

PD-ABT-365

**Support for Ukrainian Private Farming Sector and Scientific  
Collaboration: A U.S./Ukrainian Partnership**

**Funded by**  
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19 Nizhniy Val Street  
254071 Kiev, Ukraine

**Tenth Quarter Report**  
**January 1, 2001 ~ March 31, 2001**

March 2001

Submitted by

International Programs  
Louisiana State University Agricultural Center  
Baton Rouge, Louisiana

In association with  
Vinnitsa State Agriculture University

International Center for Scientific Culture  
World Laboratory Ukraine Branch

With the participation of the  
National Agricultural University of Ukraine



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April 12, 2001

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**Tenth Quarter Report for Period January 1, 2001 to March 31, 2001**  
**USAID Cooperative Agreement No: 121-A00-98-00631-00**

Dear Dr. Muliar:

Enclosed please find the Tenth Quarter Report for the above Cooperative Agreement executed between USAID and the LSU AgCenter. The report covers the project activities for the period January 1, 2001 to March 31, 2001, of the project entitled "Support for Ukrainian Private Farming Sector and Scientific Collaboration: A U.S./Ukrainian Partnership."

One hard copy of this report, as required in Section 1.5.2 of the Cooperative Agreement, "Monitoring and Reporting Program Performance," will be delivered to you when I arrive in Kiev next week. The entire work plan will be e-mailed to your office today.

Thank you for your continued assistance and guidance.

Sincerely,

Lakshman Velupillai  
Director

LV:bwc  
f/muliar.third annual work plan.111500  
cc: Dr. William B. Richardson  
Dr. Leonid Sereda  
Dr. Gennady Palshin  
Mr. Larry Brock  
Mrs. Margaret O. Blackwell

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**January 1, 2001 -- March 31, 2001**

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## **Section 1. Summary**

The tenth quarter starting January 1, 2001 and ending March 31, 2001 precedes the beginning of the farming season for the year 2001. During these months, the Center has been active in preparing for this upcoming farming season. This report elaborates on the activities performed during this quarter.

With the completion of the Third Annual Work Plan and the Ninth Quarter Report, the Center has met its goal to successfully open thirteen new raion offices. In essence, the Center now has raion extension agents in place in all of the raions in Vinnitsa oblast. In addition, the Center continues as a successful example of a working advisory/extension delivering science-based information to farmers.

In our outreach activities under objective #2, seminars, visits, and consultations have increased as reported in this document. Further, the training for raion agents in the area of demonstration plot work has been implemented and the plans have been established for the planting season. In addition, the livestock demonstration efforts have shown great success as reported in this document.

The Credit Union for Vinnitsa Farmers established with assistance from the Center provided a major step forward for the farmers in Vinnitsa oblast with the establishment of its first farm loans. Enrollment in the Credit Union has also increased. Details are provided in this report.

The Soil Laboratory at Vinnitsa State Agriculture University has been completed and is beginning operations. This laboratory will be an important addition to the Center's abilities to assist the private farmers and household plot owners (HPOs) of Vinnitsa Oblast.

The Information Support System as reported during this quarter has greatly expanded the database and are providing additional computer-based agricultural technology and information to meet the needs of the private farmers and HPOs. The Formal Education Program has successfully implemented a number of training programs as reported in this document. The Scientific Research Programs are progressing as indicated in the Third Annual Work Plan. Details are provided in this report.

Section II describes in detail all activities and results achieved in this reporting period.

## **Section II. Project Activities**

### **A. Introduction**

The tenth quarter of the Project was filled with a great number of events and activities, which covered all areas of the Project scope of work. They will be described in this report under each project component in detail. Several Attachments at the end of the document will give more distinct information about the activities given in the narrative sections.

### **B. Project Objective #1: Establishment of the Center for Private Farmer Training and Outreach**

Work under this objective was directed toward several goals. Included were the raion office update, work on creation of the National Ukrainian Advisory system, faculty training and internal evaluation.

#### *Modification of the Center*

According to our work plan for the 3d year, 13 new raion offices were opened on the basis of the agreements with raion administrations. This was described in our 9th quarter report. The administration of Tomashpil raion initially did not want to sign the agreement and cooperate with the Center and University. But at the beginning of January 2001, the head of Tomashpil raion administration applied to the Center with a request to open an office in the raion and with the commitment to sign the agreement and support the new raion specialist in all his needs. After this statement an announcement was made about the interview for the position of a raion agent (specialist). The interview was held with all candidates, and a raion specialist was employed and the office opened. The office space was given by the raion administration and it was equipped with a computer. The first seminar for the farmers in this raion office was held on March 16, 2001.

To finalize the process of institutionalization of the Center, and to follow the recommendations given by Dr. S. Verma in his report, after evaluation of the Project work last year, the policy development teams are continuing their work on the policy document development. As the result, the following policy statements have been developed:

1. Policy regarding recruitment and appointment of personnel
2. Policy on providing incentives for superior work
3. Policy on conducting a meeting of the Center's personnel
4. Policy on advisory committees
5. Methods for successful performance of the raion agents.

Another area that was identified by Dr. Verma for strengthening was internal evaluation of the effectiveness of the Center's work. Dr. Verma sent to the Vinnitsa Center his Outcome evaluation plan. This plan focused on primary data to be collected to

demonstrate the Project's outcomes. It's planned that these data will be supplemented with secondary data from other sources: published Project reports, anecdotal information, published information from other projects, and reports of other evaluators. As the plan outlined major evaluative activities, specific tasks and deadlines, people responsible and resources needed; the Center's staff selected four individuals as members of evaluation team (T. Mulyk, Y. Vanzhula, V. Pryshliak, and V. Petrychenko). This team identified the stakeholder task force (STF) and representatives, conducted one-on-one meetings with individual STF representatives, informed them about the Project and conducted interviews, asking specific questions, that were also developed in Dr. Verma's plan. The information generated in these interviews was analyzed and summarized. The STF representatives were invited to attend an STF representative meeting. This meeting was held on March 15, 2001. Many stakeholders took part in this meeting and in an interactive manner a set of questions were developed for interviewing farmers in Vinnitsa oblast. The results of the meeting were translated and sent to the LSU evaluation team for future analysis and summary. The internal evaluation of the project will go on and finish in September 2001. To accomplish this task two evaluation specialists, Drs. S. Verma and R. Richard, will travel to Ukraine this spring.

### *National Advisory System*

As it's known, the development of the draft of the Presidential Order on creation of the Agricultural Advisory System for Ukraine, as well as the Law of Ukraine on the Rural Advisory System were postponed. For this reason, the Project leaders and staff organized and took part in a number of events. The purpose of which was to spearhead the process of development of the Advisory System for Ukraine.

On February 15, Deputy Minister of Agrarian Policy of Ukraine, Mr. Y. Luzan visited the Project and evaluated its activities positively. At the regular meeting of the collegium of the Ministry for Agrarian Policy, he suggested to conduct a meeting of the Heads of Agricultural Boards from all over Ukraine at the Center in March-April and make them aware of the Center's achievements.

President of Ukrainian Farmers' Association, Mr. I. Tomych, Director General of the Farmers' Support Foundation, Mr. G. Kachurak, and Director of the Information Center of the National Growers' Association, Mr. O. Krynytski, visited the Center, one of its raion offices, and had a meeting with the Vice Governor Mr. G. Zabolotny on March 16. Their purpose was to study possible grounds for the formation of the National Advisory System, and to write the letter of recommendation to the Ukrainian Government. The guests took part in a press conference organized by the Center. Project leaders, President of the oblast growers' association, delegates from the farmers and mass media had a discussion on the current problems of agriculture and the need for a Rural Advisory Service. Afterwards, they visited Nemyriv raion office, talked to the raion administration, to the head of the raion growers association, and the Center's raion specialist. The decision was made by them to write the letter to the Government and recommend it to build the Ukrainian Rural Advisory System on the university basis.

British Project (TACIS) invited our Project coordinators to take part in a meeting schedule by them to announce the formation of agricultural advisory systems in three additional oblasts: Chernigiv, Mykolaiv, and Lugansk. Their proposal included formation of a National Center for Coordination of Extension. A primary purpose of this center is to provide training for those with a desire to become oblast and raion level extension specialists. They had formulated a teaching schedule which included classes conducted by faculty specialists of our Center. They also desired access to the ISS developed by the World Laboratory.

Since prior consultation and collaboration had been ignored, our coordinators asked for deliberations with TACIS to determine mutual areas of interest and cooperation. Dr. Palshin, Dr. Melychuk, and Mr. McCormack held preliminary discussions and scheduled a meeting at NAUU on March 28th. Points of interest were identified and a plan of approach was agreed upon. NAUU will give leadership to a working task force of all potential stakeholders to develop a proposed national law, which will allow and guide formation of a national extension system. The proposal will identify defined roles for Ukraine's agricultural institutions, describe major responsibilities, and provide for cooperative development of a comprehensive system which will serve the needs of Ukraine farmers and its rural communities.

The participants at this meeting also agreed to provide trainers for the planned training sessions of the Coordination Center. It was also agreed that the Center's role might be redefined pending deliberations of the working task force. Dr. Melychuk accepted the major role in teaching and training and agreed to host the Center's work and personnel.

On March 13, the Center's representatives: G. Loyanych, L. Brock, V. Mamalyga, V. Todosiychuk, and V. Yamkovenko visited Uman State Agrarian Academy where they met with the Rector and leading staff of the Academy. The purpose of the visit was to prepare grounds for the expansion of the Project activity for other regions. This Academy people expressed great interest in extension of the Center's experience and wrote the letter on inclusion of the Academy into the Project as a full right partner to the leaders of the Project (Drs. L. Velupillai, L. Sereda, and G. Palshyn) (see Attachment A).

### **C. Project Objective #2: Development of Outreach Services**

For the development of this objective, the Project staff conducted a number of seminars, farm visits, and individual consultations. Credit Union activity was developed and activated; contacts with agribusiness on development of livestock demonstrations were continued; publishing sector of the project was enhanced; soil lab for farmers was organized and operations started; contacts with other projects continued for the benefit of farmers; the ISS component was expanded with several new additions/parts to the data base.

*Seminars/workshops, farm visits and consultations*

In January, February and March 2001, the seminars and workshops were conducted in the central and raion offices for the following categories of clients:

- Farmers;
- HPOs;
- Directors and specialists of the reformed collective farms;
- Farmers' wives;
- Farmers' children.

Total number of the seminars and workshops for this period was 47 seminars, in which 1491 people took part. Forty seminars were conducted for farmers (but they were open to HPOs and for the members of the restructured agricultural enterprises and some of them attended). Three seminars were organized for the members of the reformed collective farms on the request of the agricultural board in Chechelnyk, Gaisyn, and Mogyliv-Podilsky raions. Four seminars were held specifically for HPOs (94 people took part). A special training program was organized for farmers' wives on farm accounting. Farmers' children, who constitute the majority of the formal education group, finished their first year of education.

The topics of the seminars were determined by the current needs in the reforming of the agricultural sector. Rural people are continuing to receive land titles, new farms and other kinds of private agriculture enterprises are emmerging, so in the requests addressed to the Center, we find many questions of a legal and financial nature. As we near a new planting season, seminars also addressed many technological and marketing issues.

#	Activity	Total number
1.	Informational assistance (written responses to farmers questions)	858
2.	Consultations provided by VSAU faculty specialists	271
3.	Consultations provided by raion agents to: <ul style="list-style-type: none"> <li>• Farmers</li> <li>• HPOs</li> <li>• New farmers</li> <li>• Women farmers</li> <li>• Farmers' wives</li> <li>• Other categories of clients</li> </ul>	1185 621 253 130 41 53 87
4.	Visits to farmers and visits of farmers to the office	1857
5.	Seminars	47
6.	Participants in the seminars	1491
7.	Brochures of "Farmer's Library series"	31
8.	Radio programs	13
9.	Newspaper articles	37
10.	TV programs	8

As evident from the above table, the number of people with whom the Center works has increased significantly. We see that more HPOs and people who would like to or are actually beginning to farm address the Center with different needs. They comprise 22% and 11%, respectfully, of the total number of our clients.

The Center's marketing specialist, O. Kryvokon, received 135 requests from farmers during this quarter. All requests were categorized into groups according to their themes. It will be interesting to make the analysis of the percentage of each topic in the total number of the requests. These were: markets for agricultural products (8.6%), production technology (8.6%), purchasing machinery (18.9%), purchasing seeds (20.7%), purchasing fertilizers (12.1%), purchasing plant protection means (1.7%), consultations on loan conditions (20.7%), purchasing fuel (3.5%), miscellaneous (5.2%).

This quarter the interest of farmers regarding different legal questions was still at a high level. The Center's lawyer helped farmers in many cases. Most of the activity of the legal component of the Center was directed toward solving problems of land privatization issues: getting land and asset shares, receiving land titles, etc.

The following quantitative analysis will help to depict the work of our legal officer during this quarter:

1. Oral consultations and explanations given during farmers' visits to the office	145
2. Written responses given to farmers' requests	11
3. Presentations and participation at discussions during seminars	10
4. Practical assistance in developing legal documents: By-Laws, agreements, claims, letters of complaints, orders, etc.	11
5. Development of agreements, contracts for the Project activity	15
6. Development and distribution among the raion agents for their use in work samples of the By-Laws of a private farm and agricultural cooperative	11
7. Development of samples of all necessary legal documents for raion agents for their use in the work with farmers	13
8. Typing and printing the texts of different laws, orders, instructions of Ukrainian Law for each raion office	18

The Project Lawyer worked closely with the Credit Union while considering the letters of application for loans. Very helpful legal assistance was provided during talks between the Center officials and agribusiness ("Diskont", "Eco") representatives about their possible future cooperation.

Our University faculty wrote and published 31 brochures for "Farmers library" series, published 5 articles in the newspaper "Budni", and produced "Fact sheets" (issues 7 – 22).

The topics for publications, which involved active participation of many faculty, especially Y. Vanzhula, N. Pravdiuk, S. Kaflevska, I. Palamarchuk, and others, cover the most painful questions for farmers, which were raised during seminars and sent in written requests. These topics are:

1. Legislation regarding taxation of farmers
2. Simplified forms for farm accounting
3. Operations necessary to organize appropriate feed supply for animals in spring and summer seasons
4. Recommendations on feed rations
5. Application of agricultural machinery

In addition to this raion, newspapers published 9 articles of our field faculty about the work of raion offices.

### *Demonstrations*

A special training program was launched for the raion agents to help them better understand the concepts for result demonstrations and to gain the skills to outline for themselves all the procedures in the development of demonstration plots during the growing season. Interactive teaching techniques were used to lead them into discussions to identify and describe all components necessary for effective demonstrations. The presentation emphasized setting measurable objectives, listing all materials, finding agreement with willing and capable farmers, observations and collection of data during the demonstration and using the results and observations in subsequent teaching efforts. The seminar showed the ability of Project staff to analyze errors and plan for expected outcomes (Attachment B). Raion agents received many handout, which were: “The description of the program ‘Demonstration development’”, “Methodological recommendations for a raion agent”, “Questionnaires”, and “Test of knowledge levels”.

Livestock demonstrations were developed through the efforts of the Center’s specialist, Y. Vanzhula, the Center’s liaison officer, Paul Ivanicky, and correspondent raion specialists, participating farmers and agribusiness – “Gigiena Bio Ukraine” (Crimea), which provided feed premix “Elita” for balanced rations for pigs and poultry. Demonstrations were developed on the private farm “Agorostok”, Orativ raion, farmer M. Motuzuk, and “Flora”, Kruzhopil raion, farmers A. Flora and O. Flora.

The purpose of the demonstrations was to:

- Implement and extend progressive technologies in new feed elements in pig production;
- Give farmers reliable evidence that recommended mineral-vitamin premixes that will guarantee an increase of livestock productivity and will be economically efficient for farms of this type;

- Determine further activities for spreading the information on the results of these demonstrations among farmers for their increased awareness of the importance in the use of well-balanced feeds for livestock (training programs, seminars, consultations, publications, demonstration videos).

The study of the results of these demonstrations showed that during the first month of their life until the age of 40 days the growth of piglets depended only on the quality of milk of the sow. Adding of premixes in their rations did not have much influence on their growth. Weight gains were relatively low, 60 g in the trial group and 58 in the control group.

During the next 20 days for suckling piglets the effect of the premixes grew considerably. Weight growth per day increased to 250 g in the trial group and 162 g in the control group. The importance of sow milk decreased. In general for 50 days of suckling period the average growth per day of the control group was 103 g and of the trial group – 135 g. The amount of feed per kilo of weight growth was 24.8% less for the trail group compared to the control group.

The demonstration committee also conducted a training meeting for raion specialists concerning the use of Klepps in crop production farm demonstrations. Scientists described its potential benefits, methods of application, and variances in rates for different crops. Each raion specialist was given Klepps to establish substantial demonstrations in his/her raion. This material was made available by Dr. N. Korzyrovska of the World Lab research team.

### *Credit Union*

For the better operation of the Credit Union (CU) of Vinnitsa Farmers, a special study tour was organized for the credit union and Project accountant, Larysa Kovalchuk. The primary objective was to learn more about CU activity in the US: to study the accounting system of the CU, the system of recruiting new members, and the conditions and different forms of loans. One of the goals was also to discuss the possibility for international cooperation between the LSU Campus Federal CU and Vinnitsa Farmers' CU. The detailed report on this program is given in Attachment C.

During this quarter, 14 new members (farmers) joined the credit union. On the 26th of March, the total number of farmers in the credit union was 24. The head of the managing board, O. Kryvokon, the accountant of the CU, L. Kovalchuk, and the Project lawyer, V. Dmytruk, gave 22 consultations about the work of the credit union to potential members. They worked out and issued three new documents for CU operation: "Agreement on the Loan Conditions", "Letter of Warrantee", and "Confirmation of the Obligations of the Warrantor." In addition, the "Agreement on the Project Loan for the CU" was developed and signed (Attachment D). As the result of this agreement, the CU was able to start providing the first loans to farmers. The CU Credit Committee conducted 5 meetings and the managing board had 7 meetings. One of the members of

Credit Committee was changed. Instead of the farmer from Lypovets raion, I. Kuharchuk, the farmers elected a farmer from Koziatyn raion, V. Demydiuk.

At the end of this quarter CU of Vinnitsa farmers issued 10 loans:

- N. Skotska (Vinnytsia raion) – 3,500 grn
- V. Melnyk (Tulchyn raion) – 3,700 grn
- P. Kryvoruchko (Vinnytsia raion) – 500 grn
- A. Pogrebny (Vinnytsia raion) – 1,500 grn
- M. Stadnik (Bershad raion) – 3,500 grn
- O. Sikorsky (Bershad raion) – 3,500 grn
- A. Tsura (Bershad raion) – 3,500 grn
- G. Andriyenko (Gaisyn raion) – 3,700 grn
- V. Potushynsky (Gaisyn raion) – 3,700 grn
- A. Voronin (Gaisyn raion) – 3,700 grn
- 

Total sum of the loans is 30,800 grn.

On March 26, the CU still had on its account 6,200 of reserve capital. The information on the credit union has been distributed to farmers in different raions through the Center's specialists and during seminars in the raion offices.

#### *Soil laboratory organization*

The soil lab is still in the process of development, but considerable progress has been made. Since the beginning of this year, the renovation of the lab facilities has been completed, all necessary equipment, glassware and reagents have been purchased at project expense and university funds. Part of the equipment was donated by LSU Department of Agronomy.

LSU expert, Ms. Loretta Fourrier, came to consult with project personnel in January. She helped to set up the operating equipment purchased by LSU. Ms. Fourrier conducted a seminar for raion specialists in which a discussion was held on the arrangements for soil lab operations, techniques of collecting samples, and submitting of the soil tests results to farmers. A full report on this visit can be found in the Attachment E.

Currently the installation of all Ukrainian equipment is being finalized. Fifty-two samples were processed for determination of pH and all samples are ready for the analysis on Nitrogen, Phosphorus, and Potassium.

Our farmers will soon be able to realize economic benefits of the soil lab operation.

### *Contacts with agribusiness*

Agribusiness links with the Center in the 10th quarter focused on preparing for cooperation in field demonstrations. After finalizing plans for demonstration plots on household plots and farms, the Center approached several agribusiness companies to propose collaboration. Agribusiness companies have responded with an interest to participate and it is expected that companies such as Aventis, Bayer, DuPont, and Monsanto will make inputs available to implement demonstration plots.

Many demonstration plots include plant protection using agro-chemicals. It has been planned that these agribusiness companies providing agro-chemicals for plant protection will make presentations at training programs and seminars on the safe and proper application of their chemicals to Center staff and farmers. On March 29th, the Center met with Director Olga Cholovska of the Lviv Plant Protection Research Station and became acquainted with the USAID-funded Virginia Tech project to educate farmers on safe and proper application of agro-chemicals. As a result of the project, the Lviv Plant Protection Research Station has implemented a very successful educational program. Mrs. Cholovska has agreed to organize a training program for the Center's raion specialists in mid April and assisted in establishing links to Vinnitsa Plant Protection Research Stations to consider devising a program similar to the Lviv initiative.

This quarter plant protection has also been a focal point of seminars organized by apple and potato growers associations. The Center assisted in arranging agribusiness representatives involvement and on April 10th Aventis and Bayer will be present at a potato growers association seminar. Demonstration plots planned for association members will be reviewed by the Center specialists at that time. Also, the potato growers association benefited from an exhibition sponsored by the Center and attended by more than 300 household plot owners. The success of the exhibition inspired the association to repeat the event one week later. Association members were able to sell many different varieties of potatoes, as well as, securing agreements with agribusiness companies on partnerships. Zeleniy Svit, a distributor of plant protection, has agreed to provide inputs to the association's farmer stores on 30 day credit for 5000 hrivna with agreements that the Center assist in implementing demonstration plots at those sites.

In the two seminars organized by the apple growers this quarter, association members have discussed the feasibility of purchasing inputs in bulk orders to have a considerable savings in costs. A seminar co-sponsored by ACDI/VOCA and the Center included a field day on a private orchard farm for seventy five members. Material has been collected by the Center for continuing the creation of educational videos. A scope of work has been submitted to CNFA for a U.S. farmer-to-farmer volunteer to work with the apple growers in Vinnitsa on growing and storage technologies and is expected to arrive in mid May. Discussions with the Holland Ukraine Fruit 2000 Project concerned cooperation in identifying potential farms for producing their crops organically. Holland Ukraine Fruit 2000 is in the process of submitting a proposal to assist farms to produce and market organic fruits and vegetables and envisions a role for the agricultural extension service at VSAU.

Demonstrations in animal production have continued this quarter with agribusiness companies Gigiena Bio, Eso, Kyiv Atlantic, and Nutrafeed providing inputs for feed trials. Once a month, the farmers and raion specialists are visited by an animal scientist from the VSAU to evaluate and videotape results. Feed trials on two pig farms with Gigiena Bio's premix are at mid-point and have demonstrated a positive effect. Following two months of trials with the premix, a pig farmer from Orativ rayon has made a decision to switch to Gigiena Bio's premix and believes that the premix will increase productivity. Gigiena Bio has sold a two month supply of premix to the Orativ farmer and received several orders from other farms based on effects in the demonstrations.

On March 5th, a VSAU animal scientist was invited to Dnipropetrovsk for participation in a conference organized by Nutrafeed. Attending the conference was General Manager of Eastern Europe Pierre Lietens. A presentation by the VSAU animal scientist explained agricultural extension service at VSAU and the implementation of Nutrafeed trials by the Center. Mr. Lietens expressed interest in further cooperation with the Center and discussed the possibilities for farms wanting to become Nutrafeed dealers.

VSAU's animal scientist, Y. Vanzula, and head of Haicyn Rayon Farmers Association, Mr. V. Voronin, visited Kiev oblast's Semex office, a Ukrainian Canadian Joint Venture for superior genetics in cattle breeding. The purpose was to discuss the formation of a cooperative within the Haicyn Farmers Association to provide artificial insemination services with superior genetics to local village livestock producers. A meeting with Sales Manager Zinaida Yakovenko donated to Mr. Voronin's association 150 units of sperm with superior cattle genetics and an invitation to a one-week training on artificial insemination beginning April 23rd. At Mr. Voronin's request, the Center will sponsor two members of the association for training and continue to assist in the formation of the cooperative. Mrs. Yakovenko of Semex, also the Assistant General Director of Ukraine's Main Cattle Breeding Selection Center, is planning to visit the Center in mid April to pursue further cooperation.

On March 22nd, a group from STEP, a Canadian sponsored program in beef and forage, arrived in Vinnitsa to propose a one-week intensive training program by Canadian specialists to be held at VSAU on animal production topics. Tentative dates were set for mid September 2001 and twelve specialists from the Center will be officially invited for the training.

A meeting in Lviv on March 29th with the ACIDI/VOCA-Southern States Cooperative Project allowed the opportunity to begin a scope of work for animal nutrition scientist and ACIDI/VOCA consultant Roy Chapin to assist in evaluating feed trials implemented by the Center and a training program for rayon specialists on animal nutrition. Mr. Chapin is on a three month assignment to consult feed mill cooperatives in Lviv and it is anticipated that periodic visits will be made to Vinnitsa.

### *Information Support System*

The work completed in the reported period by the group of the project at the World Laboratory, Ukraine Branch is described as follows:

Database and software for use in plant growing area

The above component has been further expanded and updated, as follows:

- number of items in the database of input suppliers has been increased to 1005;
- 100 new items have been put in the database on crop varieties increasing the number of items to 3891;
- 100 new items have been added to the database on weed plants increasing the number of items to 195;
- 300 new items on pest insects have been introduced increasing the number of items in the database to 600;
- 361 items on crop diseases are now available in the database.

Computer-aided guides

The first section for computer-based identification of grain crop diseases is close to being completed. The program will allow the identification of specific diseases affecting winter and summer wheat, winter and summer barley, oats, corn, buckwheat and rye from symptoms displayed by the plant.

The pest guide has been supplemented with 300 new insects (as mentioned above), including data on their biological classification. The algorithm of the computer-based pest identification has been worked out, as well as, a library of damage caused by specific pests on the winter wheat bound to the crop development phases (phenophases).

Site-specific calculation of the optimum fertilization regime

Development of the above program continued in this reporting period, as follows:

- the core program has been supplemented with a new form of the specific farmer plot profile, including its agrochemical characterization;
- mathematical models and algorithms have been developed to enable the program to make the selection of specific brands of fertilizer suitable in each case using the data base available in the ISS (earlier the program allowed calculating only the amount and kind of nutrients, which should be applied additionally without indication of the specific brands accessible at the Ukrainian market);
- format of the resulting data display has been improved to make it more user-friendly – currently it shows the farm plot characteristics, size, crop cultivated, fertilizer dosage, and recommended breakdown by periods of application;
- the group has started working out the mechanism of selection of the best case-specific fertilization scheme based on calculation and analysis of several possible ones.

“Technology” module

The group has started development of the software to enable construction and analysis of multiple flow-charts for cultivation of the specific crops, which would be linked to the existing database of crops and crop varieties, fertilizers, technological operations of soil preparation and cropping. As part of this work, the fertilizer application timing for 34 crops has been bound to their growth phases at this time.

### "Economic" module

Within the "Economic" component of the Information Support complex, which covers today a set of programs dealing with accounting and financial analysis of farm operation and cost assessment of flow-charts according to the National Standards being adopted in Ukraine at this time, the monthly salary computation form for different categories of agrarian workers has been added to the earlier developed computer programs of accounting balance, report on financial results, as well as, calculation and analysis of economic activity indicators.

### ISS Outreach

Seeking to identify and reach out to the whole spectrum of potential users of the plant growing component of the ISS, the team has held a number of visits and presentations with leadership of agro-industrial complex and associated institutions:

- National Academy of Agrarian Science – Prof. Lyssenko, Vice-President, and his staff;
- Ministry of Agrarian Policy, State Department for Plant Protection – Dr. Petrunek, Head, and his staff;
- State Commission for Pesticide Registration, State Commission for Crop Varieties Testing etc.

### "Animal Husbandry" module

- Database on Swine Breeding has been reviewed by experts of the Swine Breeding Research Institute;
- Preparation of the "Swine Breeding" module for distribution among Outreach agents and other users on CD-ROM started; in order to be able to produce it, the distributive program has been made as well as the technical problems of module compatibility with both Paradox and MS Access 97 DBMS have been resolved;
- Data lattice and program libraries maintaining the "Swine Breeding" module operation through Internet are under development;
- Data gathering and input into a database for the "Dairy Cattle" module continued.

### Beekeeping module

Computer-based guide on "Beekeeping" has been completed. This program module contains a comprehensive data on biological particulars of bees, on arrangements and logistics required for starting beekeeping, maintenance and breeding techniques, and uses of beekeeping produce, bee diseases, etc. All data in the computer-based guide are

followed by illustrations, i.e. pictures of honey plants, and some technological operations of bee keeping, schemes and drawings of hives and beekeeper tools, etc. In order to make the guide user friendly, it is supplied with a glossary of terms, structured by chapters in alphabetical order. Also, the work was started recently to produce the beekeeper guide on CD, as well as, to make it accessible through the Internet.

### "Animal Disease" database

Database on animal diseases, which is being developed as part of the ISS jointly with the Veterinary Medicine Research Institute covers today 1663 diseases. Inputs of data provided by partner continued and description has been made for 994 of them.

### Cartography

Work done in this report period within the cartographic component of the ISS were primarily focussed on the development of the computer version of the Atlas of Vinnitsa Oblast for Private Farmer Use.

- data lattice has been worked out;
- several maps available in hard copy of the Atlas (totally 40 layers) have been scanned, digitized in ArcView format and referenced;
- initial data identified for the maps of "Pest Insects" and "Crop Diseases" Chapters and maps are digitized;
- digitizing and referencing of the Soil Resource map started;
- baseline data (75 tables) are entered into the database of the new chapter "Solution of climate-related tasks in Agriculture" specially designed for the digital version of the Atlas. The said tables contain parameters and characteristics needed for solution of the specific tasks.

### Website

On the web-server of the Project at the address: <http://www.project.vsau.org>, maintained in Vinnitsa by the ISS staff member, I. Valyukh, the following information is available:

- on the project and participating institutions;
- agrarian sites on the World Wide Web;
- credit-related information;
- weather;
- ASP-based access to several ISS databases, namely, the ones dealing with plant protection chemicals, mineral fertilizers, register of crop varieties, atlas of vegetable crops, general data about the Information Support System;

The work on providing access to other databases continues. Principal pages on the Project website are also available in English. An Electronic Notice Board (Internet-shop) has been opened on the Project website for private farmers and outreach agents, where they can place announcements on the crop products and second hand equipment they are interested to market or to buy. Special E-mail server, located by the address

[user@vsau.org](mailto:user@vsau.org) allows the agents in raion offices to have their own e-mail boxes on the Project server. Also, "on-line chat" communication technology has been tried to enable faster exchange of information with raion agents. Connection to raion offices to the Internet has allowed for quicker updating of information in the ISS. These have been installed in each raion office,

### Distance Learning

ISS continued cooperating with the Ukrainian National Agrarian University on the concept and scope of National Agrarian Extension and Distance Learning Center. A number of meetings and discussions were held with this purpose and an Agreement on Cooperation has been signed. The trial distance course on one of the agrarian disciplines is being worked out with regard to content and software support development.

### Other activities

Meetings were held in search of possible partnerships with projects, funded in Ukraine by USAID and other donors, specifically with

- Center of Land and Resource Management, funded by USAID (Memorandum on Understanding has been signed);
- Joint effort of USAID and EPA dealing with a databank on plant protection chemicals authorized for application in Ukraine;
- Two meetings were held with representatives of a new Project on establishment in Ukraine of the National Agrarian Consulting Service, recently started under TACIS Program. Professor Melnichuk, Rector of UNAU, hosted both meetings in his office. The second enlarged meeting initiated by Dr. Palshin, was attended by USAID representatives (Mr. Olexandre Muliari and Mr. Bohdan Khomiak) and US Coordinator of this Project (Mr. Larry Brock).

## **D. Objective #3: Formal Education Component**

The Center's staff and formal education team during this quarter pursued the goal of helping farmers, their wives and children, future farmers and future employees for the Advisory/Extension System to receive their education. Part of the goal was reached by providing clients with practical educational programs, and another part (extension employees training) is only in the stages of development.

During this quarter the following training programs were organized and conducted:

1. Training program for farmers' wives on farm accounting, the final (second) stage of the course.
2. Beginning of the accounting course for farmers' wives: first stage for a new group.

3. The final session of the formal education program of the first year of the curriculum for new farmers and farmers' children.

These programs became popular among our clients and aroused great interest all over Vinnytsia oblast. There are plans to expand the scope of work and recruit more students. Another part of the work of formal education team is development and improvement of the courses for undergraduate and graduate levels for training future extension specialists. The description of all courses was completed and the team is collecting necessary reference materials.

#### E. Objective #4: Agricultural Technology Research Programs

Endophytic Colonization of Wheat (*Triticum vulgare*) and Rice (*Oryza sativa L.*) with Nitrogen Fixing Bacterium *Klebsiella oxytoca*. January-March 2001. Studies of technology of inoculant production.

In this reporting period, a technology for inoculant manufacturing is presented which is based on co-cultivation of *Paenibacillus sp.* and a bacterium of choice (Table 2). The technology exploits the capability of some bacteria to stimulate the EPS production of *Paenibacillus sp.* Results of experiments on co-cultivating *Paenibacillus sp.* with klebsiella, agrobacteria, pseudomonads and erwinia showed the possibility of a two-step method for inoculant manufacture. The critical factors in inoculant manufacture were the population size of the active strain which determines a sort of inoculant and the concentration of EPS produced by *Paenibacillus sp.*. After drying, the final numbers of the partners' living cells per gram is approximately  $1.0E+12$ . In the case of co-cultivating *Paenibacillus sp.* together with *K. oxytoca* IMBG 26, the culture gel contained a minimum of  $1.4 \pm 0.5E+10$  cfu/ml of both partners and not less than 20.0 g/l of EPS. The five variants of preparation will be recommended for field trials in Vinnitsa region

Table 2. Co-cultivating Gram-negative bacteria with *Paenibacillus sp.*

Variant	Concentration of cells in the mixed culture after the 48 h-incubation period, cfu/ml
<i>K. oxytoca</i> IMBG 26	$1.4 \pm 0.5E+10$
<i>Pseudomonas sp.</i> AP33	$6.5 \pm 0.9E+9$
<i>Ps. fluorescens</i> ATCC 13525	$1.6 \pm 0.7E+10$
<i>Ps. aureofaciens</i> IMBG 288	$3.7 \pm 0.7E+9$
<i>E. herbicola</i> IMV 8945	$5.0 \pm 3.0E+9$
<i>Agrobacterium sp.</i> IMBG 260	$3.7 \pm 0.7E+9$
<i>Agrobacterium sp.</i> IMBG 261	$2.9 \pm 0.1E+9$
<i>Paenibacillus sp.</i> IMBG 221 (control)	$2.4 \pm 0.3E+8$

Isolation, Characterization And Utilization Of Insect Resistance Genes That Will Benefit Into Ukrainian And Us Agriculture

In our previous investigation we have identified the genes for new Ukrainian *B. thuringiensis* (Bt) strains that are responsible for insecticidal activity in the studied strains.

These genes encode crystal proteins that belong to Cry 1B class. It is known that Cry 1B proteins are toxic to a wide range of pest insects (both Lepidoptera and Coleoptera). But the toxic effect of these native proteins to Coleoptera is weaker in comparison to toxicity to Lepidoptera and variable. Our main interest is to control Colorado potato beetle larvae and so the aim of this project is to develop methods to increase insecticidal properties of Cry 1B proteins to Coleoptera. One way to intensify the crystal protein is to influence of toxic response of insects to solubilization of crystals and protoxin activation.

Accordingly, our plan in this step of project is the study of solubilization and activation conditions that are carried out in crystal proteins of three Bt strains (Bt 949, Bt 834 and Bt 10-H). Activation of solubilized proteins is realized both via trypsin digestion and truncation of proteins by chemical influence. As a result, the conditions of insecticidal protein solubilization were selected in different buffers. The conditions, that provided the retention of protein primary structure, as protoxin, and its truncation with appearance of polypeptides (molecular mass 68 kD and 50kD), were determined. After trypsin digestion, the set of polypeptides (68,56, 20 kD) for Bt 949 and Bt 834 was obtained. The spectrum of polypeptides after trypsin digestion for Bt 10-H, which produces Cry 1A type of crystal proteins except Cry 1B was more complicated. Insecticidal activity of solubilized crystal proteins and polypeptides obtained after truncation of native proteins will be studied during summer infestation of Colorado potato beetle larvae. The results of biological tests will be taken into consideration during demonstration experiments on restricted farmer fields.

*Development Of The Way For Gene Vaccines Creation On The Basis Of The System Assembling In Liposomes -- January-March 2001*

Blood sera from mice, vaccinated with prototype DNA-vaccine against CSFV, using different ways of immunization, were tested in ELISA. It has been shown that the maximum response can be achieved with immunization into spleen. The additional (4<sup>th</sup>) immunization revealed higher increases in antibody titers after the subcutaneous but not into spleen immunization . The immunization of the group of mice that were injected intramuscularly (into the feet) did not result, as was expected in significant growth in antibody titers.

The additional immunization of rabbits with the purified in preparative SDS-PAGE recombinant protein is being performed. The aim of it is to get the immune serum for isolation of immunoglobulins and preparation of affinity sorbent. This work will be finished by the middle of April.

Sera from the domestic swine and wild boars, that have been collected in different regions of Ukraine, were tested . They were studied in ELISA with the recombinant

protein, and in PCR. Sera from western (safe) regions and Crimea were investigated. Sera and materials from western part of the country gave negative results for anti-CSFV antibodies as well as for RNA, while Crimean materials from wild boars revealed both antibodies in ELISA and RNA in PCR.

The work directed for the development of the optimal schedule for the obtaining of the recombinant protein in preparative amounts continues. The best concentrations of the inductor (IPTG), the time of its adding are chosen. The possible variants of the preparation of the protein vaccine with the use of carriers and stabilizers (aerosil, mannite and others) are being studied.

### **Section III. Attachments**

- A. Uman State Agrarian Academy Agreement Letter
- B. Seminar Agenda for Demonstration Plots
- C. Larisa Kovalchuk Report
- D. Credit Union Agreement
- E. Loretta Fourrier Report

**Attachment A**

Dr. Lakshman Velupillai,  
Director International Programs, LSU Ag Center

Dr. Leonid Sereda,  
Rector, Vinnytsia State Agrarian University

Dr. Gennadiy Palshyn,  
Director, International Center for Scientific Culture,  
World Laboratory, Ukrainian Branch

Uman State Agrarian Academy would like to suggest a partnership in the implementation of the USAID Project Support for Ukrainian Private Farming Sector and Scientific Collaboration in case of its expansion, with the goal to assist Ukrainian rural community in economic development and building up a regional extension service for Vinnytsia, Cherkasy, and Chmelnytsky oblasts.

The commitments of Uman State Agrarian Academy will be as follows:

- select and recruit 15 faculty;
- provide office space and facility for distant education;
- hire bilingual secretary, coordinator, and translator;
- provide transportation support;
- 50% accountant;
- any other materials and accommodations, which may be mutually agreed to be necessary;

With great respect

Dr. O. Gerkiyal  
Rector, Uman State Agricultural Academy

**Attachment B**

*Agenda for the seminar on the development of result demonstration*

03/02/01

Vinnytsia

1. Demonstrations as the means for studying and evaluation of the new technologies of crop production.

Dr. V. Petrychenko – **10 – 10.30 am**

2. Overview of the demonstration plan for the 3d year of the project activity

Drs. V. Mazur, Y. Vanzhula – **10.30 – 11.30 am**

3. LSU experience of demonstration development and evaluation

US Project Coordinator – Mr. Larry Brock – **11.30 – 12.00**

**Coffee break – 12.00 – 12.30 pm**

4. Some peculiarities of demonstrations and of the implementation of scientific researches in big agricultural enterprises

Associate Director, Vinnytsia oblast research station –

M. Romanenko – **12.30 – 1.00 pm**

5. Assessment of the results of demonstrations in Kryzhopil raion

Round table discussion – **1.00 – 3.00 pm**

Participants: farmers and raion agents

Presenters: A. Flora (farmer), V. Fedoryshyn (raion agente)

## Attachment C

# Report of Larisa Kovalchuk, Accountant for the Ukrainian Center for Private Farmer Training and Outreach, and Wanda Yamkovenko

On study tour to LSU Ag Center  
January 30 – February 10, 2001

### Purpose:

Overview of the accounting system of LSU AgCenter Accounting Services, university accounting process, taxation, and main functions and services of the Campus Federal Credit Union.

### Objectives:

1. Conference with Margaret Blackwell on budgeting procedures in the Project.
2. Overview of the university financial and accounting process.
3. Overview of purchase procedures.
4. Overview of the Human Resource Management office
5. Credit Union Federation and Organization

The program started with work at the International Program Office on February 1, 2001 and ended on February 9, 2001. The schedule included conferences with the staff of International Program Office, visits to several Credit Unions, visits to the AgCenter and LSU Accounting Service, and to the Human Resource Management Office.

### Objective 1

On February 1, 2001 we had a meeting with Margaret O. Blackwell, Assistant Director, and Cathy Marks, Administrative Secretary, and discussed Project Budgeting Procedures and changes in the budget lines. These changes were necessary because of the expanding of the scope of work of the Project. Twenty-seven raion offices were opened and raion specialists employed for each. As a result project staff increased tremendously compared with the original plan. For this reason line 1, Salaries and Wages, and line 2, Fringe Benefits, which was used for paying taxes on salaries didn't have enough funds for the salaries and taxes.

During this meeting we also talked about the role of International Programs and AgCenter, made an overview of financial responsibilities of International Programs in projects, studied accounting, purchase, and travel procedures.

On February 2, we continued our work in International Programs. The main topics discussed were: budget guidelines, monthly invoicing, payment of invoices, project financial issues, and review of Vinnitsa Credit Union program.

### Outcome

As the result of budget discussion changes in the budget lines were approved. Lines 1 and 2 were increased from Line 3, Travel, Transp. & Per Diem. (Attachment 1). Our next financial reports, beginning from February 1 will be reflecting these changes in the Billing Form. In addition to this, a special letter, authorizing internal changes of the budget, shifting the money from one line to another, was composed and signed.

Much useful information was received on purchase procedures. This information confirmed that the purchasing practices in Vinnitsa were observed, but it gave us some new ideas for future work. These will involve better and advance planning of our purchases, better organization of the process itself and easier reporting procedures.

#### Objective 2

On February 6 we worked at the LSU AgCenter Services with Mr. Mark Legendre and his staff (14 people). We had an overview of office functions, work of its subunits, university accounting process, and special topics with regard to Vinnitsa Project, writing financial reports. We tracked all stages of processing of our financial reports – from mailbox to signed checks for payment of invoices.

#### Outcomes

During this meeting we were pleased to here that our financial reports were well done and didn't cause any problems for their processing.

#### Objective 3

Miss Marsy Fisher, Purchasing Agent, who is responsible for purchasing procedures at LSU AgCenter Accounting Service, told us that purchasing equipment for the Ag Center is fulfilled only after receiving bids from three different companies, and submitting them to LSU Accounting Service with a rationale in favor of one company. A purchase can be made only after getting an approval from LSU Accounting Service. These are rules, which are recommended for our Project to follow.

#### Outcome

This kind of purchasing procedures allows planning necessary purchases in advance and using the project money cautiously and rationally. We also were pointed out again that the original project budget doesn't indicate any funds for purchasing equipment, vehicles. That's why we do not have any right to buy any piece of equipment without a written permission from LSU and USAID.

#### Objective 4

Miss Ann Coulon, Director, Human Resource Management, LSU AgCenter discussed with us salary and reward systems procedures at LSU AgCenter. She explained that LSU policy for promoting excellence in research, teaching, and service is regular evaluations to ensure that their academic performance is commensurate with their rank and status. All faculty members are reviewed at least annually by the appropriate unit head. Reviews should be based on the faculty member's responsibilities. The effect of unsatisfactory reviews depends on each individual case and is based on the proper policy document.

#### Outcomes

At the end of this discussion we generated several ideas on writing corresponding policy documents and managing personnel at the Center.

## Objective 5

Mr. Mark Legendre, who helped to write a program for our study tour, had a very good understanding that it was more relevant and beneficial for us to start overview of credit union operations from a meeting with managers of credit unions similar in size to the one in Vinnytsia. We toured to one small credit union in Baton Rouge and met with the manager and with Ms. Connie Major, from Federation of Credit Unions. This small credit union has already 1,800 members and a capital of \$8 million. Talking to the manager we could learn some good ideas how working with a small staff it's possible to achieve big results.

The next step in studying credit union operation was our work at Campus Federal Credit Union with Mr. John Milazo, Chief Executive Officer, and his personnel. He started with the overview of the credit union's history and its functions. He referred to the present mission and roles of this credit union and showed us the work of the accounting office of the credit union. Very helpful for us was our meeting with the marketing specialist, who helped us with some new ideas on recruiting new members. In turn we told Mr. Milazo and other personnel members about our credit union and expressed hopes for future cooperation.

## Outcomes

As the result of this work we hope we'll be able to use some of the mechanisms of recruiting new members, which is very important for our small credit union. We started looking for new contacts with other credit unions, which work abroad with the help of the list of addresses, which we received in the US. We hope to establish some basis for cooperation with Ukrainian credit unions in Chicago.

At the end of this study tour we were given certificates in recognition of the successful completion of Business Study Tour. Chancellor Dr. Richardson made a presentation of the certificates to us.

## Acknowledgments

We express gratitude to many individuals who organized and helped to implement this program for us.

To the Chancellor Dr. Richardson, who found time and interest to give his support to this program.

To Vice Chancellors Drs Rogers, Brown, Bagent, and to Associate Vice Chancellor Dr. Bivin for giving us perceptive advice and expression of support.

To Dr Lakshman Velupillai for his tremendous energy, intelligence and kindness, which he always reveals in his leadership.

To Ms Margaret Blackwell for her patience and readiness to share her knowledge with us.

To Mr. Mark Legendre for his great efforts to meet all our needs and make this program beneficial and interesting.

To Mr. Brett Craig for his ever-timely assistance in everything we needed.

To Ms Cathy Marks for her kind and hospitable nature.

To Mr. John Millazo for his insight of the credit union, for his practical wisdom and willingness to help.

To all the staff of the AgCenter and LSU Accounting Service, and to the personnel of Campus Credit Union who gave us their time and good advice.

**Tentative Itinerary**  
**Larissa Kovalchuk and Wanda Yamkovenko**  
**Business Study Tour**  
**January 31 - February 10, 2001**

**Wednesday, January 31, 2001**

8:15 pm Arrive Baton Rouge Metropolitan Airport. Dr. Lakshman Velupillai to meet at airport and take to hotel.

Hotel: Homewood Suites  
5860 Corporate Blvd.  
Baton Rouge, LA 70808  
(225) 927-1700  
(225) 927-1766 Fax

**Thursday, February 1, 2001**

8:30 am Pick up at Homewood Suites and take to International Programs, 118 Knapp Hall.

9:00 am Orientation

- Brett Craig, 118 Knapp Hall
- General overview, campus facilities
- Contact process, telephone numbers, emergencies
- Health and safety issues
- Hotel, transportation
- Per diem, check cashing
- Questions and answers

12:00 pm Lunch

1:30 Meet with Margaret O. Blackwell, Assistant Director, and Cathy Marks, Administrative Secretary, 118 Knapp Hall

- The role of International Programs and AgCenter, LSU Baton Rouge offices
- Overview of Financial responsibility of International Programs in projects
- Budgeting procedures
- Accounting for projects and other expenditures
- Purchase procedures
- Travel procedures
- Questions and answers

4:00 pm Return to Homewood Suites

### **Friday, February 2, 2001**

- 8:15 am Pick up at Homewood Suites
- 8:30 - 11:30 Continue meetings with International Programs' staff, 118 Knapp Hall
- Vinnitsa State University, Ukraine Cooperative Agreement issues
  - Budget guidelines
  - Monthly invoicing
  - Payment of invoices
  - Questions and answers
- 12:40 pm Lunch with Dr. Lakshman Velupillai
- Afternoon with Dr. Lakshman Velupillai, 118 Knapp Hall
- Review of program and schedule
  - Discussion of project financial issues, Vinnitsa
  - Review of Vinnitsa Credit Union program
  - Support issues to project financial management and Vinnitsa Credit Union
- 4:00 pm Return to Homewood Suites

### **Saturday, February 3, 2001 and Sunday, February 4, 2001**

Free Days

### **Monday, February 5, 2001**

- 8:15 am Pick up at Homewood Suites
- 12:00 pm Lunch
- 1:00 pm Ms. Connie Major, Federation of Credit Unions, 103J Efferson Hall  
(Mark will pick up from IP)
- Credit Union Federations and Organization in U.S.
  - Tour of 2 smaller credit unions in Baton Rouge
- 4:00 pm Return to Homewood Suites (Mark Legendre)

### **Tuesday, February 6, 2001**

- 8:15 am Pick up from Homewood Suites and go directly to Mr. Mark Legendre's office  
Mr. Mark Legendre, LSU AgCenter Accounting Services, 103J Efferson Hall
- Overview of office and functions
  - Sub units, staff, and functions
  - Overview of the university accounting process
  - Special topics with regard to Vinnitsa Project
  - Writing financial reports
  - Taxation
- 12:00 pm Lunch

2:00 pm Mr. Mark Legendre, LSU AgCenter Accounting Services, 103J Efferson Hall  
- Continuation of discussions  
- Questions and answers

4:00 pm Return to Homewood Suites (Mark Legendre)

**Wednesday, February 7, 2001**

8:15 am Pick up from Homewood Suites and go directly to Campus Federal Credit Union  
Mr. John Milazzo, Chief Executive Officer, Campus Federal Credit Union (CFCU)  
- Overview of CFCU and functions including history of start up  
- Present mission and roles of CFCU  
- Main functions and services of CFCU  
    - Credit Union activities  
    - Accounting of a Credit Union  
    - Recruiting new members  
- Asset and Liability Management of CFCU  
    - Procedures, approach  
- Discussion of linkage between CFCU and Vinnitsa CU  
- Questions and answers  
- Visit to CFCU Branches  
(John Milazzo will call IP when they are finished)

4:00 pm Return to Homewood Suites

**Thursday, February 8, 2001**

8:15 am Pick up from Homewood Suites and take directly to Mr. Mark Legendre's office.

9:00 - 10:30 Ms. Donna Torres, Executive Director, Accounting Services  
Tour LSU Accounting Services  
(Mark will bring back to IP when finished)

Lunch

2:00 pm Certificate presentation, LSU AgCenter

4:00 pm Return to Homewood Suites

**Friday, February 9, 2001**

8:15am Pick up from Homewood Suites

9:00 am Ms. Ann Coulon, Director, Human Resource Management, LSU AgCenter  
- Salary and reward systems/procedures

Lunch

4:00 pm Return to Homewood Suites

**Saturday, February 10, 2001**

Depart Baton Rouge

## Attachment D

### AGREEMENT On the Loan

Vinnytsia

“ ” \_\_\_\_\_ 2001

Vinnytsia State Agrarian University, further “VSAU”, in person of its rector, Dr. L. Sereda, with an approval of an American partner, in person of the Coordinator of the Project “Center for Private Farmer Training and Outreach”, Mr. Larry Brock, further “Center”, as one party, and credit union “Farmers of Vinnychina”, further – “CU”, in person of the head of the board of directors, Mr. O. Kryvokon, as another party, signed this agreement on the following:

#### 1. Subject of an Agreement

VSAU with an approval of the Center, and for the expense of the funds of the Center’s Budget lends and the CU borrows for temporary use a loan in Ukrainian currency in the amount equivalent to \$5,000 US dollars according to the NBU rate on the day of issuing the loan, for the term determined by this agreement.

#### 2. Obligations of the parties

##### 2.1. VSAU is obliged to:

- 2.1.1. Transfer to the bank account of the CU a determined amount of money in Ukrainian currency, equivalent to 5,000 US dollars, based on the exchange rate of the NBU on the day of the transfer;
- 2.1.2. The transfer should be made from the grivna account of the Center in one transaction not later than 5 days from the day when the agreement comes in force;
- 2.1.3. Not to demand the loan money recovery until the term stipulated by this agreement (a. 2.2.2.)

##### 2.2. CU is obliged to:

- 2.2.1. Use the money borrowed on the basis of this agreement only for the operations allowed by its bylaws.
- 2.2.2. Pay off this amount on the determined date.
- 2.2.3. Paying off on this loan should be done by a money transfer to the grivna account of the Center the amount of money equivalent to 5,000 in US dollars, shown in the table above (a. 2.2.2.), based on the exchange rate of the NBU;
- 2.2.4. Be responsible for non-payment off the loan on the determined date;
- 2.2.5. Every month provide an American coordinator Mr. Larry Brock with a report on the CU financial operations in the 5-KPC format;
- 2.2.6. Provide VSAU authoritative people and an American coordinator of the Center on their request with a necessary information regarding the CU operations and let them free access to the documents with the purpose to make them aware that the conditions of the loan are observed;
- 2.2.7. Consider and take into account, during the term of the agreement, the recommendations of VSAU authoritative people and an American coordinator regarding CU operations, with the purpose to improve them;
- 2.2.8. In case of inappropriate use of the CU money immediately (during 2 bank days from receiving a written demand from VSAU or the Center) return the money of the loan to the grivna account of the Center.

3. Special terms

- 3.1. The loan agreed upon in this agreement is given to the CU at no interest condition until September 1, 2001.
- 3.2. The loan is considered paid off when the money transfer is received on the account of the Center.
- 3.3. In case of delays in paying off the loan the CU shall transfer to the Center's account a fine in the amount of 0.5% of the loan for each day of a delay.
- 3.4. In case of a default on obligations stipulated in the a. 2.2.8 the CU shall pay a fine in amount of 0.5% of the total sum of the loan for each day of the delay of the money return.
- 3.5. Paying off the fines determined in a. 3.3 and 3.4 doesn't discharge the CU from fulfilling other obligations.
- 3.6. In case of breaking or suspension of the agreement based on mutual consent of the parties the payments should be done according to the new agreement on suspension or breaking of the former agreement.

4. Term of the Agreement. Solution of Arguments.

- 4.1. The Agreement comes in force from the day of its signing by the parties, VSAU, Center and CU, and is valid until the date of fulfilling the parties obligations in full range, and can be suspended on the basis of mutual consent of the parties.
  - 4.2. One-party denial fulfilling the obligations is considered infeasible.
  - 4.3. In case of default of obligations by one of the parties, another party has the right to break the agreement before the appointed time on the basis of the Law of Ukraine.
  - 4.4. All arguments emergent in fulfilling of the agreement shall be solved by the Arbitrage Court of Vinnytsia oblast according to the Law of Ukraine.
  - 4.5. Any changes or additions to the agreement can be made only on the mutual consent of the parties.
5. The agreement is drawn up in 3 original copies (in Ukrainian and English), which are equally legitimate.
6. Addresses and requisites of the parties.
- 6.1. VSAU – Vinnytsia State Agrarian University
  
  
  
  
  
  
  
  
  
  
  - 6.2. CU – Credit Union “Farmers of Vinnychyna”

VSAU

Center

CU

Rector  
L.Sereda

Coordinator  
L. Brock

Head of the Board of Directors  
O.Kryvokon

## **Attachment E**

### **Technical Assistance in Establishing Soils Laboratory Equipment and Procedures**

**By Loretta Fourrier**

#### **Acknowledgements**

My sincere thanks to the many individuals responsible for my trip to the Ukraine. The people and the land are wonderful. There is no way to name everyone who contributed to the success of this assignment, but I appreciate each and every one. The spirit of those working with the Project is to be admired and envied.

Dr. Bill Richardson, Chancellor of the Agricultural Center, LSU, Baton Rouge, LA, and to Dr. Larry Rogers, Vice Chancellor, for allowing me to go.

Hershel F. Morris, Jr., Department Head for Agricultural Chemistry Laboratory, for his technical and moral support.

Dr. L. Sereda, Rector at Vinnitsa State Agricultural University, for his support and interest.

Dr Grigoriy Loyanych, Project Coordinator, for kindly sharing his office, staff, and classroom.

Larry Brock, U.S. Project Coordinator, for the invitation, knowledge, patience, and personal attention.

Wanda Yamkovenko, Project Interpreter, for her gracious ability to find solutions for all problems, and her treasured friendship and jeweled humor.

Drs. V. Petrochenko and V. Mamilyaga, Vice Rectors, for their support, interest and warm hospitality.

Alexander Kovtum, Director of the Soil Laboratory, for his enthusiastic attitude toward the laboratory's development.

Dr. Lakshman Veluppillai, Director, International Programs, LSU Agricultural Center, for his attention to organization and detail and allowing me the privilege of contributing to the Project.. Margaret Blackwell and Cathy Marks were very helpful in executing this "organization and detail".

#### **Executive Summary**

The purpose of this assignment was to assist in setting up the Soil Testing Laboratory in Vinnitsa and to recommend methods of requesting, transporting, preparing, extracting, analyzing, tracking, and reporting soil samples.

#### **Performance Assessment**

Laboratory design and equipment placement had been established before my arrival. Because the laboratory was still under construction, the Atomic Absorption Spectrophotometer was the only instrument installed. Glassware and other equipment had been ordered but had not yet arrived. Delays in the actual installation of the spectrophotometer were due to the lack of available

support technology required. The instrument was uncrated, set-up and turned on. No calibration or analysis took place.

The exchange of general laboratory information and lengthy discussions of techniques accomplished part of the objectives of this assignment. The laboratory personnel reviewed all extraction and analytical methodologies, and read manuals that had been translated. A procedure for sample tracking and reporting was recommended. The interest displayed by the staff and raion specialists cannot help but fuel this project's success.

## **Report of Assignment**

### **Purpose:**

To assist in the establishment of the soil testing laboratory in Vinnista, Ukraine.

### **Objectives:**

1. Assist in the laboratory design and equipment placement.
2. Set up and calibrate soil lab equipment with project personnel.
3. Assist project personnel with development of GLP (Good Laboratory Practice which are techniques required for running a certified lab in the US).
4. Review suggested PPE (Personal Protective Equipment).
5. Recommend techniques for soil sample drying, grinding and storing.
6. Digest/extract soils for analysis with Project personnel.
7. Analyze soils with Project personnel.
8. Train technicians and conduct preliminary testing
9. Develop results reporting criteria.
10. Conduct seminars to train raion agents in the use of field equipment as necessary.
11. Assist Project personnel in developing sample request forms and tracking records.
12. Provide support to Project personnel when ever possible.
13. Be available to Project personnel for meeting/discussions/problems.
14. Document results with recommendations and suggestions.

### **Findings**

**Objective 1:** Assist in the laboratory design and equipment placement.

This had been decided before my arrival. The laboratory was still under construction and no counters, cabinets, or distilled water sources had been installed.

**Objective 2:** Set up and calibrate soil lab equipment with project personnel.

The Atomic Absorption Spectrophotometer was set up on a temporary basis, and the burner was lit. It was decided to wait until the lab was completed before actually calibrating and running samples as the instrument is sensitive to fumes and dust. No other lab equipment was set up.

**Objective 3:** Assist project personnel with development of GLP (Good Laboratory Practice which are techniques required for running a certified lab in the US).

Laboratory techniques were suggested to assure accurate results. This included discussions involving instrument calibrating, running controls, instrument maintenance records, and maintenance scheduling, logging daily checks, ie. room temperature, gas pressures, fresh DI water, for laboratory certification. It was suggested that written procedures for sample receiving, storing, labeling, tracking and discarding should be developed as well as a Safety Program with MSDS (Material Safety Data Sheets)

**Objective 4:** Review suggested PPE (Personal Protective Equipment).

- Emphasis was placed on the necessity of using lab coats, eye goggles, gloves and fume hoods when dealing with reagents and samples.
- Objective 5: Recommend techniques for soil sample drying, grinding and storing.  
The methods were discussed with lab personnel.
- Objective 6: Digest/extract soils for analysis with Project personnel.  
The laboratory was under construction and sample preparation was not possible. The Bomb Digestion technique was discussed.
- Objective 7: Analyze soils with Project personnel.  
The laboratory was under construction and sample analysis was not possible.
- Objective 8: Train technicians and conduct preliminary testing.  
The laboratory was under construction and sample analysis was not possible.
- Objective 9: Develop results reporting criteria.  
The need for a simple reporting technique was discussed. What analyses is the laboratory going to offer? The agronomist interpreting the results must be able to relate his recommendations to the sample results.
- Objective 10: Conduct seminars to train raion agents in the use of field equipment as necessary.  
No field equipment was available. The possibility of using the soil screening kit in the field was discussed. On-sight screening can be very valuable.
- Objective 11: Assist Project personnel in developing sample request forms and tracking records.  
Request forms for soil analysis were discussed. It was suggested that there be one form, possibly available on the web site. It should include the date, location, collecting raion specialist, farmer's demographics, soil description, history, problems encountered and crop plans. The sample form would be signed by the collector and then by the lab personnel accepting the sample. The technician responsible for the sample preparation (drying, grinding, sample digestion or extraction, dilution etc.) would also sign the form. The chemist analyzing the sample would report the results, sign the form and send to the agronomist to read and interpret. After making recommendations, he would sign the form, send to the lab director who would review and sign. The results and recommendations could then be forwarded to Dr. Palshin, to the Raion specialist, and to the farmer.  
Sample tracking and accountability is very helpful in keeping laboratory competency in line.
- Objective 12: Provide support to Project personnel when ever possible.  
Several formal and informal meetings with raion specialists. Very open communication was encouraged. What information do you want and why do you want it? What can you do with the information you receive?
- Objective 13: Be available to Project personnel for meeting/discussions/problems.  
Several formal and informal meetings with farmers were held. The farmers voiced interest in soil type, pH, nitrogen levels and inquired about measuring pesticide levels. Very open communication was encouraged. What information do you want and why do you want it? What can you do with the information you receive? Some concern was expressed regarding land titles, ownership, and leasing terms. The Center's legal counsel must address these matters.
- Objective 14: Document results with recommendations and suggestions.

#### Conclusions:

Strengths: The strength of the success of the laboratory lies in the cooperation and communication of the raion specialists with the laboratory and the farmer. This is a very positive factor for the Project. The eagerness of those participating is inspiring. There appears to be a hunger for information that is insatiable.

Performance Problems: The laboratory must be completed and adequately equipped. Budget support for consumables is an issue, as it is in most laboratories.

Recommendations:

- Translate all laboratory literature.
- Complete laboratory construction.
- Assure a pure and filtered source of compressed air and propane for the spectrophotometer (support technology)..
- Have lab director and chemist visit similar soil testing lab, Agronomy Department and Ag Chemistry lab at LSU.
- Inventory lab equipment, glassware, and reagents. Order as budget allows.
- Develop working sample requisition forms to hold all handling personnel responsible.
- Consider on-site testing for soil pH, nitrogen.
- Get soil sampling probes for specialists.
- Develop close relations between lab, raion specialists, and farmers. Send out publications of lab's capability, cost, turnaround times.
- Address land ownership and leasing issues.
- Have information about pesticide use and soil contamination available to farmers.