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SUSTAIN

TECHNICAL ASSESSMENT

MAY 1993

RUSSIA

S haring
U nited
S tates
T echnology to
A id in the
I mprovement of
N utrition

A U.S. Private Food Industry initiative
in collaboration with the U.S. Agency for International Development
through a Cooperative Agreement with the National Cooperative Business Association

Upgrading the Food Processing Industries in Developing Countries.

Why SUSTAIN?

SUSTAIN represents a successful collaborative effort between the U.S. food industry and the Agency for International Development (A.I.D.) to upgrade food processing in developing countries. It provides an excellent model for similar private-public sector joint ventures in health, agriculture and other areas of concern to developing countries.

Food processing is a major contributor to development. It serves multiple roles. Food processing can increase the available food supply by extending the life of perishable food products. It can improve the nutritional quality of the diet by making nutritious foods available the year round. It can lead to the growth of related enterprises in transportation, storage, distribution and marketing. And, it can produce much needed foreign exchange by creating value added products both for export and for internal substitution of imported processed foods.

The U.S. food industry has embraced the concept that freely sharing its expertise and knowledge is of mutual benefit to recipient and donor - to the recipient by improving current operations - to the donor by contributing to a healthier global future.

How SUSTAIN Works

A.I.D. missions and trade associations in developing countries publicize SUSTAIN's goals and activities. Executives of U.S. food companies with technical expertise and overall knowledge of the food industry serve as the SUSTAIN Steering Committee, providing guidance and overseeing activities.

Food related companies in developing countries submit their requests to SUSTAIN through the A.I.D. mission or a designated organization in their country. SUSTAIN screens all incoming requests and if necessary asks for additional information. Appropriate U.S. companies are then invited to respond.

Some problems can be readily resolved by providing information. Others require that consultants be sent. When a consultant is sent, the usual assignment is for one to three weeks. Upon completion of the assignment, the consultant prepares a report describing findings and making recommendations. Depending on need, some consultants may return for follow-up visits to ensure that recommendations have been appropriately implemented.

SUSTAIN Helps

Requests are diverse. Help may be needed to solve processing problems, to identify equipment needs and sources of new and used equipment, to train personnel in the use of new equipment and new technologies, to find new uses for indigenous commodities, to establish or improve quality assurance procedures, to control insects and rodents in food processing plants and to improve plant layouts and materials handling.

In the past, U.S. food companies, large and small, have provided technical assistance in the form of information, consultants and training to food processors in Africa, Asia, Latin American and the Caribbean.

SUSTAIN PROGRAM

TECHNICAL ASSESSMENT:

**LINKING SUSTAIN/OFFICE OF NUTRITION
WITH NCBA'S SECTION 416 TVER PROJECT
IN THE TVER OBLAST, RUSSIA**

May, 1993

by

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NCBA/SUSTAIN Project 111.020

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I. INTRODUCTION

Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN) provides access to U.S. expertise in food processing to help improve the nutritional quality, safety, and availability of food in developing countries. Technical assistance is provided by volunteer professionals from U.S. food companies, universities, and other organizations who donate their time and expertise. In 1991, the Office of Nutrition of U.S. Agency for International Development awarded the National Cooperative Business Association a \$2 million, five-year cooperative agreement to work with SUSTAIN's volunteer leadership to improve, expand, and manage the program.

The assistance SUSTAIN volunteers provide contributes to improved health and nutrition through improved food quality, safety, and availability. In many countries, sufficient food is produced but populations are underserved because much of it goes to waste due to inefficient processing and storage. Improper food handling presents a hazard to human health, and improper waste disposal can contribute to environmental degradation. Strengthening manufacturing practices not only captures scarce resources, but also improves food safety and elevates nutritional status.

II. REPORT

A. Introduction

NCBA's Section 416 project in the Tver Region of Russia, as authorized by the U.S. Department of Agriculture (USDA), is structured to provide loan funds to strengthen the agribusiness/food sector utilizing local currency generated by the sale of USDA donated feed wheat. NCBA's local partner in the implementation of this project is the Intellect Foundation. To carry out this activity, Intellect Foundation has formed an Oblast including Tverzernoproduct, Moscow Interregional Commercial Bank, AKKOR (farm organization), and private food processors and distributors activity.

The Tver Oblast is approximately 84,000 sq. km or the size of Austria. The government is very concerned about the maintenance of environmental purity since Tver is still classified as one of the few remaining "uncontaminated" oblasts in Russia. While there is very little outright hunger in the Oblast, the food production is inefficient, locally produced and consumed goods are of poor quality, and the quality of the local diets need improvement. Processing, storage, and distribution are considered to be major constraints in the food industry in general.

During the trip in Russia, and in particular to Tver, it was observed by NCBA staff, as well as identified by Intellect and local agribusinesses, that there was a great need for technical assistance in the area of agribusinesses and banking, as well as a need for a local food consumption survey which would identify nutrient intake and would provide the basis for formulating nutrition intervention strategies.

The Intellect Foundation, in conjunction with other local organizations and businesses affiliated with the Project had requested assistance from SUSTAIN to strengthen the food system by providing technical assistance and training. Observations by NCBA staff reiterated and stressed that this assistance was in great need.

NCBA staff noted that the livestock feed not only was in short supply, but that the nutritional value of the feed was poor. After examining the feed grain distributed to the livestock in the Tver Region, NCBA decided to seek a renewal for the Tver Project that would involve the import of soybean meal. Two options would be to pursue a grant under Section 416 or pursue a commodity grant under Food For Progress.

The soybean meal would be shipped to the Tver Oblast (Region) in Russia where it will be used to i) alleviate the shortage of feed and improve the nutritional value of feed grains in Tver Oblast, and ii) to generate a local currency credit fund for small and medium-sized food processing enterprises. This soybean meal would improve not only the food distribution system in Russia but also the quality and nutritional value of the food distributed.

B. Recommendations

NCBA and SUSTAIN recommend that additional funding be provided to support 1.) a food consumption survey by Tver University that would build on their recently completed agro-industrial report, 2.) a local hire consultant who coordinates logistics for SUSTAIN team interventions and the food consumption survey, and 3.) travel and per diem expenses incurred by volunteers.

The survey would establish a new paradigm for improving health, contributing to economic growth, and identifying appropriate intervention strategies. The survey could be used to assess gaps in diet quality of the residents in Tver, especially in those groups most vulnerable. Once identified, the project could work with Tver Administration to promote the fortification of milk, flour, etc. Project resources could also be used to assist in the technical aspects of the fortification.

This survey would link data on consumption, production, processing, marketing, and distribution. The time required for the survey is anticipated at: 3 months planning and survey preparation, 6 months data collection, and 3 months analyzing data and identifying strategies for course of action.

If NCBA is awarded a new grant for the import of Soybean meal, NCBA would attempt to hire an NCBA expatriate to monitor the logistical aspects in Tver. This would also alleviate SUSTAIN's need for a representative in the Oblast, as the NCBA representative could also assist in coordinating logistics for the SUSTAIN team.

NCBA located two basic types of SUSTAIN intervention that would prove useful in the near future. 1.) SUSTAIN could provide technical assistance to lending officials in the evaluation of agribusiness/food processing business plans. Local business have not fully grasped how food businesses should operate, nor have they fully comprehended how key elements of merit in food business loan applications. 2.) SUSTAIN expertise was greatly needed in the following areas: a.) dairy processing, b.) meat processing, c.) fruit and vegetable storage and processing, and d.) grain processing. SUSTAIN could provide technical assistance to select food sectors (e.g. vegetable processing, or dairy) in the composition and submission of valid business plans for the loan review process. As an example, SUSTAIN could provide training to dairy companies in a seminar format.

APPENDIX I

SUSTAIN PROGRAM

The program **Sharing U.S. Technology to Aid in the Improvement of Nutrition (SUSTAIN)** provides access to U.S. expertise in food processing to help improve nutrition in the developing world. Technical assistance is provided by volunteer professionals from U.S. food companies, universities, and other organizations who donate their time and expertise.

SUSTAIN was granted a five-year renewal from the U.S. Agency for International Development (USAID) on September 30, 1991. The program is managed under a cooperative agreement with the National Cooperative Business Association (NCBA) and receives advice from a Steering Committee made up of private sector representatives.

NCBA was founded in 1916 and is a membership association representing America's 45,000 cooperative businesses. Known overseas as CLUSA, NCBA works overseas with its own member co-ops, USAID, World Bank, UNDP, and other donor agencies to promote development and joint ventures in the third world.

Many benefits can accrue to the developing world through improvements in food processing. From the standpoint of alleviating hunger and improving nutrition, food processing has much to offer. It helps meet food and nutritional requirements and reduce post-harvest food losses. From the economic standpoint, food processing provides a means for increasing foreign exchange earnings through exporting value-added processed foods rather than commodities. It helps generate employment and stimulates technological development and the growth of allied industries.

SUSTAIN helps improve food quality, expand production, and lower operating costs of locally grown and processed foods by providing technical assistance in post-harvest food systems, including: (a) food safety, quality, and sanitation (b) food preservation and storage (c) food processing (d) food fortification (e) packaging (f) marketing (g) weaning foods and (h) environmental technologies.

How the Program Works

SUSTAIN receives requests for assistance from individual food companies, research institutions, and USAID. Short-term technical assistance is provided by experienced U.S. professionals who donate their time and expertise to the project. Missions are typically one to three weeks in duration. SUSTAIN covers international travel costs. Companies or host organizations requesting SUSTAIN assistance are asked to contribute towards in-country expenses. Due to budget constraints, priority is given to requests that can demonstrate an ability to improve the nutritional quality, safety, and availability of food in the local community.

SUSTAIN is able to solve many problems by providing information that exists either in technical literature or in the "memory" of a company. If the problem cannot be solved through correspondence, then SUSTAIN volunteers may be sent to provide short-term technical assistance. Workshops and seminars can also be organized to help address food technology issues. The program does not fund product or equipment acquisitions.

The program publishes a quarterly newsletter (*SUSTAIN Notes*) on food technology issues. It is provided gratis to approximately 2300 recipients in more than 50 countries.

For more information, please write to:

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APPENDIX II

OVERVIEW OF RUSSIAN "BLUE BOOK" 6-30-93

ORGANIZATIONS INVOLVED: Administration of the Tver oblast
Administration of the Staritzskii Region
Russian Charity Foundation "Intellect"
Tver State University

OFFICIAL TITLE: Program for the Support and Development of Enterprise in the Agroindustrial Complex of the Tver Oblast Project.

SUMMARY:

Conditions of the land - very poor, low in minerals and humus.

Working population - decreasing, esp. in agriculture. low birth rate. 1 farmer feeds 11 people vs. 1:60 USA and 1:114 Holland

Plant products - production down, 1992 purchase of veggies one-half of 1991 figures. reason = decrease in technical preparation - equipment (such as tractors) is sparse. consumers not buying.

Animal products - production and consumption is down. "Peasant farmers" as they are called are not doing badly. Need refrigeration for meat plants and milk product transport.

Tver Association of Peasant Farming and Cooperatives (TAPC) growing numbers, of both people and products.

Join stock companies - 5 have been established

Creating farm industry - more farms and animals, but bad/inefficient relations between, esp. regarding transport. Still in-between, in the formative stage. Terrible living conditions on farms (no running water in many), few usable roads.

Reasons for agroindustrial decline - movement toward a free market although people are used to fixed prices, monopolies on agroservices, complicated relations between farms.

Negative factors in agroindustrial development - low productivity, diminishing work force, low quality soil, bottlenecks (such as lack of transportation

esp. with raw material.), storage is limited, weak technology, limited knowledge, no basic market infrastructure.

Criteria for priorities - quick payment form investment, new technology, ecological production, transport, storage, sales.

Current weaknesses - no efficient ecological production, limited use of local raw materials, lack of development of active initiative.

Formation of a support system for enterprises - financial credit system needed, staff preparation, informational support, material-technical support, moral and psychological support.

Stimulation of enterprise.

Projects in development.

APPENDIX III

TVERSKOY INNOTSENTR

**PROGRAM
OF
DEVELOPMENT OF ENTREPRENEURIALSHIP
IN THE AGRO-INDUSTRIAL COMPLEX**

* * * * *

**ADMINISTRATION OF TVER' OBLAST'
ADMINISTRATION OF STARITSKIY RAYON
THE RUSSIAN CHARITABLE FUND "INTELLEKT"
TVER' STATE UNIVERSITY**

**PROGRAM
of
SUPPORT AND DEVELOPMENT OF ENTREPRENEURSHIP
in the
AGROINDUSTRIAL COMPLEX
of
TVER' OBLAST
(draft)**

City of Tver'

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GENERAL SITUATION

The US Department of Agriculture, through the good offices of the National Cooperative Business Association (NCBA) and the Russian Charitable Fund "Intellekt" (RCF "Intellekt") has allocated 125 thousand tons of wheat fodder as charitable aid for Tverskoy Oblast. The wheat will be processed into fodder by the firm "Tver'zernoprodukt".

The earnings from the wheat will be placed into a special account of the RCF "Intellekt" in the Tverskoy branch of the "Kladez Bank" and, under the control of the NCBA and the RCF "Intellekt" will be devoted to an overall resolution of the problems related to the increase of agricultural production in the Tver Oblast.

The effective utilization of financial resources for humanitarian aid in the area of agricultural production is a condition for receiving such aid and, in addition, will assist the attracting of capital from commercial structures for the development of the Tver area.

One of the directions for the effective application of credit resources in order to facilitate the increased productivity of agricultural production is the development of entrepreneurship. The development of small and middle enterprises:

- assists the rapid payback of credit resources and an efficient reacting to changing consumer demand;
- assists the surmounting of monopolism in economic fields;
- creates beneficial conditions for innovative activities on the basis of scientific-technological achievements, the appearance of entrepreneurship and initiatives.

The major problem in the development of entrepreneurship is tied to the absence of mechanisms for the practical development of entrepreneurship and motivation for entrepreneurship, primarily in the sphere of the production of agricultural raw materials and their processing.

To work out mechanisms and motivation for the practical development of entrepreneurship in the sphere of agricultural production, the agroindustrial complex of the Staritskiy Rayon was named as a base model, on the example of which there should be worked out procedures for establishing and supporting entrepreneurship. The choice of Staritskiy Rayon as a base model came about because it is a typical agricultural region of Russia.

In the interests of giving organizational support to the development of entrepreneurship in the Staritskoy Rayon, it is proposed that a scientific-technological park, "Agropark" be created. Agropark is a specialized innovational structure which can facilitate the working out of legal, organizational and economic problems related to the practical implementation of new technologies for the production of agricultural raw materials and their processing, working out mechanisms for the establishment and motivation of entrepreneurship, new organizational structures in the sphere of production and transportation, storage and processing, and the disposal of final products. This tested experience in the development of entrepreneurship in the spheres of production, agroservices and middlemen will be generalized and copied into other regions of the Oblast.

The effective expenditure of the financial resources of this humanitarian aid will be achieved by the granting of advantageous credits in prioritized spheres which will assist in an overall resolution of the problems of agricultural productivity. The basis for receiving advantageous credits are to be presented in a business plan of concrete projects for agricultural productivity.

The purposes and goals of the program:

The basis purposes of working out and implementing this program are:

- the creation of conditions for the successful setting up and development of entrepreneurship and market infrastructures;
- the activation of entrepreneurial activities in the interest of improving productivity of agricultural production;
- the effective utilization of credit resources for humanitarian aid for the resolution of agricultural productivity problems.

In order to achieve these purposes the following tasks must be resolved:

- the determination of narrow areas and the choice of prioritized spheres for the application and support of small and middle-sized entrepreneurships;
- the formation of means for supporting small and medium entrepreneurships;
- working out mechanisms for the stimulation and support of small and medium entrepreneurships in the sphere of the production of agricultural products;

•orientating the processes of privatization of objects of agricultural production through the development of small forms of entrepreneurship in the interests of improving the productivity of agricultural products.

I. Conditions for Establishing and Developing Entrepreneurship in the Agroindustrial Sector of Tverskoy Oblast.

A. The Agroindustrial Complex of the Oblast

A. 1. The Overall Characteristics of the Agroindustrial Complex

Agricultural and industrial firms comprise the basis of the agroindustrial complex. Up until 1992, there were in the agroindustrial complex (AIP) 1757 enterprises, farms and organizations, including: 864 agricultural firms, out of these 393 collective farms and 311 state farms; 822 industrial enterprises and organizations; 14 production units and plants; 62 intra-firm enterprises for service of agricultural production; 30 intra-forestry and other enterprises.

Within agriculture by the end of 1992 there were functioning 690 farms (380 collective farms, 310 state farms). In accordance with the Directive of the President of the Russian Federation "On Urgent Measures for Achieving Land Reforms in the RSFSR" there is to be undertaken a reorganization of collective and state farms by the period ending 1 Jan. '93; in the Oblast, there is still continuing a registration of these farms.

The current status is, as of the beginning of 1993; 32 percent of these farms maintained their current status, including 50 percent of the collective farms, 10.6 percent of the state farms;

•a reorganization of 31 percent of the farms, including 20 percent of the collective farms and 43.9 percent of the state farms;

•there were no registrations of 37 percent of the farms including 30 percent of the collective farms, 45.5 percent of the state farms.

In the process of the reorganization of the collective and state farms there were created:

limited stock companies -	138
agricultural cooperatives -	80
associations of family farms -	7
separated-out family farms -	467

According to the data of the Oblast statistical department, by the end of the first quarter of 1993, there were significant changes; on the first of April 1993 the makeup of the AIK consisted of (with growing numbers):

limited stock companies -	221
agricultural cooperatives -	100
farmer's farms -	3034

The productive activity of the agroindustrial complex. During 1992, in the agricultural activities of the Oblast, according to preliminary accounts, there was produced a gross product in the sum of more than one billion rubles (based on 1983 prices). Plant production amounted to 356 million rubles (34 percent of gross production) and the animal production came to 699 million rubles (66 percent).

The gross production of all products compared with 1991 came down by 11 percent and 1991 was 15 percent lower than that of 1990. A particularly complicated situation was reflected in animal husbandry, which can be seen from Table No. 1.

Table 1

Number	Indices	1991 (1000 tons)	1992 (1000 tons)	1992 as of 1991
1	Productivity (collective farms, state farms, and collective agricultural enterprises)			
	meat (in live mass)	118.9	94.5	80
	milk	569.8	415.3	73
	eggs (millions)	453.2	420.1	93
2	Purchases (all categories of farms)			
	cattle and poultry (by live weight)	116.1	83.2	72
	milk	503.6	327.3	65
	eggs (millions)	390.6	339.5	87

The productivity of labor in the public sector of agriculture during 1992 went down by 15 percent and amounted to 6585 rubles per average worker while the number of workers went down by 7 percent.

Land resources. The overall land resources of the Oblast consists of 8,420.4 thousand hectares. Out of that amount agricultural activities occupy almost 2,657.3 thousand hectares or 34.4 percent of the entire land area of the Oblast. The distribution of agricultural lands out of all the land usages as of 1, Jan., '90 is presented in table II.

Table 2

No	Land Users	Agricultural Usages (1000 hectares)			
		Total	For Planting	For Haying	For Pasture
1	Collective farmland total	1296.3	821.7	203.2	265.5
	lands for public use	126.7	803.6	193.8	265.5
	private plots-kolkhozniks	24.8	15.6	8.3	-
	private use by workers and employees	3.7	2.5	1.1	
2	Lands of state farms and other government farms	1285.0	728.8	268.5	281.4
3	Lands for personal use by workers and employees	22.6	18.5	3.2	
4	State land reserves and state forest fund	19.5	1.2	15.9	2.4
5	Other land users	33.9	9.3	10.2	8.4
TOTALS: 1 Jan. 1990		2657.3	1579.3	501.0	557.7
Jan. 1993		2383.8	1500.1		869.1

In the oblast one can note a continuous cutting back of the area of land used for agricultural purposes. Overall, since 1965 the cutbacks went from 3.9 million hectares down to 2.66 in 1990 and to 2.38 million in 1992.

In the region there is mostly low-fertility land. 2/3 of the soil contains less than 2% humus, almost all of the soil lacks phosphorous and is poor in potassium. According to data from a land inventory, in 1990 overly damp plowed fields amounted to 397.5 thousand hectares (26.5%), bogs were 113.5 thousand hectares (7.6%), rocky soil -- 480.3 thousand (32%), water eroded - 87.8 thousand hectares (5.8%). The greatest water erosion occurs in the western regions of the oblast where the intensiveness of water washout in cultivated lands reaches 6-8 tons/hectare annually.

Out of the total lands used for feed purposes, 140.8 thousand hectares (16.2) is swampland, 246.6 thousand hectares (28.4%) is overgrown with

forests and bushes. Serious difficulties in utilization of the land for agricultural purposes arise because of the limited size of fields. The average field size throughout the oblast as a whole is only 6.0 hectares.

Dangerous amounts appeared during the process of the overgrowth of agricultural fields by bushes and small trees. During the period 1975 to 1990 for these reasons 32.6 thousand hectares of ploughed fields and 440 thousand hectares of fodder lands were lost.

Harvests give witness to the low fertility of the soils. So, for example, during one of the best of recent years, 1989, the average harvest per hectare was 14.9 centners of grain, 106 centners of potatoes, 3.4 centners of fibre and 187 centners of vegetables.

In the oblast there is appearing a tendency toward the worsening of the surface soil as a result of anthropogenic activity. The land areas which are polluted to varying degrees by emissions from industrial enterprises are continuously rising; during 1991 alone the pollutants themselves consisted of 129.6 tons of solid materials.

The growing usage of heavy machinery brings about an overpacking of the tilled and subtilled layers and a heightened degradation and erosion of the soils. These negative changes in the soils, and, even more important, the pollution and excess moisture have a negative influence on its biological characteristics.

In recent years the situation has worsened as to the the utilization of land and there was a significant lowering in the amount of work being done for the basic improvement of agricultural lands -- and the obtaining of new lands has practically stopped.

Thus one of the main reasons for the low level and irregular development of agricultural production of the Oblast is the unsatisfactory status of agricultural lands, the continuous lowering of their fertility, unstable land usage; and a significant quantity and intensiveness of degradation of the land.

Labor resources. The population of the Oblast as of 1 Jan., '90 was 1,671.2 thousand people. Of them, 470.2 thousand were from agricultural places. Notably, the number of the agricultural population continuously fell because of a flow of village persons to the cities, because of an increased death rate over birth rate and also because there were more older inhabitants in the villages. Since 1965, the number of village population decreased by almost a half.

During the period from 1980 to 1990, the village population was cut back by 73.1 thousand persons, that is, by 13.3 percent, which is considerably more than the average in the RSFSR (7.6 percent). The deficit in agricultural labor force is 40 thousand persons.

The Oblast is one of those regions with a very low birth rate and a high level of infant mortality (23 babies for each thousand births) which does not allow even a simple maintenance of productive population. The life span of men has gone down at the present time to 59 years in the villages. In the Oblast have been registered one of the highest mortality rates of village men of working age in the RSFSR - - it is 66 percent higher than in urban areas.

The tendency for change in the average annual numbers of village population in the Oblast is characterized by the following data:

1990-470.thousand	persons
1995-390.5	“
2000-358.5	“
2005-334.5	“
2010-354.0	“

As of 1 Jan. 1990, the labor resources of the Oblast consisted of 950 thousand persons, including a population of labor age of 863 thousand persons while the numbers of working persons of older age and youth were 87 thousand persons. The overall numbers working in the economy were 722.1 thousand persons, of which those working in agriculture were 75.5 thousand persons (10.5 percent of the total labor force).

The experience of economically developed countries shows that it is sufficient that 5 percent of the entire work force be involved in the agrarian sector of the economy. One peasant of our Oblast feeds eleven persons (approximately) while a farmer in the U.S.A. feeds 60 and in Holland - 114.

Tied to the complex political situation in the different states of the NIS, there is an opportunity for agricultural repopulation. The appropriate effective measures to achieve agricultural redistribution of population has been included in the directives of the head of Oblast administration and the Oblast program for population employment of the Tver Oblast for 1993. During 1992, 471 families were shifted into agricultural production. Among these families, 1673 persons came for permanent work, including 924 employable citizens of which: 193 were mechanics, 310 were workers in animal husbandry, 45 builders, and 376 others.

During 1993, according to the requests of collective and state farms, there is planned a movement of population from cities, from working towns and from other regions of about 300 families. A large reserve to increase the cadres of agricultural productivity can be obtained from military service personnel who have been shifted to the reserves, and members of their families. There has been established an Action Program to facilitate the involvement in work by ex-servicemen who have been moved into the reserves during 1992 - 1993.

At the same time, a basic way of resolving this problem of personnel is not as much bringing people from the cities to the villages as increasing the effective utilization of labor reserves, cutting back on the extent of heavy hand labor, of dangerous work and of untrained manual labor; also the equipping of agricultural productivity with highly productive technology and the increasing, on that basis, of the productivity of agricultural products by cutting back on the number of workers.

Thus, the complex economic, demographic and social processes which are taking place in the Oblast (as well as throughout Russia) have a negative effect on the labor utilization for production. The non-prestigious professions of farming, the insufficient level of engineering equipment, low salaries, and unsatisfactory conditions of labor and standard of living have brought about a continuous deficit in the labor resources of the Oblast.

I.A.2. THE POTENTIAL OF THE BASIC BRANCHES OF THE AGROINDUSTRIAL COMPLEX.

Vegetation. During 1992, according to preliminary accounting, in the agriculture of the Oblast the gross product produced came to over one billion rubles (in comparable prices of 1983). The vegetation products grown came to 356 million rubles (34 percent of overall production). The production of vegetation products declined by comparison with 1991 by 15 percent. The dynamics of development of planted areas, total harvests and the harvest of basic agricultural crops in all categories between 1991 through 1992 is shown in Table No. 3.

An analysis of this data shows that in vegetation the situation worsens in almost all directions and particularly noticeable was the worsening in 1991. The cutting back on planted areas and yield brought about a lessening of the gross harvest.

The costs of vegetation products in collective farms, state farms, and collective agricultural enterprises continued to grow and in 1992 it sharply increased as can be seen in Table No. 3

Production	1	2	3	4
Grain (rubles for centner)		29.4	50.4	261.6
Potatoes (rubles for centner)		33.6	69.6	412.8
Above-ground Vegetables		14.1	34.7	443.1

Planted areas, total harvest and yield of basic agricultural products in all types of farms.

Table 4

	Planted area (1000 hectares)			Gross harvest (1000 hectares)			Yield (tcentners per hectare)		
	1988	1990	1992	1988	1990	1992	1988	1990	1992
Grains and grain-bean crops	609.9	621.9	594.2	5523	9420	7069	9.1	15.1	11.9
including:									
wheat	21	52.1	50	29.6	80	65.7	29.9	33.1	27.2
winter rye	104	109.5	119.5	140.6	193.6	209.4	13.5	17.7	17.5
buckwheat	0.3	0.2	1.9	0.7	1	9	2.3	6.6	4.5
above-ground									
vegetables	4.6	3.9	3.7	1118	842	740	243	216	199
root fodder	6.1	4.9	3	761	687	196	127	141	65
silage corn	17.7	37.6	25.7	4613	3303	1724	261	88	67
non-corn silage	54.7	36.5	20.3	5694	3807	966	104	104	48
one-year grasses									
for silage fodder	162.9	104.4	66.9	1332	11337	4359	82	109	65

0

The sale of agricultural products is decreasing. So, for example, vegetables in 1992 were purchased at only 54 percent of the amount purchased in 1991. Among the basic problems of the development of vegetation are: low productivity of soil; cutting back on the planted areas; lowering of the yield of agricultural plants; decrease in the production of rough and succulent fodder, the lowering of their quality and storability.

In order to resolve these problems at the present time, relevant programs are being worked out within the agroindustrial complex.

One of the reasons for the lowering of the productivity of agricultural crops is the cutting back on agricultural machinery and the worsening of its technological readiness. During 1990, the number of tractors declined by 1876 units, trucks by 521 units, grain combines by 326, planters by 344, plows by 610, and cultivators by 590 units. During 1992, 1253 tractors were recalled (4.4 percent less than the numbers of 1 Jan. '92) as were 232 grain combines (5.8 percent). The cutting back of this agricultural machinery is explained not only by its being removed from service but also by its sale to peasant (farmers') farms and other citizens and

organizations. Also the numbers of unrepaired machinery is growing, as can be seen from Table No. 5.

Table 5

	Unrepaired 1990	as a % of the 1991	total as of 1992	1, January 1993
Tractors, total	14	14	15	18
Trucks	18	18	19	22
Grain Combines	33	37	35	39
Tractor Planters	17	22	26	32
Tractor Cultivators	20	22	33	37
Tractor Plows	15	19	24	29

A considerable number of tractor planters, plows and cultivators are in bad shape. For example, in the farms of the Kalinin region, only slightly more than half of the planters, plows, and cultivators are in repaired shape. Out of the current units for production of fodder one unit in Kalyazinsk Region is in an irreparable state, and out of the nine units for cutting and salting concentrated fodder, three units are also irreparable. Of them, two in the Kuvshimovsk Region and one in the Torzhoksk Region.

Out of the twenty five swine fodder units, five are irreparable (20 percent). The situation is worse with the work of those fodder units for large horned cattle. Many of that type of irreparable fodder units are in the farms of the Udomelsk Region - 8 units (36 percent). Seven irreparable units are located in farms of each of the following regions - - Maksatikhinsk (47 percent), Rzhevsk (44 percent), and Toropets (38 percent). In addition, in the Oblast there are 17 irreparable fodder cookers for long horned cattle (14 percent) and 15 fodder cookers for swine.

Flax production represents a powerful productive and scientific - technical potential which plays a leading role in Russia. The flax complex of the Oblast includes 85,000 hectares of planted area which are located in 500 collective and state farms and in 48 peasant (farmers) farms, 43 linen factories, 20 linen seed stations, the Rzhevskiy linen combing factory, the scientific-production plant "Nechernozemagropromlyon" made up of two scientific-research institutes, a welding-mechanical and a repair-mechanical plant an experimental farm, a factory "Bezhetksel'mash" of the ministry of industry of Russia and a zonal machine-experimental station.

The dynamics of the development] of the flax industry in the Oblast are shown in table 6.

Table 6

No.	Type of Indicator	1971- 75	1976- 80	1981- 85	1986- 90	1991	1992
1	planted area (1000 hectares)	150.8	132	114.2	109.7	77	83.8
2	Yield:						
	fiber (centners/hectare)	3.4	2.7	3.1	3.1	3	2.8
	seed (centners/hectare)	2.1	1.2	1.5	1.5	1.1	1.2
3	Sales:						
	fiber (1000 tons)	50	35	33.7	32.5	25.3	22
4	Products:						
	seed (1000 tons)	31.9	15.8	17.5	14.8	8.8	10

From the above data it is obvious that over the past twenty years there has been a steep decline in the production and purchase of linen products. So the purchase of raw linen in terms of fiber was cut back by 35 percent. If, during the three years between 1987 - 1989, the average annual raw materials coming into linen factories (in terms of fiber) consisted of 37 thousand tons, in the period 1990-1992, about 21 thousand tons came in, that is, 43 percent less than during the previous three years.

The cutting back in the volume of fiber production came about both as a result of less area planted as well as because of a lower yield. In the course of two decades, the flax fields cut back from 158.6 thousand hectares in 1971 to 77.0 thousand hectares in 1991, that is more than by half. Many collective and state farms utilized their potential only up to 30 - 35 percent.

A sharp worsening of the quality of linen products has come about for the following reasons:

- a shifting over of flax production to machine harvesting without having the complex machinery necessary for that function;
- the warming of flax into film as a result of a tendency for most of the local types of flax to lie down in the large fields;
- the outdated status of the processing machinery in the linen factories which do not live up to technological specification which has led to decreasing the thickness of the fiber by 25-30 percent.

In order to develop and improve the effectiveness of the linen complex of the Tver Oblast, there has been worked out at present a Regional Program for 1993 - 1995 for working out measures and their financing.

In general linen production is being developed in an extensive manner and the level of its development is lower than the potential possibilities of the Oblast.

Animal Husbandry. Over recent years in all categories of animal husbandry in the Oblast the situation significantly worsened. The situation of the production of such animal husbandry products in their natural forms as expressed during 1990-1992 is shown in Table 7.

The Production of Animal Husbandry Products in their Natural Status for 1992

Table 7

Indicators	1990	1991	1992	1992 as % of 1991
<u>Production (raised) in</u>				
<u>live weight of</u>				
<u>cattle and poultry</u>				
all categories of farms	188.3	158.3	135.1	85
public sector	137.1	106.7	83.5	78
private plots	51.2	50.8	49.1	97
peasants' farms	0	0.8	2.5	310
<u>Produced at slaughter.</u>				
<u>cattle & poultry</u>				
<u>in live weight</u>				
all categories of farms	197	174.2	154.3	89
public sector	158	126.8	100.9	80
private plots	39	47.2	50.6	107
peasants' farms	0	0.2	2.8	1400
<u>The meat fat and</u>				
<u>products received</u>				
<u>after slaughter</u>				
all categories of farms	126.6	113.1	98.9	87
public sector	100	81.3	64.3	79
private plots	26.6	31.7	33	104
peasant's farms	0	0.1	1.6	1600
<u>Milk (all types</u>				
<u>including goat's)</u>				
all categories of farms	881.3	785.9	639	81
public sector	698.9	582.8	425.1	73
private plots	182.4	202.2	208.5	103
peasants' farms	0	0.9	5.4	600

Wool (physical weight
per ton)

all categories of farms	540	617	280	45
public sector	190	118	50	42
private plots	350	498	224	45
peasants' farms	0	1	6	600

Eggs - one million

all categories of farms	567.5	567.4	607.7	107
public sector	472.8	453.2	422	93
private plots	94.7	114.2	185.2	162
peasants' farms		0.014	0.5	3600

Heads of cattle

& poultry (1000 head)

large-horned cattle:

all categories of farms	900.6	837.8	765.8	91
public sector	819.7	739.8	653.8	88
private plots				

including:

peasants' farms (head)	357	2972	7393	250
------------------------	-----	------	------	-----

including: cows

all categories of farms	364.5	353.4	337.1	94
public sector	307	290.9	257.5	88
private plots	57.5	67.5	79.6	118

Pigs

all categories of farms	355.7	320.2	290.9	91
public sector	271.6	227.7	192.9	85
private plots	84.1	92.5	98	106

including:

peasants' farms heads	82	1096	3187	290
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Sheep and goats

all categories of farms	345.2	307.2	255.8	83
public sector	105	63.3	27.5	43
private plots	240.2	243.9	228.3	94

including:

peasants' farms heads	509	2890	3662	127
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Poultry

all categories of farms	6782	7279	6281	89
public sector	5593	5328	4499	84
private plots	1189	1951	1982	101.5

including:

peasants' farms		2	9.1	460
-----------------	--	---	-----	-----

It can be seen from this table that the production of meat in the past year decreased by comparison with 1991 by 15%, milk by 19% and wool by 55%. As a result the purchase of cattle and poultry went down by 28%, milk by 35%, wool by 46% and eggs by 13%.

As of the first of January of last year the numbers of large horned cattle in all categories of farms amounted to 765.8 thousand head, or 9% less than a year earlier. That included 337.1 thousand cows, or 6% less; 290.9 thousand swine, 9% less, and 255.8 thousand head of sheep and goats, 17% less than the previous year.

A markedly greater lowering of the numbers of animals took place in the public sector. The numbers of large horned cattle and cows fell by 12%, swine by 15%, sheep by 57%. All of the public head of large horned cattle were located in 4,119 populated points, pigs in 557 farms and sheep in 143 farms. The average size of farms with large horned cattle was 160 head, of which 110 were milk cows, while swine farms averaged 330 head and sheep farms 200 head.

On the first of April of last year there were two swine complexes with 70,000 and 24,000 head and one complex feeding 6,000 head of large horned cattle, two milk complexes with 1,200 head, 13 with 800 head and 7 with 4-600 head. 14 farms in the oblast are poultry oriented, 8 chicken factories and 6 incubator stations. In addition, in the oblast there are operating 35 specialized farms handling the feeding up of young long horned cattle and 4 special farms for the raising of heifers and 5 wild animal farms.

The entire genofund of the oblast is concentrated in 3 breeding plants and 70 breeding farms with breed cattle: cows - 30,000 head; pigs - 2,700; sheep 3,000 and 35 breeder horses. On the base of the state agricultural enterprise "Tverskoye", there has been created a breeder station for high-value producer bulls with 100 head.

Great difficulties are being experienced by the large specialized swine-raising farms in the Oblast. In the 16-farm conglomerate "J" there are 129,400 pigs, that is 72,600 head less than in 1992. Because of the low provision of concentrated fodder for these farms at the present time 72,600 spots for such animals are now unused.

Sheepgrowing in the Oblast has undergone big losses because of economic irregularities and purchasing prices which have appeared on products in this branch. The expenses tied to the production of wool, rams and Romanov sheep are almost twice the prices that can be gotten for these products. For this reason, over the last 2 years, the numbers of sheep in collective farms and state farms and in other forms of public ownership have gone down by 77,500 head and, as of 1 January 1992 amounted to 27,500 head.

Pedigree animal husbandry is in a critical state. Because of the high prices on pedigree cattle and seeds of expensive producers, the demand for them fell significantly. Despite the governmental monies which have been allocated for the support of pedigree stock, the situation in this branch is only slowly improving. For that reason one can note a cutting back in the volume of artificial insemination, there is not the needed renewal and renovation of herds in all areas of animal husbandry. Therefore it is necessary to allocate 110-150 million rubles annually to support pedigree matters and increase the volume of artificial insemination.

The long-term program for the reconstruction and technical reequipping of animal buildings by 1995 is not being implemented because of an absence of financial resources from the farms and from investment. The level of complex mechanisms on the farms of large horned cattle stands at 43.9% and on those of cow farms at 67.9%. There is a sharp lessening of new construction in animal husbandry. During last year only 7,300 new places were built for large horned cattle and 950 spots for pigs. The volume of technical retooling and reconstruction of farms for long horned cattle has gone down from 75,000 (for the period 1986-1990) to 17,000 spaces in 1992.

Out of the 1747 refrigeration facilities needed for the animal husbandry farms, there are only 1508 existing and of them 1281 have been repaired, that is 85%. There are lacking more than 700 scales for weighing milk, 140 scales for weighing cattle. For the transportation of milk from the farms there lacks more than 120 milk tank trucks.

The economic reforms which are being applied to the agrarian sector have touched on the problem of furnishing animal farms with permanent staff for animal husbandry. At the present time, because of the complicated financial situation of most of the farms, one sees a low pay level in animal husbandry (3-4,000 rubles /month). In the field there is a lack of 4,300 workers in the major professions, including 495 milkers, 282 persons to care for heifers, 1260 cattle herders.

For the purposes of maintaining personnel in animal husbandry, salaries are being reviewed everywhere and in a number of farms they are taking the approach of more broadly using the form of natural pay.

At the present time many collective, state and farmers' farms are put in a different situation than industry. There are incidents when the processing plants hold up their payments for animal products which have been delivered to them. The Romanov sheep products are at the verge of disappearing from all categories of the economy due to the incompleteness of purchase prices.

Tied to the continuously rising prices on industrial products coming to the villages, the established size of governmental supplement on animal products does not cover the losses on their sale. Therefore it is necessary to constantly index these prices and review them with an eye to increasing them. For the current year, accounting indicates a need for more than 17 billion rubles of supplements, but, in fact, only 5.4 billion have been allocated for that.

Processing Industry of the Agroindustrial Complex. The processing industry has 110 enterprises (20% of all the industrial enterprises of the Oblast), including: 56 food specialities, 12 meat processing, 38 milk, 1 fish and 3 enterprises for flour seed and fodder grinding.

The production of the most important types of products of the food processing industry of the agroindustrial complex are presented in Table 8.

Table 8

No	Indicator	1991	1992		1993	
		actual	actual	as % of 1991	forecast	as % of 1992
1	Meat including by-products of the 1st category (1000 tons)	58	40	68	29	73
2	Whole milk products (1000 tons)	190	78	41	67	86
3	Animal meat (1000 tons)	11	10	91	8	80
4	Fat cheese (1000 tons)	8	5	62	4	80
5	Canned Vegetables (1000 cans)	12600	8600	68	9600	112
6	Flour (1000 tons)	158	199	126	200	100
7	Grain groats (tons)	1900	3600	189	3900	108
8	Bread & bun products (1000 tons)	290	259	89	259	100
9	Confectionary products (1000 tons)	21	14	67	16	114
10	Macaroni (1000 tons)	14	15	107	14	93
11	Vodka & liquor products (1000 gal.)	3000	2600	87	3200	123

25

As one can see from the table, the production of basic products (meat, milk, butter, cheese) have a tendency toward declining in comparison with 1991.

Meat Industry In the Oblast there are 11 meat plants which have independent, balanced accounts. As part of the Bezhetsk meat plant is included the Sandov slaughter house. In Rameshk there is a veterinarian-sanitation plant.

Four of the plants were started before 1950, three from 1951 to 1960, 4 from 1961 to 1970. the Rameshk veterinarian-sanitation plant came on line in December 1987.

The value of the basic fund for production comes to 26.6 million rubles, including 8.5 million rubles for machines and equipment. Wear and tear amounts to 45% of that basic production fund.

The productivity of the meat plants as of 1 January 1993 was:

- cattle meat - 148 tons/shift
- poultry meat - 24.5 tons/shift
- various sausages - 33.8 tons/shift
- dry animal feed - 8 tons/shift

Up to 1990 there was felt an insufficient capability for cattle processing at the Tver, Verkhniy Volotsk, Kimrsk and Bezhetsk meat plants. In 1993, as a result of the sharp decline in the cattle supplied (and for the first 4 months of 1993 that was 36% of the first four months of 1990), the insufficiency of capacity was not felt.

Three meat plants do not have sufficient production refrigeration -- Kimrsk, Ostashkovo and Torzhok. At the Kimrsk meat plant they are building a refrigerator facility with a total volume of 250 tons, but the completion for use has been put off since 1990. In general, there is not enough refrigeration capacity for freezing meat and similarly not enough storage space.

The engineering network is in bad shape at the Nelidovsk, Kashino, and Ostashkovo meat plants.

The Volotsk meat plant was built in 1989. The production building has been worn down by more than 80%. The rooms of a number of meat plants do not allow the setting up of new, modern-technology equipment.

Milk Industry In the Oblast there are 36 milk processing plants, two butter-cheese bases. The volume of their goods production, in comparable prices (millions of rubles), annually was:

1990- 5267.2

1991- 4230.7

1992- 2838.3

The production of products for infant diet is presented in Table 9

Table 9

No.	Types of products	1990	1991	1992
1	Infant food in general	1223	1433	1224
	including:			
2	steralized milk	648	845	
3	children's yogurt drink	575	588	

The actual usage of milk products per person in the Oblast is presented in table 10.

Table 10

No.	Types of products	Expected annual usage in kg.	Actual 1990	in 1991	kilograms 1992
1	Whole-milk products	210	178.9	156.8	64.4
	including:				
2	sour cream	6.5	13.7	11.6	2.2
3	fat cottage cheese	8.8	3	2.2	1.4
4	whole milk	116	100.4	91.8	56.6
5	butter	6.2	6.7	4.5	3.7
6	lowfat cheese	6.2	4.1	3.3	1.7

The Oblast annually delivers milk products to cities: Moscow, Murmansk, Saint Petersburg, Petrozavodsk, Yaroslavl, Ivanovo, Tula, Vologda, Vladimir, Pskov, Novgorod, Smolensk, etc. in the volumes presented in Table 11.

Table 11

No.	Types of products	1990	1991	1992
1	Whole-milk (1000 tons)	91.1	69.6	26.7
2	Fat butter (1000 tons)	4.5	2.4	3.2
3	Cheese (1000 tons)	3	1.8	1.8

At the present time, narrow spots in the processing industry are:

- insufficient amounts of raw materials;
- low quality and variety of products delivered;
- losses during the transportation and processing of cattle;
- finishing and packaging of ready products due to the absence of finishing machines and also the absence of packaging materials at the level of world demand and packaging production;

•low technology equipment used at certain enterprises, departments and sections.

In order to strengthen the material-technical base of enterprises of the processing industry, a complex program is being worked out at present for enterprise development in each enterprise by 1995.

A. 3. The Level of Development of Farmers' Farms

In the Oblast there has been created the Tver Association of Peasants (Farmer's) Farms and Cooperatives (TAKK) which undertakes its activities on the basis of funds assigned from the federal budget as government aid to farmers' farms. The dynamic of the growth in the numbers of farmers' farms and the land area they represent are presented in graphs 1 and 2, respectively:

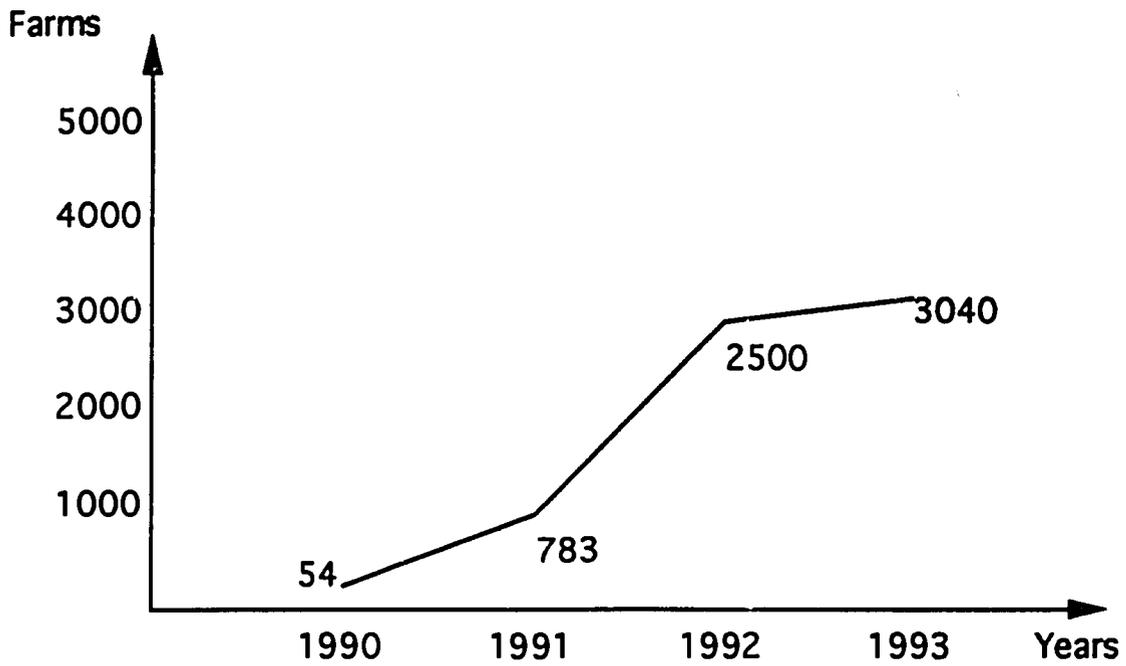


Figure 1

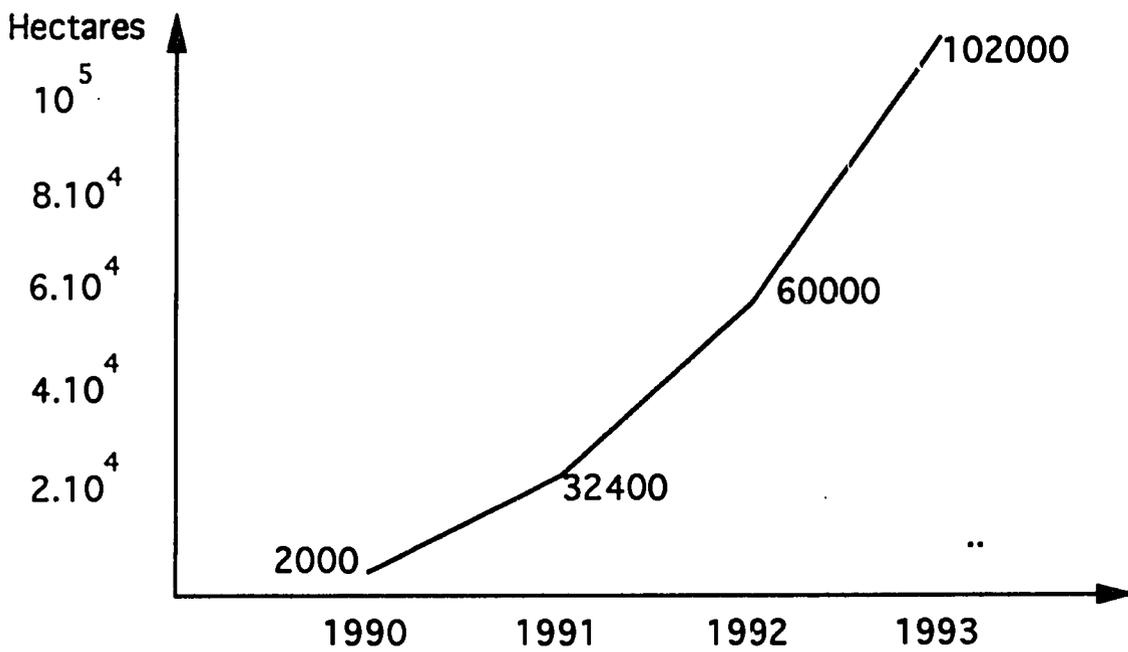


Figure 2

As seen in the graphs, over the course of the last two years in the Oblast there has been a growth in the number of peasants' farms and the land area presented to them, and as of 1 April 1993 those figures were 3034 and 102,000 hectares respectively.

Despite the significant growth of peasants' farms in the oblast, their numbers do not correspond with their potential possibilities from the point of view of their significant influence on the development of the agricultural potential. In 1992 2,500 peasants' farms produced agricultural products in the amount of 1.5% compared with that of the collective and state farms of the oblast. They received 632.9 million rubles of credit reserves and 28.7 million rubles in one-time grants for newly created farms.

Data on heads of animals in peasants' farms as of 1 January 1993 are forseen in Table 12

No.	Type of cattle	1992	1993	1993 as % of 1992
1	Long-horned cattle, (head)	3014	7393	250
	including cows, (head)	1155	3985	350
2	Pigs, (head)	1096	3187	290
	including herd sows, (head)	216	541	250
3	Sheep, (head)	2853	6543	230
	including sheep sow, (head)	1512	3505	230
4	Goats, (head)	37	157	420
5	Horses, (head)	88	362	410
6	Rabbits, (head)	460	1043	230

The majority of the peasants' farms during the past year were dealing with organizational questions and therefore the return from the farmers' farms so far is not significant. In general the added level of animals in farmers' farms does not cover the level of loss of cattle in the public farms of the Oblast.

Basically, the increase in peasants' farms comes about both from the local population, as a result of the reorganization of collective and state farms, as well as from the city population who have resettled and also from the families of officers who have been laid off as the ranks are cut back.

At the present time in the oblast a broad-ranging program of inter-farmer cooperation is being worked out wherein basic attention is devoted to the development of processing, storage and supply-and-selling enterprises as well as to the opening of farmers' stores and rental points for agricultural

equipment. In particular it is proposed, within the regions of the oblast during 1993-1995, to build (reconstruct, complete construction, or build new):

- mini-facilities for processing milk, with a productive capability of from 0.4 to 10 tons/shift;
- mini-facilities for meat processing with a capability of from 300 to 500 kilograms/shift;
- seed producing enterprises and potato processors;
- mini-facilities for processing grain;
- points for rental and service of machinery;
- trading enterprises;
- small agricultural enterprises for the production and preparation of building materials;
- bread bakery;
- shop for preparing confectioneries

B. Evaluation of the Agroindustrial Potential of the Staritsk Region as a Base Model for the Development of Entrepreneurship

B. 1. General Characteristics of the Agroindustrial Complex.

The economy of Staritsk Rayon has a clearly expressed agricultural direction. The basic producers of agricultural products are public farms. In 1992 agricultural production was achieved at 31 public farms, 5 stock firms, 136 farmers' farms and more than 11,500 private plots of workers and employees. The basic indicators, characterizing the agroindustrial complex are presented in Tables 13 through 19.

Dynamics of Production of Animal Products 1990-1992

Table 13

Indicators	1991 as % of 1990	1992 as % of 1991	1992 as % of 1990
Production of animal products:			
meat	87	77	67
milk	84	72	59
wool	55	26	15
Purchases from all types of farms:			
cattle	96	67	64
milk	82	68	56
wool	94	43	41

Dynamics of Heads of Cattle

Table 14

Indicators	1991 as % of 1990	1992 as % of 1991	1992 as % of 1990
Long-horned cattle including:	89	90	81
cows	993	88	83
Pigs	67	58	39
Sheep	37	37	14

Planted Lands on All Farms (hectares)

Table 15

Indicators	1991	1992	1992 as % of 1991
Planted area	81688	76015	93
Mowed area	70894	74376	105
All grains	33397	38285	110
Flax	4582	5475	120
Potatoe	763	951	124
Fodder Crops	32117	29604	92
Perennial Grasses	24032	22847	95

50
50

From an analysis of the data on Tables 13-15, it is obvious that in 1992 the decline of the production of animal products continued. Compared with 1990 that lowering was 33% on meat, 41% on milk and 85% on wool. The decline continued on the herds of animals, particularly pigs and sheep, 61% and 86% respectively.

One of the basic reasons for the lowering of the animal herd is the low level of the development of the fodder base and a lack of fodder. The fodder production problem will be even sharper at the end of 1992 and beginning of 1993 because the fields planted for fodder grains were cut back by 5-8%.

Areas devoted to growing plants on all types of farms grew an average of 5-20%. Areas planted with buckwheat grew by 200%, potatoes by 24% and with grain by 10%. The production of plant products in 1992 was somewhat higher than the 1991 level but less than in 1990.

For plants the region is characterized by a series of inadequacies: a not very high ability to till the soil, the utilization of unconditioned seeds, low yield, a predominance of spring-planted crops, inadequate and unbalanced use of mineral fertilizers, the littering of seeds, insufficient technology and inadequate storage facilities.

The grain grown in this region is utilized, basically, for feed purposes. The selling of grain in 1992 was 5% (of the total product). The planted fields in the region in 1992 were devoted to: grains - 39% of that total area; fodder - 39%, perennial grasses - 29%; flax - 6%; buckwheat and potatoes each 1%.

In 1992 the gross harvest of grains and grain beans came to 45,300 tons, 20.5 tons more than in 1991. In addition, the yield grew from 7.4 centners/hectare in 1991 to 11.9 centners/hectare in 1992. In 1992 7,300 tons of potatoes were harvested, 2 times more than in 1991, with an average yield of 77 centners/hectare as opposed to 47 centners/hectare in 1991. 1008 tons of potatoes were sold to the government, which was 3.3 times more than in the previous year.

Farmland devoted to flax increased in 1992 by 19%. However, as a result of lowered yield from 2.8 centners/hectare to 2.5 centners/hectare the harvest of flax went down 3%.

The lands planted in buckwheat in 1992, compared with 1991, almost doubled, but the yield went down from 7.6 centners/hectare to 4.7]/hectare. Therefore the gross harvest went up only by 23%.

In 1992 the linen factories of the region increased their production by 40%, compared with 1991. The butter and cheese plant increased its production of butter by 3%. In other types of products in the food industry there was a lowering of production, in fact, sausage products when down by 69%, confectioneries by 60% and whole milk products by 78%.

In the agricultural complex the problem of labor resources continues to highten. Because of the unsatisfactory social and living conditions (there are no roads, schools, hospitals, kindergartens, clubs, stores) annually, the deficit in the labor force grows. As of 1 January 1992 in the collective and state farms there were working about 5,000 persons, that is 4% less than required.

A particularly large deficit of basic laborer is experienced in animal husbandry -- 17%, of these milkers - 36%, mechanics - 30%; a very sharp lack of workers with higher qualifications -- 45 mechanical engineers, 12 construction engineers, 14 bookkeepers.

The major reasons for the lowering of agricultural production in the Staritsk region are the same as for the other regions of the non-black-earth area and are linked with the general economic crisis of the country, the price policy on agricultural products and the deeply unsatisfactory state of agro-service.

The shift to a market economy and alternative forms of ownership is happening slowly and do not show a noticeable influence on stabilizing agricultural production.

I.B.2. The Basic Branches of Agricultural Production in the Staritsk Region in 1992.

Plants. Planted areas in the farms of this region are filled, basically, with grains -- 41% of all cultivated fields, including 25% for oats and barley. Fodder plants take 39%, perennial grasses - 29%, potatoes and buckwheat 1% each, and flax - 6%. The distribution of the planted fields in the farms of the region is shown in Table 16.

Table 16

Planted Areas (hectares)

Indicators	Collective & 1991	state farms 1992	Peasant's 1991	farms 1992	Private plots 1991	& coop. farms 1992
Plowed area	81688	76015				
Planted area	70265	71308	108	449	521	2629
All grains	33128	36289	36	265	233	1731
including:						
winter rye	2899	7315				
winter wheat	323	845				
barley	5922	5176				
spring wheat	2938	2020		13		60
oats, barley	20471	19969	36	252	185	1351
Flax	4582	5475				14
Potatoe	759	833	2	37	2	81
Feed	31738	28672	70	150	309	782
Perennial grass	24004	22802	21	33	7	12
Rape	30	31				
Vegetables	7	20				
Buckwheat	85	964		6	18	160

In the structure of fields devoted to grains in 1970, winter crops occupied 36% of the area. Starting with the '70s, the area of the winter crops began to cut down somewhat. In lieu of expensive food products of winter rye and wheat, more broadly used were oats, which became the basic grain crop.

In recent years there was a noticeable increase in the planted fields of peasants' and private plots. In 1991 the planted areas of peasants' farms were 0.15% of the overall planted fields; in 1992 - 0.63%. The share of private and cooperative farms accordingly increased from 0.70% to 3.6%. The basic crops in peasants', private and cooperative farms also are oats and feed.

Some of the increase in the overall planted fields in 1992, by comparison with 1991, came about due to an increase in the areas planted with winter crops, yet, as before, spring-sown crops remain the base. In 1992 the planting of flax and potatoes increased a bit while the planting of buckwheat doubled. The productivity of grains is shown in Table 17. **The planted areas and harvest on public farms**

Table 17

Indicators	1991	1992	1992 as % of 1991
Total grain			
sown, hectares	32894	36183	110
gross harvest, tons	24452	44078	180
yield, tsentners/hectare	7.4	12.2	164
including:			
spring wheat			
sown	2938	2020	69
gross harvest	1573	1627	103
yield	5.3	8	151
barley			
sown	5922	5176	87
gross harvest	4309	5364	124
yield	7.3	8.5	116
oat			
sown	20300	19849	98
gross harvest	14163	21383	151
yield	7	10.7	153
buckwheat			
sown	485	938	194
gross harvest	371	456	123
yield	7.6	4.7	62
Potatoe			
sown	759	833	110
gross harvest	3550	6630	187
yield	47	80	170
Flax			
sown	4582	5475	119
Flax seed			
gross harvest	458	618	135
yield	1	1.1	110

A large amount of the grains produced are used on farms in the region for feed purposes. The marketability of grain in 1991 was 1%, in 1992 - 5%.

The gross harvest of plants is of an unstable character. Although there was an increase in 1992 compared with 1991, the gross harvest of all

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crops did not achieve the level of 1990. One of the reasons for the lowering in 1991-92 of the production of plant crops by collective and state farms in the region, compared with 1990, was the cutting back of sown fields linked to the turning over of 4,552 hectares of land to the village councils for peasant farms and private plots.

The yield of all crops, except buckwheat, in 1992 was also higher than in 1991, yet it did not come up to the crop levels of 1990. Thus, the yield in 1992 in grains was 87% of the 1990 level, 91% in flax, while in potatoes it was 170%.

To a significant degree there are differences in yield in different agricultural regions. Thus, the yield on grain from 1 hectare is less than 10 centners on 39% of the farms; 10-15 centners on 39%; 15-20 on 16%; 20-25% on 3%; and more than 25% on 3% of the farms. Analogous are the differences in yield of potatoes, from 30 centners/hectare in 18% of the farms to more than 100 centners/hectares in 26%.

Farms in the Oblast continue to utilize low-quality seeds. In 1992 unconditioned seeds were used to plant grains on 97% of the farms, and to plant flax, on all 100%.

Other reasons for low yield are: the breakdown in machinery for preparing the soil for grain crops, insufficiency and unstable application of mineral fertilizers and the clogging up of planters by weeds. All of this is accompanied by the low natural yield level of the soil. There is insufficient use of possibilities for irrigated and drained fields for obtaining high, reliable yields. The level of yield on the lands is at best 25 centners/hectare for grains and 29 centners/hectare for potatoes.

The cut back of technical equipment and the poor applicability of machinery to the work also has an effect on lowering the gross harvest. During 1992 46 tractors and 15 grain harvesting combines were recalled; there is also a serious situation arising with fuel and lubricating materials coming to the collective and state farms. There were delivered 6085 tons of diesel fuel and 2468 tons of gasoline during the year, which was less in volume than the previous year by 29 and 25 percent correspondingly. By the beginning of harvest in 1992 the technical readiness of tractors was 84 percent, of grain harvesting combines - 78 percent, of potato harvesting combines - 80 percent, and of flax combines - 85 percent.

There have been cut-backs in the number of workers in agricultural production from 5963 persons in 1987 to 5227 persons in 1991. The level of mechanization of labor in plant agriculture is 79 percent. Because of a cut-back in the numbers of workers and the low level of mechanization,

the time needed for harvesting becomes more and that effects the quality of the harvest and it increases the expenses for each planted hectare.

The farms experience large losses when storing grains and potatoes. The farms utilize grain storage facilities which were introduced in the 1960's to '80's. Over the last three years, there have been built storage facilities for only 3500 tons of grain. Things are particularly bad with the storage of potatoes. In the region, there is a potato storage facility of 5150 tons. The basic mass of the potatoes are stored in clamps and in the winter period to a large extent become spoiled.

Farms experience a large loss from the ruin of spring-sown crops. Over the last three years, grains were lost on 13594 hectares, flax - 3773 hectares, potatoes - 496 hectares. As a result of that, for 1992 alone, 26 thousand tons of grain were not obtained and 800 tons of flax was lost.

Animal husbandry. In recent years, the production of animal products in the region continued to go down continuously as a result of the lowering number of personnel, the wearing out and non-repair of production areas, the low yield of animals, a weak feed base, absence of roads, and a number of other reasons linked to the general economic crisis of the country and the inflationary processes.

The tempo of the lessening of the number of cattle and the lowering of the production of animal products in 1992 is higher than in 1991. In January of 1993, compared with corresponding data of the previous year, the number of heads of all types of cattle declined. Comparative data on numbers of cattle is given in Table 18.

Comparative data on cattle herds in heads of cattle.

Table 18

Indicators	As of 1, Jan. 1992	As of 1, Jan. 1993	1, Jan. 1993 as % of 1, Jan. 1992
Long-horned cattle	33466	30179	90
including cows	13279	11670	88
Pigs	5389	3134	58
including sows	1297	999	77
Sheep	2258	837	37
including sows	1463	663	45
Horses	644	586	91
heads of cattle/100 hectares of agricultural land:			
Long-horned cattle	28	28	100
including cows	11	11	100
Sheep	2	1	50
/100 hectares of pasture			
Pigs	7	4	57

The number of cattle were cut back in 1992 in 33 farms of the region; that included cut-back of cows in 32 farms. For collective farms ("Iskra", "Leninskoye Znamya", "im. Kalinina", "Rassvet") cut back their herds of cows by 25-29 percent. At an even faster tempo, the herds of pigs and sheep are declining.

The herds of cattle in private farms increased - - large horned cattle by 961 head, cows by 956 head, pigs by 828 head. However, this increase only to a limited extent compensates for the lowering of herds in the collective and state farms. Data on the number of cattle in private farms is contained in table 19

Numbers of cattle in private sector.

Table 19

	1991	1992	1992 as % of 1993
Long-horned cattle	4262	5223	122
•including those in peasants' farms	85	369	434
•Estimated per new peasant farms having			
•long-horned cattle	3	5	166
•cows only	2870	3826	133
•on peasant farms	23	213	926
•Per new peasant farms having cows	1	3	300
Pigs	3700	4520	122
•including those in farmers' farms	80	260	325
•Per new peasant's farms having pigs	3	5	167
Sheep & goats	10147	10047	99
•including those in farmers' farms	41	213	520
•Average/farm having sheep	2	5	250
Horses	42	91	217
•including those in peasants farms	9	23	207

The tempo of lowering productivity of animal products is shown in table 20.

Productivity of animal products.

Table 20

	1991	1992	1992 as % of 1991
1	2	3	4
Produced milk, tons	23067	16643	72
Meat sold, tons	4931	3798	77
Produced meat, tons	3723	2723	73
Produced wool, tsentners	92	25	26
Milk drawn from 1 cow kg/cow	1623	1253	77
Clipped wool/kg/sheep	1.5	1.1	73
Produced/100 hectares of arable land			
milk, tsentners	195	156	80
meat produced in live weight, tsentners	32	26	81
sold meat, tsentners	42	36	86
produced wool, tsentners	8	2	29

From the table, it is clear that in 1992, the significant lowering of the production of animal products continued; meat declined by 23 percent and wool by 76 percent. The purchase of cattle and poultry by comparison with 1991 went down in 32 farms by 1526 tons. The sale of meat to the state went down by more than two times in six farms. The average price per kilogram of meat was 20.6 rubles - the price rose by 3.6 times. The general volume of the purchase by weight of lean meat was 17.5 percent. The average weight of a single head of large horned cattle was 350 kilogram.

Milk production is going through the same crisis. The lowering of the productivity of milk continued throughout the whole year, as a result of the lowered yield of cows as well as a decline in the milk herd. For the year, the production of milk in all 36 farms declined by 6424 tons. The lowering of the production of milk could not help but have an effect on government purchases. Here, the lowering from the level of the earlier year was 6082 tons (32 percent). The lowering took place in all farms. The collective farms "Progress" purchased two times less. The average price of one liter of milk was 5.2 rubles. This price, compared with the previous year, was 6.5 times greater. In overall terms, the purchase of ordinary milk was 5 percent and 15 farms of the region only give in

ordinary milk. The extent of milk fat has declined from 3.49 to 3.47 in 1992. The population received 167 tons of meat and 1016 tons of milk.

Into the government resources have begun to enter products from farmers' farms. For that year, the purchase of cattle from farmers was 104 centners, milk 378 centners, grain 284 centners, and flax 73 centners.

Food and processing industry of the agrocomplex of the region.

Economic Indicators of the Processing Industry

Economic indicators of the work of enterprises is shown in Table 21.

Table 21

Enterprise	Relationship to type of property	Volume of production compared to rubles		Extent of decline, %
		(work, services) prices, 1000	to rubles	
		act for 1992	ual for 1991	
1	2	3	4	5
Total for region:		683649	1006563	68
including:				
Staritskiy linen factory	rental	8596	6796	126
Stepuginskiy linen factory	rental	11326	5920	191
Lukovnikovskiy	rental	20940	16103	130
Butter & cheese plant	state	102002	145127	70
Bernovskiy fish production company	state	5881	5457	108
Plant of food concentrates	state	247180	503836	49

From the table it is clear that the growth of the production of these products came about basically from the rental by enterprises of flax processors. A significant lowering of productivity came about in the butter and cheese plant and the plant for food concentrates.

The lowered volume of production of special goods for popular consumption are presented in Table 22

Consumer Goods Produced

Table 22

	Produced in 1992	as % of 1991
Fat butter	395	103
Whole-milk products	580	22
Fat cheese	638	87
Food concentrate	4548	98
Bread & roll products	6435	82
Sausage products	26	31
Confectionary products	138	40
Pancake flour	128	87
Fritter flour	46	80

In 1992, consumer goods were produced, with comparative prices, by 25 percent less than in 1991. The production was lowered on 13 types of products of the food industry out of the 14 that were studied. To the largest extent, the lowering came about in whole milk products, sausages, and confectionary goods. The level of production was lowered in the factory for food concentrates. At the same time, in December of 1992 at the milk plant there was an increase in the average amount of animal oils produced.

The basic reason for the lowering of the volume of the production of consumer goods is the cutting back in the volume of agricultural raw materials produced on public farms. These farms found it not economically useful to increase the product of raw materials when the purchase prices were several times lower than the costs themselves. At the same time there is a problem of selling, processing, and transporting meat and milk products which are produced by farmers and on the private plots, all of which holds up the growth of volume of its production.

I.B.3 Entrepreneurial activity

As of 1 January 1993, in the Staritsk Region, there were registered 43 comradeships, 13 private enterprises and 17 cooperatives. A large part of these small enterprises (43 percent) specialize in the sphere of construction, deal with repair and building matters, produce building materials and building of roads.

Middleman activities are undertaken by small buying-and-selling enterprises. In the first quarter there were operating 15 percent of the

enterprises, numbering 34 persons. In the city of Starits there has been created and is actively working a commercial house with an average membership list of 29 persons and a turnover during the first quarter of 1993 of 45.5 million rubles.

The production of consumer goods is handled by 13 percent (6 small enterprises). These small enterprises deal in the spheres of consumer services (3 enterprises) and non-productive activities (buying leather raw materials, nature conservancy activities, cable television) - three enterprises numbering twelve persons.

The portion of agricultural enterprises amounts to 15 percent. In the first quarter of 1993, economic activities were actively implemented by only 4 agricultural enterprises numbering 32 persons. The value of the products they produced was 1.2 million rubles. The most developed entrepreneurship in the agricultural field was production.

Forming stock companies. As of 1 April '93, all collective and state farms went through a reregistration. As a result of the reregistration, there were created 5 stock companies and 31 collective farms. The following enterprises for processing agricultural products were also shifted to stock companies: the butter and cheese company, the Bernovskiy regional food plant, Stepurinskiy, Lukovnikovskiy and Staritskiy linen factories.

Data for evaluating the effectiveness of the economic activities of these stock companies and collective units so far are not available; the workers and new owners of these structures so far do not realize in full their rights and obligations as owners.

Farmers' farms. In 1992-93 there continued an energetic process of creating farmers' farms. As of 1 April '93 in the Starits region, there were registered 179 farmers' farms. The general characteristics of the farmers' farms and their productive activities are shown in Table 23.

Peasants' farmers' farms

Table 23

Indicators	1991	1992	1992 as % of 1991
No. of farmers' farms	43	138	3327
Allocated lands, hectares	1998	4670	230
Average/farm, hectares	46	34	74
No. of cattle			
long-horned cattle	85	369	434
Average/farm having			
long-horned cattle	3	5	166
including:			
cows	23	213	926
estimated/farm	1	3	300
Pigs	80	260	325
estimated/farm	3	5	167
Sheep & goats	41	213	520
estimated/farm	2	5	250
Horses	9	23	207

Data on the economic activities which have been shown in the table are approximate since, because of technical difficulties (bad communications and transportation difficulties) a large portion of them are not available for statistical research. At the present time data is available only on the thirteen researchable peasant farms existant as of 1 Jan. '93.

Results of the research. Many farmers' farms are in a stage of getting established. A number of the farms have not yet gotten into agricultural activity but began with the building of cattle sheds and houses. The living conditions of the farmers are very often unsatisfactory - 31 percent of the farmers aren't supplied with water. In the buildings for farm use there is an absence of all elements of comfort - 23 percent of the farms do not have approach roads.

There has been an improvement in the availability of machinery. On those researched farms, 92 percent of the farmers have tractors, 38 percent - trucks, 92 percent - plows, 53 percent - haymowers, 38 percent - sowing machines. By comparison with 1991, only 40 percent of the farmers had tractors, 10 percent - trucks, 20 percent - plows, and 10 percent - sowing and haymowing machines.

In the researched farms, a large portion of the planted area (79 percent) was devoted to grain crops. The yield of these crops was 7.4 centners per hectare, which is considerably lower than the yield on public farms - 12 centners per hectare. With such a yield, the gross harvest of grains was 109 centners per farm.

Crop areas devoted to potatoes amounted to four percent of the cultivated land. The yield was 74 centners per hectare (in the collective farms, it is 80 centners). The average gross harvest of potatoes on each farm is 135 centners. Feed crops occupy 6% of the arable land.

The productivity of the fields in the peasants' farms turn out to be less than in the collective and state farms. But, even at that level of yield they were able to sell part of their product. 19 % of the potatoes and 16% of the grain out of their entire product. The relatively low index of yield of grain and vegetable crops is conditioned by the lower quality fertility and cultivation of the soil which has been turned over to the farmers' farms.

The sale of milk to the state amounts to 38 tons, or 0.3% of the overall regional amount of sales; meat - 10 tons, 0.3% of overall; grain - 28 tons, 1.3%; flax fibre - 0.6%. The saleability of milk amounted to 50% in those researched farms; meat - 40%, wool - 88%. Data on state purchases of agricultural products from farmers' farms can not serve as a true evaluation of the productivity of their economic activities since a significant portion of produce is sold in the free market.

The development of farmers' farms for the first time in the Starits region stopped the process of taking away from industrial turnover the agricultural advantages of weed overgrowth and swampiness. Those lands which were removed from usage were, as a rule, turned over to farmers' farms. The arable lands of peasants' farms in 1992 amounted to 0.6% of the arable lands of the region. The development of farmers' farms is limited by the problems of selling, processing, storage and transporting agricultural raw materials, primarily meat and milk. There is practically no organization of service for peasants' farms and middle-man functions -- farmers do not have their own stores in the cities of Tver Oblast.

Farmers experience particularly big difficulties in selling milk products. In the interest of resolving this problem it is necessary to organize the cooperation of farmers' farms to sell raw milk, process it and sell the finished product. The setting up of collection points and processing facilities for raw milk should be accomplished, keeping in mind the geographical location of the farmers' farms.

The function of transporting raw milk from the farmers' farms to the collection points is seen as being put onto a small enterprise -- that farmers' farm which is equipped with the relevant machinery. The creation of such an enterprise will be stimulated by the growth of commercial products from farmers' and other peasant farms which will be afforded the relevant middle-man services.

In general, as of 1993, a large portion of the farmers' farms continue to be in a state of getting established and could not really develop active economic activities, which is shown by the low indices of productive activities in several indicators. The high tempo of growth of production of products on farmers' farms so far is not compensated for by the lowering of agricultural productivity on the currently reregistered public farms.

II. REASONS FOR THE LOWERED LEVEL OF AGRICULTURAL PRODUCTIVITY AND THE NARROW AREAS FOR ITS DEVELOPMENT

The reasons for the continuing decline in agricultural productivity in the oblast are general, characteristic of other regions (oblasts); the resolution of some of them should be undertaken at the federal level.

Fundamental among these reasons for the lowering of the level of productivity in the agroindustrial complex are the following:

the establishing of a price policy in the sphere of agricultural production; in the context of the present free prices on the products of material-technical supplies, on the services of middle-man and agroservice organization, together with fixed prices on the basic types of agricultural raw materials (grains, vegetables and meat-milk products), it becomes disadvantageous for farms to increase the production of agricultural products since the costs are several times higher than the sale prices - for example on milk it is 2-2.5 times higher; the support funds allocated for agricultural products do not cover the costs of production from all farms; more than 70% of the collective and state farms have a low return, lower than a payback level;

the monopoly on agroservice, processing plants and sales organizations; the monopoly limitation of the sales price on agricultural raw materials and an insufficiently high quality of services rendered are limiting factors for agricultural production; the retail price on final products, as a result of additions to these structures, goes up by as much as 50%;

the resultant productive relationships in the collective and state farm structures and the newly created, on their base, shareholder companies do not stimulate the lowering of expenses of production nor the raising of

labor productivity; hired labor by workers of the original farms is not stimulated by the final results of production; the workers of agricultural stock companies do not recognize, fully, their rights and obligations as owners - there is no master of the land.

The results of the negative influence of these reasons on the development of agricultural production in the agroindustrial complex of the Oblast are:

low productivity of agricultural production in public farms of the Oblast; the productivity of labor is 5-8 times lower than analogous indicators of the economies of developed countries;

the extensive-type development of agricultural production; bioclimatic potential is used, in general, only by 30-35%; the available indicators of yield of agricultural crops and the productivity of animals are lower than their genetic potential by 50-60%;

the process of overgrowth by bushes and the forming of swamps in agricultural lands continues; over the last 15-20 years up to 40% of the lands had been shifted over from industrial usage to the (agricultural) economy of the Oblast;

the process of the lowering of the fertility of soils due to the loss of the humus layer continues, as does their acidity due to the economic activities of humans; the amount of organic materials introduced per hectare of ploughed field is below the norm by 40-50%;

the low level of utilization of wastes from animal farms, particularly fluid outflows, and their ineffective use as fertilizer; intensive technology for producing highly effective fertilizer on the basis of peat and sludge in field conditions is practically not used at all;

the loss of a considerable portion of agricultural raw materials during harvest, storage and transport; the annual loss of potatoes and vegetables reaches 40-45%, grains - up to 25%; grain is used ineffectively when preparing feeds; the processing of meat and milk raw materials is not done fully;

the low level of providing farms with mechanization and truck and tractor technology; the machines have low-quality characteristics and exert a negative effect from the ground traction systems on the soil; they have a high power for heavy service yet low universal usage; the demand for tractors is being met by only 75%, that for cars and trucks by 50%;

the low level of development of the social and daily living infrastructure; the degrading and lowering of moral principles among a considerable portion of the workers; the average level of pay for workers in the public farms is 4-5 times lower than the pay of city workers;

the nonreceptiveness in the agroindustrial sector of new technologies for farming, harvesting and storing, transportation and integrated processing; the supplying of farms with qualified workers and highly qualified cadres was always low because of the unsatisfactory conditions of labor and life.

Simultaneous with the lowered volume of production of agricultural products in the public sector, there occurred a growth in the production of products in the peasant farms; this growth during the year 1991-92 in the production of animal husbandry, consisting of meat and milk products, was 16 and 6 times, respectively. At the same time this growth of production did not cover the level of decline of productivity in the collective-state farms.

Narrow Areas (focal points, transl.) for the development of agricultural production:

the unsatisfactory agroservice of public and farmers' farms, the middleman-monopolist raising the prices too much on the services they offer lead to a needed alternative intra-farm (intra-farmer), on a private basis, enterprises for transportation and sale of agriculture products, and the supplying of material-technical necessities;

the sale of agricultural raw materials, particularly by peasants farms; does not have enough means of transport; in the cities there are no specialized stores; the collective and state farm structures sometimes refuse to accept certain types of agricultural raw materials from the farmers, even at lower prices; because of difficulties in selling milk products there are instances of it being destroyed;

the storage and integrated processing of agricultural raw materials in public and private farms; there are needed intra-farm (intra-farmer) processing establishments; the low purchase prices (lower than costs) on agricultural raw materials do not stimulate the increased volume of its production;

the weak technical supplying of farmers' (peasants') farms with universal machinery, including tractors, means the farmer must have at his farm at least two types of tractors (ploughing and tilling);

utilizing the complex processing of local raw material resources (peat, saprophela, clay, production wastes) for the production of highly concentrated fertilizers, feed additives for animals, and building materials and consumer goods;

the low level of knowledge by the rural population who are beginning their entrepreneurial basis of commercial activities, marketing, legal and financial-credit activities; the weakly developed entrepreneurialship of most of the workers of agricultural producers;

in rural regions there is lacking the elements of the market infrastructure; village regions should be included in the interests (through representatives, agents, sections) of newly created basic elements of the market infrastructure, such as leasing companies, business centers, marketing services;

the low level of development of the social and standard of living infrastructure; the weakly developed communication and road network, the absence of reliable energy supplies and water supplies for animal farms, the discontinuing of housing construction, and the provision of medical and cultural/daily living services remain at a low level.

The direction for resolving the problems of "narrow areas" is a deep reorganization of the structural elements of the agrocomplex on the basis of the relationship of property (its privatization), and the establishment, support and development of small forms of entrepreneurship.

III. PRIORITY DIRECTIONS TO BE APPLIED TO SMALL AND MIDDLESIZED ENTREPRENEURSHIPS

Potential spheres for the application of entrepreneurship are first of all determined by the narrow areas in agricultural production.

To satisfy the needs for supporting and developing of entrepreneurship in all spheres indicated by the narrow areas, under conditions of material and financial limitations, is practically impossible. In order to determine the first directions for establishing and supporting entrepreneurship there should be selected certain priority directions.

Expedient criteria for the choice of priority directions are:

a quick return on investment with relatively low start-up expenses; orientation to effective utilization and the integrated processing of local raw material resources with the production of products useful to agriculture, building, ecology;

orientation toward resolving social, living, and other problems of the region;

the possibility of introducing new technology throughout the entire technology chain for the production of agricultural products -- growing, harvesting, storing, processing, and sale of the final product;

Keeping in mind these criteria and the peculiarities of Tver Oblast vis a vis the priority spheres, small and middle entrepreneurships should be applied to the following:

the production of ecologically clean agricultural raw materials, their complex processing, transport, storage, and sale;

the utilization of integrated processing of local raw material resources and wastes from this production, including the production of highly concentrated fertilizer and feed additives on the basis of peat, sapropela, and the utilization of non-waste technology for processing raw flax; resolving the problem of transport, communication, housing and communal services;

innovative activity in the sphere of incorporating new technologies for working over the soil, gathering the harvest, processing agricultural raw materials and local resources for agriculture with a resultant duplication of these technologies for the economy of the oblast.

The contents of concrete proposals for establishing and supporting entrepreneurship in the indicated spheres are characterized by the following data

Production of ecologically clean products. The land resources in the oblast are used ineffectively. There continues a process of overgrowth and swamp formation of agricultural resources. In the public farms the productive areas are utilized in an insufficiently effective manner - some are not even used at all.

It is necessary to support private entrepreneurship in the following directions:

the creation of small and medium enterprises on the basis of the privatization of deserted or ineffectively utilized animal farms, greenhouses and other buildings for the production of agricultural products;

the creation of a network of small firms of entrepreneurs in the sphere of processing and storage, sale and transportation and other middleman services, dependent upon the geographic placement of the farms and infrastructure which is formed;

providing the farmers' farms with machinery, including on a lease basis, for the production of agricultural raw materials, their processing and sale of finished products.

Production of flax fibre and linen products. The Tver Oblast occupies a leading role in Russia for the production of flax fibre. The entire production of flax fibre is sent out to other regions. At the same time the oblast textile enterprises are not fully busy because of the absence of raw materials and often stand still. About 75% of the total flax raised is left as waste -- the stalk, which is a valuable organic raw material for the production of building materials. The production from flax fibre and stalks is highly profitable and has a high demand on the internal and external market.

It is necessary to support the establishment of entrepreneurship in all links of the technological chain: from the growing of flax to the production of linen materials and finished sewn products; also in the creation of small enterprises for the production from waste of the linen production process -- stalk-based tiles, sheet materials, artificial tiles, nonfabric materials, textolite.

Utilization of local raw material resources. Peat and sapropel. The reserves of these resources in the oblast are enormous (about 23% of the reserves of Central European Russia), but they are used very ineffectively. At enterprises they continue to obtain the peat while in workers settlements unemployment is growing because of an excess of free productive premises.

In the scientific institutions of the Oblast there have been worked out and continue to be worked out new technologies for the production of ecologically clean products on the basis of peat, for agriculture, ecology and construction. The technologies being proposed have a high degree of scientific-technical workup, are ecologically clean and have low energy and metal input. The products of these new technologies have a high capacity to compete on the internal and foreign markets; peat enterprises and other organizations are interested in its production and sale.

In order to effectively utilize these peat resources support is necessary:

the establishment of small innovative enterprises to utilize both the industrial finishing work of the new technology for the production of competitive-capable production in the peat enterprises of the Oblast and in other regions;

the creation of a network of small and medium enterprises within the structure of the peat complex to produce highly concentrated organic

fertilizer, feed additives for animals, adsorbents for the cleaning of hazardous wastes and waste waters, the deacidification of soils with fertilizer additives and other products for various purposes.

Wastes. Practically none of the wastes from the meat factory are utilized though they can be used for the production of valuable products, including some for medicines. The ineffective utilization of wastes from the animal farms, particularly the liquid sewage and from poultry factories for the later preparation of highly effective fertilizers used together with peat on the basis of biotechnology.

Support of private entrepreneurship is necessary in these spheres..

The development of innovative activities. Agricultural production in the Oblast is developing in an extensive-oriented manner -- The agroindustrial complex is not accepting of new technologies in any areas of the technological chain of production of plants, meat and milk products, or new organizational-production forms of economic activities.

It is necessary to create in Starits region a scientific-agroindustrial park, "Agroparka", which could be looked upon as a base model for the development of entrepreneurship, for the organizational and economic support of innovative activities, particularly new technologies, and the creation of scientifically-based production of agricultural products.

The possibilities for establishing and developing entrepreneurship in priority fields will depend, in its application, on the conditions and level of support. The primary conditions of support and development of entrepreneurship are:

the formation of an environment of support for entrepreneurship;
the working out of mechanisms to stimulate entrepreneurship in the sphere of agricultural production.

IV. Formation of an environment of support for entrepreneurship

The basis of the support environment should consist of a market infrastructure which is oriented toward the development of small forms of entrepreneurs. The formation of an environment of support and development of entrepreneurship in the sphere of agricultural production is foreseen in the draft program -- "Program for the formation, development and support of a system of small and medium sized entrepreneurs in Tver Oblast:.

In the proposed elements for the creation of a market infrastructure there is provision for the creation of guidelines, departments, and agencies

aimed towards supporting and developing entrepreneurship in the agricultural sphere. ,

For support of entrepreneurship is envisioned:

in the financial-credit system

the creation of an oblast stock and bond bank as an instrument for the financing of activities to support entrepreneurship in the oblast with the implementation of financial control and utilization of bonds;
the development and implementation of a system of compensation of portions of the overall taxes for beginning entrepreneurs who are dealing with the production of consumer goods, agricultural products and their processing;

for the preparation of personnel

facilitate short-term studies of the basics of entrepreneurship for up to 1500 representatives of small and medium businesses, including those from the agricultural production sphere;
introduce a program of teaching economists and managers through special courses to prepare them for work in small and medium enterprise businesses;

for informational support

creation of a data bank in Tver and regional centers (under the Biznes-Tsentr, House of Entrepreneurs) to provide, on a commercial basis, for potential and actual entrepreneurs, systematic information on special questions and types of entrepreneurial activities which are being realized and niches foreseen for small and medium business, utilizing production facilities and those with incomplete construction;

creation in the city of Tver of consulting firms to offer to those newly created enterprises practical assistance in the organization of their production, management, marketing and other services -- while they are starting up.

for regulations and legal support

working out and implementing an effective system of juridical and economic support for entrepreneurs on the basis of existing legislation; working out effective measures for struggling with rackets, extortioners and providing for the security of entrepreneurial activities in the Oblast within the framework of existing legislation; creating special juridical consulting services in Tver, and analogous services in the regional centers of the Oblast to serve entrepreneurial activities, on a commercial basis;

for material and technical support

create in Tver two leasing companies to serve entrepreneurs of agricultural and industrial orientation; work out an organizational structure for innovative activities (Agroparka) in the sphere of agricultural activities; work out and implement advantageous conditions for the rental of buildings, equipment, transport, communication facilities, and the assigning of land plots for small enterprises which are dealing with productive activities;

for organizational and moral-psychological support

creation of a continuously active Oblast Coordinating Council to coordinate entrepreneurial activities, including the search for partners and support; work out and implement an effective system of accounting and gathering of information on the spheres of activities, extent of work (services), the forms of ownership, the numbers and other characteristics of enterprises and organizations, including organizations (firms) of the market infrastructure; work out and bring to reality a system of moral-psychological support for entrepreneurial activities, explaining to the populace the role and position of small and medium business in the economy and the resolving of social problems, broadly using for this purpose, the mass media means of the Oblast.

V. STIMULATING SMALL AND MEDIUM ENTREPRENEURSHIP.

For the successful development of entrepreneurship in the sphere of the production of agricultural products and services, there needs to be, in addition to the benefits which are provided for in the current legislation (for example, the freeing of investment from taxes), additional measures for stimulation.

When working out such mechanisms it is expedient to foresee:

- creating of an advantageous system of taxation for investors when investments are directed toward priority spheres of agricultural production;
- lowering the tax level (down to 0.5%) on the property of those entrepreneurs working in the sphere of agricultural production who have received advantageous credits for these purposes;
- freeing up from payments for land those entrepreneurs, of small and medium businesses who are producing agricultural products, or processing and selling them on local markets;
- implementing closed auctions and focussed competitions for the sale of buildings, equipment, stores, tractor technology and machines with the participation of small enterprises and individual citizens for the development of production along priority directions;
- delaying payments during privatization and use of a privatized facility for agricultural production;
- support of innovative activities in prioritized spheres of agricultural production and utilization of local raw material resources in the interests of agriculture.

At the base of formulating economic stimuli for the development of entrepreneurs there should be laid the principle of direct dependence on the level of benefits which are being given to small and medium entrepreneurs, dependent upon the extent to which their activities correspond with the priority directions of agricultural production.

Short-term credits for the financing of priority projects are given at an interest level up to 20%, while long-term credits up to 40%. For proven and effective projects, with a high return, the level of the interest payments may go down as low as 2-3 %. The basis for the receiving of credits are proven projects with a technical-economic base - a business plan.

VI. PROJECTS FOR THE DEVELOPMENT OF ENTREPRENEURSHIP IN STARITS REGION

Projects for the first-and-foremost, most promising projects for the development of entrepreneurship and their brief characteristics are presented in Table 24.

The business plans and bases for these projects are presented in the enclosures.

The project proposals were worked out in accordance with the conceptual situations of the program which were foreseen, by evaluating the conditions for the development of entrepreneurship in the agroindustrial sphere of the economy of Starits Region, the determination of those narrow areas in the development of agricultural production and the priority spheres for investing capital. Starits Region has been assigned a priority status for the receiving of beneficial credits to support the development of entrepreneurship. The high priority projects are oriented toward the integrated resolution of the problems involved with the production of agricultural products and foresee the creation of shops for processing agricultural raw materials, local raw material resources and wastes from production, in the interests of agriculture.

The complexity of resolving problems involving the development of agricultural production of the Starits Region are discussed in the contents of and interrelations between the proposed projects, which are characterized by the following.

To implement the project for the creation of a facility to produce "kostroplit" from the wastes of flax processing on the basis of the Lukovnikov Linen Plant will allow the possibility of integrating non-waste technology for the preliminary processing of flax. Ecologically clean "kostroplit" tiles have a high consumer demand in construction and during the production of furniture. In the industrial process will be involved more than 5,000 tons of linen stalks.

The closed technological chain of production of agricultural production are facilitated by the projects for reconstructing the pig farm AO "Krasnoarmeyets" (increasing the herd of pigs by three times) and completing the building of the meat-sausage shop for farmers' farms "Abkhaziya". In that shop it is proposed to utilize non-waste technology for the processing of meat as a raw material. That enterprise is located next to (less than 10 kilometers) and oriented toward close farm interaction.

The resolving of social and daily services will be facilitated by the creation of a network of private enterprises in rural villages for the repair of used machines, ritual services and the renaissance of local trades.

Given the long-term projections, the indicators in the table have been developed on a technical-economic basis and marketing research is being undertaken.

No.	Name of project	Implementor of project	Overall need for project, 1 million rubles	Time for payback, years	Volume of production	Source of credit
1	2	3	4	5	6	7
			High priority	projects		
1	Production of biologically active fertilizer of a general nature	PKF "Medium" PMK - 30	78	0.5	30,000 tons	PKF "Medium"
2	Shop for processing buckwheat	AO "Bistrop" Staritsa	7	0.3	2-3,000 tons	AO "Bistrop"
3	Production of pork (obtaining pork & reconstruction of a feed & cook shop)	AO "Kracnoarmets" TOO	50	2.5	168 tons in live weight	AO "Kracnoarmets"
4	Development of material-technical bases	Kalinina collective farm	30	2	Increasing the production of the meat/milk produce by 30-50%	Kalinina collective farm
5	Shop for producing Kostroplit at the Lukovnikovskiy linen factory	AO	12.5	1	200,000 m. squared	Administration of the linen plant

2	3	4	5	6	7
Development of industrial complex for serving the daily needs of the population of the Starits Region	Starbitoborg	103	1 - 1.5	Ritual services, repair of household machinery, and renaissance of local traders	owner of private enterprise farmers' farms
Completion of construction of meat-sausage shop in Gostenovo village		15	5	5 - ton meat production	"Abkhaziya" farmers' farm
Greenhouse for raising vegetables					"Fora" farmers' farm
Production of animal & plant products in Khuravaevo village		12.7	5		"Universal" farmers' farm
Production of animal & plant products in Podsosen'ye village		6.5	3		"Luch" farmers' farm
Production of animal & vegetable products in Novosel'ye village		5.5	4		"Symbol" peasant farm
Production of animal products in Sasyn'ye village		1.6	5		"Sasyn'ye" peasant farm
	Long term projects				
Production of peat moss specialized soil improvement products	HPKF "Russokom"	25.4	0.5	10,000 tons	NPKF "Russokom"

1	2	3	4	5	6	7
14	Production of activated peat moss/humus fertilizer		23.3	2.7	10,000 tons	MP "Pik"
15	Production of adsorbents for cleaning of polluted waters		24.9	1.4	1,000 tons	NPKF "Russokom"
16	Production of filters for cleaning of sewage & overflow waters		35	0.5	3,000 m. cubed	"Epitsenter LTD"
17	Production of organic-mineral granulated soil deacidifier		27.3	1.5	5,000 tons	MP "Pik"
18	Production of ceramic goods on the basis of crude resources of the Starits Region		140	2	3,000,000 pieces	HPP "Tvertekhnik"

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1	2	3	4	5	6	7
14	Production of activated peat moss/humus fertilizer		23.3	2.7	10,000 tons	MP "Pik"
15	Production of adsorbents for cleaning of polluted waters		24.9	1.4	1,000 tons	NPKF "Russokom"
16	Production of filters for cleaning of sewage & overflow waters		35	0.5	3,000 m. cubed	"Epitsenter LTD"
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