private property in land for use as loan collateral?) The idea is to provide data-based evidence on what is at stake in productivity, investment in agriculture, and rural well-being in various reform or anti-reform policies being proposed.

### ***Local capacity building and impact on policy***

We plan to quantify the gains in productivity, output growth, and farm income that could be attained through improved input market performance. The main policy consequence of identifying the least substitutable inputs is that priority should be given to tackling deficiencies and impediments in markets for these inputs. Findings on regional input market integration will allow estimation of welfare losses to constraints on factor movement and trade, and so to quantify the benefits that can be obtained through removal of these barriers.

In summer 2002, we will convene a conference at which Russian policymakers, researchers, and other interested parties would have an opportunity to review our survey research and test-case results from the first year of the project's activities. In later years, as descriptive and analytical results emerge, working papers and Policy Briefs will be widely circulated to interested parties and posted on a website at participating Russian and U.S. institutions (in Russian and English as applicable).

In addition to published materials, we will conduct two public events and periodic government briefings in each of years 2 and 3. One public event will be addressed primarily to social science professionals in Russia (both Russians and foreigners working or visiting Russia). The idea would be to keep the research community abreast of our ideas and progress and to obtain ongoing feedback on research and policy ideas. The other public event would be aimed at a wider audience – press, government officials, agribusiness leaders. Here we would tentatively discuss the policy implications of our work, and address some broader economic and policy issues related to the work. Again, the idea is not only to get our results out but also to obtain feedback from interested parties. The periodic government briefings would depend on who is interested and what we have to say. Plans for such briefings will be developed in consultation with USAID, the Russian government, and others who may be interested such as some regional governments in areas where we are working.

#### **Workplan Activities:**

##### ***October-December 2001:***

PI Serova will coordinate survey plans among research themes and settle on geographic focus. Communication routines among researchers will be established and financial processes for the team established. Existing plans for thematic research will be consolidated to insure complementarities and to reduce duplication of effort.

Survey instrument/s will be drafted, reviewed.

Case studies protocols will be specified, regional focus will be coordinated with survey efforts.

Literature reviews will be launched and completed in draft form. Assembly of secondary data and analysis begins.

***January – March 2002***

Surveys: Samples drawn, instrument refined, surveyors trained.  
Case studies: sample selection, training of interviewers.

***March – June 2002***

Surveys: Data collection undertaken in remaining regions.  
Case studies: field work underway.

***July – September 2002***

Case studies: Preparation of Reports.  
Conference for scholars and policymakers.

**Outputs:**

Literature review of Russian and other literature on structure and innovation in agriculture.  
Case studies on new contracting forms.  
Survey of farm input availability on various types of farms.  
Reports on land and labor utilization in agriculture, using official and other secondary data.  
Analyses of factor markets and agriculture performance.  
Analysis of farm productivity changes on rural well-being.  
Conference to review case and survey results.